



# Site Specific Safety Plan

*S&S Roofing Inc.*

**TESLA SEMI Expansion**

1 Semi Drive

Sparks, Nevada 89437

## **Table of Contents**

Summary of Project

Scope of Work and Individual Control Hazards

Safety Contact Information and Chain of Command

Geographic and Environmental Hazard Controls

Safety Check Schedule

Accident Investigation and Reporting

PPE Guidelines

First Aid Locations

Fall Protection Areas

Safety Data Sheets

## **Summary of Project**

The project involves the installation of a Rhinobond TPO Roof System on the TESLA SEMI Expansion facility. Work will commence with the installation of sheathing at the inside vertical parapet walls, expansion joints, and wood blocking for skylight curbs. Following this, insulation and TPO membrane installation will proceed, with details and flashings being completed throughout the project. Skylight curbs and domes will be installed as each section is finalized.

The building is divided into seven sections (SA – SG), separated by expansion joints that will be fitted with Johns Manville Expand-o-Flash expansion joint covers. The building's edges will feature a Metal Era Edge Systems One Fascia system. Additionally, S&S will install conductor heads and leaders on the exterior of the building to facilitate proper drainage.

Please see the following scope of work items with hazard controls in the section below:

## **Scope of Work & Individual Control Hazards**

### ***Mobilization and Loading of Materials and Equipment***

During the mobilization phase, S&S Roofing will utilize a crane to lift various materials and equipment to the roof, including insulation bundles, TPO rolls, pallets of TPO accessories and fasteners, plywood bundles, skylight curbs, skylight domes, generators, Raptor Tie-Off Safety Carts, Rhinobond Machines, 4-wheeled carts, insulation forks and other miscellaneous items.

Before any work begins, a detailed lift plan will be developed and shared with TESLA personnel. During the lifting process, riggers will secure straps to the materials on the ground, which will then be lifted to the roof, where they will be received by workers. A flagman will be responsible for directing and signaling the crane operator to ensure the materials are positioned appropriately. Once on the roof, workers will distribute the materials evenly utilizing insulation forks to maintain balanced weight distribution.

Before any loading begins, a pre-work huddle will be held to review the lift plan and discuss any potential safety hazards. An S&S Safety Coordinator will inspect all personnel's personal protective equipment (PPE) before they access the roof.

Riggers on the ground and workers distributing materials on the roof are required to wear ANSI-approved hard hats, gloves, safety glasses, and steel-toe boots. The flagman on the roof, who coordinates with the crane operator, must be tied off to a mobile fall protection cart using a harness, retractable lanyard, and lifeline. All fall protection equipment will be visually inspected daily prior to use.

### ***Installation of Plywood Sheathing on Inside of Vertical Parapets and Expansion Joint***

The installation of plywood sheathing involves cutting the plywood to the required size using an electric circular saw, transporting it to the installation site, and fastening it to steel studs using fasteners and an impact driver.

All workers involved in this task are required to wear proper personal protective equipment (PPE), including ANSI-approved hard hats, safety glasses, gloves with a minimum cut rating of ANSI-Cut A5, and steel-toe boots. Loose clothing must be eliminated to prevent hazards.

Proper lifting techniques are taught and strictly enforced to minimize the risk of back injuries and fatigue when carrying the cut plywood. ANSI-approved gloves are worn to reduce the risk of cuts and lacerations to the hands.

Before starting work, all personnel must inspect their equipment. Electrical cords are checked for defects and tagged out if unsafe, then removed from the roof for replacement. Batteries for cordless tools are also inspected for defects before use.

### ***Installation of Polyisocyanurate Insulation***

The installation of polyisocyanurate insulation involves cutting open the polyethylene wrapping from the bundles, breaking them down, and transporting the insulation pieces to the designated installation area. Workers will fasten the insulation boards to the steel deck using manufacturer-approved #15 fasteners and Rhinobond insulation plates.

At the beginning of each workday, workers will remove the tie-downs securing the insulation bundles overnight and use insulation forks to distribute the bundles across the day's work area. The insulation forks are inspected daily for defects or flat tires. If deemed unsafe, they are tagged out and removed from the jobsite. Workers will then cut and strip away the polyethylene wrapping and dispose of it properly. ANSI-approved gloves must be worn when handling sharp blades to open the bundles.

Once unwrapped, the insulation is laid out according to the project drawings and manufacturer's specifications. Workers will use an impact driver or screw gun to fasten the insulation. During installation, proper personal protective equipment (PPE) must be worn to prevent cuts or lacerations from sharp fasteners and insulation plates.

When installing tapered insulation crickets, workers may use an electric Sawzall to cut the insulation boards to fit. Each Sawzall is inspected prior to use for defects. Any defective tools are tagged out and removed from the jobsite for repair or replacement.

Workers installing insulation within six feet (6') of a parapet less than 39" in height are required to use fall protection. This includes a mobile fall protection cart, retractable harness, lifeline, and an approved harness. All fall protection equipment is inspected daily before use.

### ***Installation of a Rhinobond TPO System***

The installation of the Rhinobond TPO system involves several key steps: laying out the TPO sheets over previously installed insulation boards, using Rhinobond magnets to position the Rhinobond induction plates, welding the TPO to the Rhinobond plates with a Rhinobond machine, and sealing the TPO seams with a self-propelled automatic heat welding machine. Vertical parapets are then flashed with LVOC bonding adhesive and TPO membrane.

After the installation of polyisocyanurate insulation, workers will employ proper lifting techniques and wheeled forks to transport the TPO membrane rolls to the designated installation area. To prevent fatigue and minimize the risk of injury, two workers are required to move the membrane rolls. Once in position, the rolls will be kicked out to lay flat over the insulation. Workers receive training on proper techniques for rolling out TPO membrane to avoid unnecessary injuries. A designated employee will use a Rhinobond machine to induction weld the membrane to the Rhinobond plates. This employee must conduct a daily inspection of the machine prior to any work. If the machine is found to be faulty, has a defective cord, or shows any other visible defects, it will be tagged and removed from service until repaired or replaced.

A designated employee will also set the automatic welder at the seam, adjusting the temperature and speed as necessary. This employee will follow the welder to ensure it maintains a straight path and make any necessary adjustments to complete the seam weld. The automatic welder is inspected daily before work begins, and any defects will result in the tool being tagged out and replaced.

Additionally, workers will install adhered membrane wall flashings using LVOC bonding adhesive. Those installing adhered membrane parapet flashings within six feet (6') of a parapet less than 39" in height are required to use fall protection equipment. This includes a mobile fall protection cart, retractable harness, lifeline, and approved harness. All fall protection equipment will be inspected daily prior to use. Workers will flash the vertical walls of the parapet with TPO membrane using LVOC bonding adhesive and nap rollers. Should workers experience lightheadedness due to fumes, they are instructed to vacate the area for a minimum of five (5) minutes to breathe fresh air. In the event of ingestion, workers should immediately call emergency services and follow the instructions on the provided safety data sheet.

### ***Installation of a Metal Era Edge Systems One Fascia***

The installation of the Metal Era Edge Systems One Fascia involves several key steps: removing the fascia from its original packaging, installing the formed rail cleat piece by fastening it to the 16-gauge metal cap using approved fasteners, and then securing the fascia piece by "snapping" it into place on the formed rail. Manufacturer-approved sealant is applied from the roof-edge side to prevent water and moisture from entering between the formed rail and fascia piece.

Regardless of conditions, designated workers responsible for installing the Systems One Fascia must consistently utilize fall protection equipment. Prior to commencing work, employees are required to inspect their fall protection cart, retractable harness, lifeline, and approved harness for any defects. Any defective equipment must be tagged out and replaced before use.

S&S Roofing will assign an employee to cordon off the area below the installation site with cones and warning lines and to monitor for any falling debris during the installation process. S&S Roofing will also notify TESLA 24 hours in advance of any edge termination installation.

In the event of sealant ingestion, workers are instructed to call emergency services immediately and follow the guidelines provided in the safety data sheet.

### ***Installation of Scuppers, Conductor Heads, and Leaders***

The installation of scuppers, conductor heads, and leaders involves several steps: installing the fabricated scupper using nails, flashing it with TPO membrane, fastening the conductor head in the designated area from an aerial man lift, and connecting the leader pipe to the conductor head, securing it to the IMP panel with approved straps and fasteners.

Workers will utilize a pneumatic nail gun to install the scupper from the inside of the parapet, followed by flashing the scupper using unreinforced TPO membrane with a heat gun. All equipment must be inspected for defects prior to use. Compressors must function properly without any leaks, hoses must be checked for leaks or holes, and fittings must not leak air. If any defects are identified, workers must tag out the equipment and arrange for its replacement. Heat guns will be inspected daily before use to ensure proper functionality, and cords must be checked for any deficiencies.

Only designated licensed workers may operate an aerial man lift. Before using any lifts, S&S Roofing will verify that licenses are valid and that training is current. All personnel working on an aerial man lift must be secured to a proper tie-off point on the machine. S&S Roofing maintains a strict policy against horseplay and improper machine usage. Any employee found misusing the equipment will be removed from the premises.

Workers installing conductor heads must wear personal protective equipment (PPE) to protect against cuts and lacerations from any sharp edges on the conductor heads or leaders. Impact drivers will also be inspected before use and tagged out for replacement if found unfit for work.

### ***Installation of Expand-o-Flash Expansion Joint Cover***

The installation of the Expand-o-Flash expansion joint cover involves the following steps: removing the cover from its original packaging and disposing of the packaging appropriately; positioning the expansion joint cover in the designated area; and fastening it to the expansion joint curb using manufacturer-approved fasteners.

Prior to installation, safety warning lines will be established six feet (6') from the opening to alert workers to the fall hazard present. S&S Roofing will designate specific personnel to install the expansion joint cover. During this process, workers are required to use fall prevention equipment in addition to their daily personal protective equipment (PPE). Any worker assigned to install the expansion joint cover must utilize a fall protection cart, retractable harness, lifeline, and approved harness. All fall protection equipment will be inspected daily prior to use and tagged out and removed from service if deemed unfit.

### ***Installation of Skylight Curbs and Domes***

The installation of skylight curbs and domes involves several key steps: first, wood blocking is cut to size and fastened to the deck using manufacturer-approved #12 fasteners. Next, the skylight curb is positioned on the wood blocking and secured with manufacturer-approved fasteners. The curb is then flashed with TPO membrane and LVOC adhesive, followed by the installation of the skylight dome, which is fastened to the curb.

Prior to installing insulation and the TPO membrane, workers will install wood blocking at locations designated by TESLA. Wood blocking will be cut to size using a circular saw, which must be inspected for defects before use. If any defects are identified, the saw will be removed from service until it has been repaired or replaced. All workers involved in this task must wear ANSI-approved gloves, hard hats, and eye protection throughout the process. After cutting the blocking, workers will lay it out and secure it to the deck using manufacturer-approved fasteners. Impact drivers and screw guns will also be checked for defects before use; any defective tools will be tagged out and removed from the jobsite. Once the insulation and TPO have been installed, the locations for the wood blocking and skylights will be marked to facilitate the skylight installation.

To prevent fatigue and reduce the risk of injuries, a minimum of two workers will be required to manually move the skylight curbs. Workers will be instructed to use proper lifting techniques when transporting the dome to prevent back injuries and fatigue. The skylight curbs will be delivered to the installation site and secured with approved fasteners. Workers fastening the skylight curb to the wood blocking must consistently wear the required personal protective equipment (PPE).

After the skylight curb is installed, workers will flash the vertical walls of the curb with TPO membrane using LVOC bonding adhesive and nap rollers. If workers experience lightheadedness due to fumes, they are instructed to vacate the area for a minimum of five (5) minutes to breathe fresh air. In the event of ingestion, workers should call emergency services immediately and follow the instructions on the provided safety data sheet.

Once the skylight curb has been flashed, workers will proceed to install the skylight dome onto the curb. A minimum of two (2) workers will be required to position the dome due to its weight and to prevent unnecessary injuries. The dome will be fastened to the curb using a properly inspected impact driver, completing the installation process.

### ***Inspections & Walkthroughs***

Throughout the duration of the project, periodic inspections will be conducted by S&S Roofing, Johns Manville, and TESLA to ensure that the work adheres to the standards outlined in the project drawings and manufacturer specifications.

Before accessing the roof, all personnel will be checked for proper personal protective equipment (PPE) and informed of any hazardous conditions present on the roof.

## **Safety Contact Information and Chain of Command**

Thomas Blewitt Jr. and Larry West are the designated safety coordinators this project.

### **Larry West**

*Safety Coordinator*

(609) 468-6550

[larryw@ssroofinginc.com](mailto:larryw@ssroofinginc.com)

### **Thomas Blewitt Jr.**

*Safety Coordinator*

(732) 682-8107

[thomas@ssroofinginc.com](mailto:thomas@ssroofinginc.com)

Any issues related to job site safety should be promptly addressed with either Thomas Blewitt or Larry West to ensure timely correction and compliance with safety protocols.

If Thomas Blewitt or Larry West are unavailable for reporting, please contact Project Manager Kacper Pacholak.

### **Kacper Pacholak**

*Project Manager*

(908) 591-0349

[kacper@ssroofinginc.com](mailto:kacper@ssroofinginc.com)

## **Geographic and Environmental Risk Controls**

### ***Wind Speeds***

If wind speeds of 15 miles per hour or higher are reported, employees will not be permitted to install roofing. The final decision regarding whether it is safe to proceed with roofing installation rests with the foreman.

Insulation bundles are grouped together and securely tied using manila rope to prevent them from being lifted by crosswinds. The manila rope is then fastened and anchored at multiple points to ensure stability and prevent lift.

### ***Temperatures***

If temperatures drop below 30 degrees Fahrenheit, S&S Roofing employees will not proceed with roof installation. Work may only resume once temperatures reach 30 degrees Fahrenheit and are rising. The foreman will make the final determination regarding whether conditions are suitable for work.

### ***Snow***

In the event of snow accumulation, S&S Roofing will not proceed with work until the snow has either melted or been removed. S&S employees are not permitted to remove snow from the roof.

### ***Use of Motorized Vehicles***

S&S employees are instructed to not exceed a speed of 5 miles per hour when operating a motorized vehicle on the job site. Each vehicle is equipped with a tracking device that monitors location and speed, featuring an alarm system to alert S&S Safety Coordinators of any violations of this policy.

Employees are required to wear seat belts at all times and must possess the appropriate license for the vehicle they are operating.

Any worker found disregarding the vehicle safety protocols will have their vehicle usage privileges revoked and will be subject to internal reporting.

### **Safety Check Schedule**

S&S Safety Coordinators will conduct daily safety inspections to ensure a safe work environment and to identify any hazards associated with the day's tasks. S&S employees and workers are instructed to inspect each piece of equipment for defects prior to use, including damaged cords, faulty batteries, worn bearings in wheeled equipment, and other deficiencies that may pose safety hazards.

Fall protection equipment must be thoroughly checked before use, and any outdated or defective equipment will be tagged, removed from service, and replaced promptly.

### **Accident Investigation and Reporting**

In the event of a reportable incident, S&S employees must notify the on-site Safety Coordinator as soon as possible. Either Larry West or Thomas Blewitt will document the incident and prepare an incident report within 24 hours of the occurrence.

A prompt investigation will follow to determine the cause of the incident and to identify measures to prevent its recurrence.

Failure to report an incident is considered a serious violation of company policy and will not be tolerated.

### **PPE Guidelines**

All S&S Roofing employees are provided with ANSI-approved personal protective equipment (PPE), which includes a hard hat, high-visibility safety vest, cut-resistant gloves, and ANSI-approved eyewear. Additionally, employees are required to wear steel-toe boots at all times while on the job site.

PPE will be inspected at the beginning and end of each workday. Any damaged or defective equipment must be promptly replaced upon identification.

Employees who do not have the required PPE at the start of the workday will not be permitted to work until all necessary equipment is properly worn and accounted for.

## **First Aid Locations**

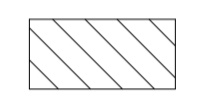


Every S&S employee is required to be knowledgeable in basic first aid to address minor injuries. A first aid kit is readily available in the work area at all times. Employees are informed of the first aid kit's location during the morning huddle each day.

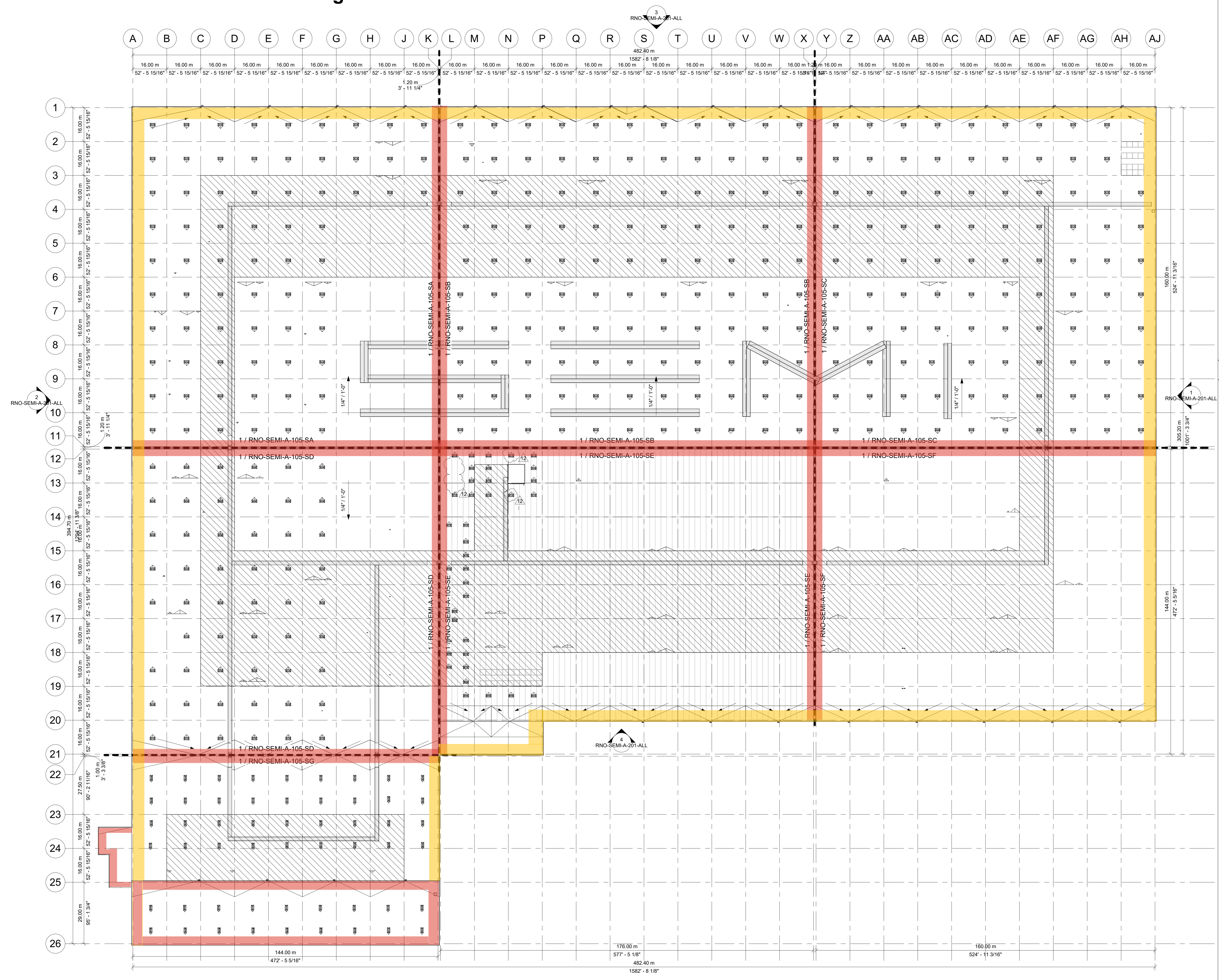
# Fall Protection Plan - S&S Roofing Inc.

## GENERAL NOTES

1. VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND SHALL NOTIFY ARCHITECTS OF ANY DEVIATION FROM THAT INDICATED ON THE DRAWINGS OR SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS FOR DIMENSIONS.
3. NOTES AND DETAILS ON DRAWINGS WILL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL NOTES.
4. WHERE NOTES AND DETAILS ARE IN CONFLICT WITH SPECIFICATIONS, THE MOST STRINGENT SHALL GOVERN.
5. PROVIDE TPO ADHERED ROOF SYSTEM OVER COVER BOARD AND RIGID INSULATIONS.
6. PROVIDE DRAINAGE CRICKETS WHERE FLAT VERTICAL AREAS INTERSECT ROOF SLOPE AT PARAPETS, MECHANICAL EQUIPMENT, SKYLIGHTS, AND PENTHOUSE WALLS AS NOTED ON PLANS.
7. BALLASTED SOLAR PANELS TO BE PROVIDED BY OTHERS.
8. LIGHTNING PROTECTION TO BE PROVIDED BY OTHERS.
9. PROVIDE RAMP CROSSOVERS AT EXPANSION JOINTS.
10. PROVIDE SCUPPER/CONDUCTOR HEAD, AND DOWNSPOUT SYSTEM FOR EXTERNAL ROOF DRAINS. OVERFLOW DRAINAGE PROTECTION TO BE PROVIDED ADJACENT TO SCUPPER/CONDUCTOR HEAD.
11. PROVIDE MAINTENANCE WALK PADS (JM TPO 45 MIL) AS NOTED ON PLAN.
12. ALL PENTHOUSE STAIR AND ELEVATOR ROOF TOP LANDINGS TO BE COORDINATED WITH STRUCTURAL.
13. STRUCTURAL TO PROVIDE SUPPORTS FOR EXPANSION JOINTS.
14. PROVIDE FLASHING AT ALL MECHANICAL EQUIPMENT CURBS AND SKYLIGHTS.
15. PROVIDE METAL CAP FLASHING AT PARAPET WALLS.
16. PROVIDE INTERIOR ROOF DRAINS ABOVE BUILDING ENTRANCE ONLY.
17. ROOFTOP MECHANICAL UNITS SHOWN FOR REFERENCE AND COORDINATION PURPOSES ONLY.

## ROOF LEGEND

-  ROOF COVERBOARD
-  Fall Protection Required at All Times
-  Fall Protection Required Task Dependent



## Roofing Membranes, Cover Boards, Insulation, and Accessories

Version 3.0

Revision Date 07/29/2022

Print Date 08/01/2022

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### SECTION 0. GENERAL INFORMATION

This product meets the definition of an article according to 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015).

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### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : Roofing Membranes, Cover Boards, Insulation, and Accessories

#### Manufacturer or supplier's details

Company : Johns Manville  
Address : P.O. Box 5108  
Denver, CO USA 80127

Telephone : +1-303-978-2000  
Emergency telephone number : 24-Hour Number: +1-800-424-9300 (CHEMTREC)

Company : Johns Manville Canada Inc.  
Address : 5301 42 Avenue  
Innisfail, AB Canada T4G 1A2  
Telephone : +1-303-978-2000  
Emergency telephone number : 24-Hour Number: +1-800-424-9300 (CHEMTREC)

Prepared by : productsafety@jm.com

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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Not a hazardous substance or mixture.

#### GHS label elements

Not a hazardous substance or mixture.

#### Other hazards

None known.

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Chemical nature

This product meets the definition of an article according to 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015).

#### Hazardous components

Non-hazardous according to 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015), when used as intended.

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### SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

Most important symptoms : None known.

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## Roofing Membranes, Cover Boards, Insulation, and Accessories

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and effects, both acute and delayed

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### SECTION 5. FIREFIGHTING MEASURES

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Further information : Standard procedure for chemical fires.  
Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Avoid dust formation.  
Environmental precautions : No special environmental precautions required.  
Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

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### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.  
Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.  
Conditions for safe storage : Keep in a dry, cool place.  
Materials to avoid : No materials to be especially mentioned.  
Further information on storage stability : Stable at normal ambient temperature and pressure.

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### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Not applicable

#### Personal protective equipment

Protective measures : If used and stored as directed, no special protective equipment is necessary.  
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

## Roofing Membranes, Cover Boards, Insulation, and Accessories

Version 3.0

Revision Date 07/29/2022

Print Date 08/01/2022

Colour : various

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.  
Chemical stability : Stable under normal conditions.  
Possibility of hazardous reactions : None reasonably foreseeable.  
Conditions to avoid : No data available  
Incompatible materials : No data available  
Hazardous decomposition products : Hazardous decomposition products formed under fire conditions.

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Further information

No data available

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### SECTION 12. ECOLOGICAL INFORMATION

#### Further information

No data available

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### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues : Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

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### SECTION 14. TRANSPORT INFORMATION

#### International transport regulations

Land transport

USDOT: Not classified as a dangerous good under transport regulations

TDG: Not classified as a dangerous good under transport regulations

Sea transport

IMDG: Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO: Not classified as a dangerous good under transport regulations

**Roofing Membranes, Cover Boards, Insulation, and Accessories**

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**SECTION 15. REGULATORY INFORMATION****TSCA list**

TSCA - 5(a) Significant New Use Rule List of Chemicals : Not relevant

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D) : Not relevant

**SARA 311/312 Hazards** : No SARA Hazards**California Prop. 65**

See product label for any applicable warning information.

**The components of this product are reported in the following inventories:**

: This product is an article (object, manufactured item) according to international chemical regulations.

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**SECTION 16. OTHER INFORMATION****Further information**

Prepared by productsafety@jm.com

The information provided in this Safe Use Instruction (SUI) is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and emergency response and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Trade name : JM LVOC Membrane Adhesive (TPO &amp; EPDM)

## Manufacturer or supplier's details

Company : Johns Manville  
Address : P.O. Box 5108  
Denver, CO USA 80127  
Telephone : +1-303-978-2000  
Emergency telephone : +1-800-424-9300 (CHEMTREC)  
number

Company : Johns Manville Canada Inc.  
Address : 5301 42 Avenue  
Innisfail, AB Canada T4G 1A2  
Telephone : +1-303-978-2000  
Emergency telephone : +1-800-424-9300 (CHEMTREC)  
number

Recommended use of the chemical and restrictions on use

Restrictions on use : For professional users only.

Prepared by : productsafety@jm.com

**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)**

Flammable liquids : Category 2  
Skin irritation : Category 2  
Eye irritation : Category 2A  
Reproductive toxicity : Category 2  
Specific target organ toxicity : Category 3 (Central nervous system)  
- single exposure  
Specific target organ toxicity : Category 2  
- repeated exposure  
Aspiration hazard : Category 1

**GHS label elements**Hazard pictograms : 

Signal word : Danger

**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

- Hazard statements : H225 Highly flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.
- Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:**  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P331 Do NOT induce vomiting.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- Storage:**  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.
- Disposal:**  
P501 Dispose of contents/container to an approved facility in

**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

accordance with local, regional, national and international regulations.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS****Hazardous components**

Chemical name	CAS-No.	Concentration (%)
tert-butyl acetate	540-88-5	>= 30 - <= 60
acetone	67-64-1	>= 10 - <= 30
toluene	108-88-3	>= 5 - <= 10

**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Symptoms of poisoning may appear several hours later.  
Do not leave the victim unattended.
- If inhaled : Call a physician or poison control centre immediately.  
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician.  
Wash off with soap and water.  
If on clothes, remove clothes.
- In case of eye contact : Remove contact lenses.  
Immediately flush eye(s) with plenty of water.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Do NOT induce vomiting.  
Keep respiratory tract clear.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : irritant effects

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Water spray

**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

	Halons Foam
Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: carbon oxides
Specific extinguishing methods	: Standard procedure for chemical fires. Use a water spray to cool fully closed containers.
Further information	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

**SECTION 7. HANDLING AND STORAGE**

Advice on protection against fire and explosion	: Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
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**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

- Advice on safe handling : Avoid formation of aerosol.  
 Do not breathe vapours/dust.  
 Avoid exposure - obtain special instructions before use.  
 Avoid contact with skin and eyes.  
 For personal protection see section 8.  
 Smoking, eating and drinking should be prohibited in the application area.  
 Take precautionary measures against static discharges.  
 Provide sufficient air exchange and/or exhaust in work rooms.  
 Open drum carefully as content may be under pressure.  
 Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Prevent unauthorized access.  
 No smoking.  
 Keep container tightly closed in a dry and well-ventilated place.  
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
 Observe label precautions.  
 Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage stability : Stable at normal ambient temperature and pressure.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
tert-butyl acetate	540-88-5	TWA	200 ppm	ACGIH
		TWA	200 ppm 950 mg/m <sup>3</sup>	NIOSH REL
		TWA	200 ppm 950 mg/m <sup>3</sup>	OSHA
acetone	67-64-1	TWA	250 ppm	ACGIH
		STEL	500 ppm	ACGIH
		TWA	250 ppm 590 mg/m <sup>3</sup>	NIOSH REL
		TWA	1,000 ppm 2,400 mg/m <sup>3</sup>	OSHA
		TWA	20 ppm	ACGIH
toluene	108-88-3	TWA	100 ppm 375 mg/m <sup>3</sup>	NIOSH REL
		ST	150 ppm 560 mg/m <sup>3</sup>	NIOSH REL
		TWA	200 ppm	OSHA
		CEIL	300 ppm	OSHA
		Peak	500 ppm (10 minutes)	OSHA

**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

**Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
acetone	67-64-1	Acetone	Urine	End of shift (As soon as possible after exposure ceases)	25 mg/l	ACGIH BEI
toluene	108-88-3	Toluene	In blood	Prior to last shift of workweek	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g Creatinine	ACGIH BEI

**Personal protective equipment**

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection  
Material : Solvent-resistant gloves

Remarks : Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection : Wear safety glasses with side shields or goggles. Wear face-shield and protective suit for abnormal processing problems.

**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

- Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : Avoid contact with skin, eyes and clothing.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and immediately after handling the product.  
Written instructions for handling must be available at the work place.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance : liquid
- Color : yellow
- Odor : strong, sweet
- Odor Threshold : No data available
- pH : No data available
- Melting point/range : No data available
- Boiling point/boiling range : > 37.8 °C
- Flash point : -4 °C
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Upper explosion limit : Not applicable
- Lower explosion limit : Not applicable
- Vapour pressure : No data available
- Relative vapour density : No data available
- Relative density : No data available
- Density : 0.91 g/cm<sup>3</sup>
- Solubility(ies)  
Water solubility : No data available
- Solubility in other solvents : No data available
- Partition coefficient: n-octanol/water : No data available
- Auto-ignition temperature : not determined

**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	1,500 - 3,500 mPa.s
Viscosity, kinematic	:	No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	None known.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong oxidizing agents Acids and bases
Hazardous decomposition products	:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). nitrogen oxides

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate : > 200 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : > 2,000 mg/kg Method: Calculation method

**Acute toxicity****Components:****tert-butyl acetate:**

Acute oral toxicity	:	LD50 (Rat, male): 4,100 mg/kg GLP: yes
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 2.23 mg/l Exposure time: 4 h Test atmosphere: vapour GLP: yes

**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: No mortality was observed.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg  
GLP: yes

**Acute toxicity****acetone:**

Acute oral toxicity : LD50 (Rat, female): 5,800 mg/kg  
GLP: no

Acute inhalation toxicity : LC50 (Rat, female): 76.0 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
GLP: no

Acute dermal toxicity : LD50 (Guinea pig, male and female): > 7,426 mg/kg  
GLP: no

**Acute toxicity****toluene:**

Acute oral toxicity : LD50 Oral (Rat, male): 5,580 mg/kg

Acute inhalation toxicity : LC50 (Rat): 28.1 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 12,267 mg/kg

**Skin corrosion/irritation****Components:****toluene:**

Species: Rabbit  
Result: Irritating to skin.

**Serious eye damage/eye irritation****Components:****acetone:**

Species: Rabbit  
Result: Eye irritation  
Exposure time: 24 h  
Assessment: Irritating to eyes.  
Method: Draize Test

**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity****Components:****toluene:**

Reproductive toxicity -  
Assessment

: Suspected of damaging the unborn child., Some evidence of adverse effects on development, based on animal experiments.

**STOT - single exposure****Components:****acetone:**

Exposure routes: inhalation (vapour)  
Target Organs: Nervous system  
Assessment: May cause drowsiness or dizziness.

**STOT - single exposure****toluene:**

Assessment: May cause drowsiness or dizziness.

**STOT - repeated exposure****Components:****toluene:**

Assessment: May cause damage to organs through prolonged or repeated exposure.

**Aspiration toxicity****Components:****toluene:**

May be fatal if swallowed and enters airways.

**Experience with human exposure****Components:****toluene:**

Skin contact:

Remarks:

Prolonged skin contact may defat the skin and produce dermatitis.

**SECTION 12. ECOLOGICAL INFORMATION**

**JM LVOC Membrane Adhesive (TPO & EPDM)**

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

**Ecotoxicity**

No data available

**Persistence and degradability****Components:****acetone:**Biodegradability : Result: Readily biodegradable.  
Biodegradation: 100 %**Bioaccumulative potential****Components:****tert-butyl acetate:**Partition coefficient: n- : log Pow: 1.64 (21.7 °C)  
octanol/water**acetone:**Partition coefficient: n- : log Pow: -0.24 (20 °C)  
octanol/water**toluene:**Partition coefficient: n- : Pow: 2.7  
octanol/water**Mobility in soil**

No data available

**Other adverse effects****Product:**Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
Protection of Stratospheric Ozone - CAA Section 602 Class I  
Substances  
Remarks: This product neither contains, nor was  
manufactured with a Class I or Class II ODS as defined by the  
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +  
B).Additional ecological : No data available  
information**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**Disposal of residual product : Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with  
chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.

## JM LVOC Membrane Adhesive (TPO & EPDM)

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

Dispose of as unused product.  
 Do not re-use empty containers.  
 Do not burn, or use a cutting torch on, the empty drum.

### SECTION 14. TRANSPORT INFORMATION

#### International transport regulations

Land transport

USDOT (Special Provision 383): UN1133, Adhesives, 3, III

TDG: UN1133, Adhesives, 3, II

LIMITED QUANTITY if shipped in inner packagings not over 5.0 L (1.3 gallons) net capacity each, packed in a strong outer packaging.

Sea transport

IMDG: UN1133, Adhesives, 3, II

Air transport

IATA/ICAO: UN1133, Adhesives, 3, II

### SECTION 15. REGULATORY INFORMATION

#### TSCA list

TSCA - 5(a) Significant New Use Rule List of Chemicals : No substances are subject to a Significant New Use Rule.

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D) : No substances are subject to TSCA 12(b) export notification requirements.

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
tert-butyl acetate	540-88-5	5000	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
 Serious eye damage or eye irritation  
 Reproductive toxicity  
 Specific target organ toxicity (single or repeated exposure)  
 Skin corrosion or irritation  
 Aspiration hazard

## JM LVOC Membrane Adhesive (TPO & EPDM)

Version 2.1

Revision Date 07/02/2019

Print Date 07/02/2019

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

toluene	108-88-3	5 - 10 %
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### Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

toluene	108-88-3	5 - 10 %
---------	----------	----------

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

acetone	67-64-1	10 - 30 %
toluene	108-88-3	5 - 10 %

### California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

**⚠️ WARNING:** This product can expose you to chemicals including toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### The components of this product are reported in the following inventories:

TSCA : On the inventory, or in compliance with the inventory

DSL : On the inventory, or in compliance with the inventory

## SECTION 16. OTHER INFORMATION

### Further information

Revision Date : 07/02/2019

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

## JM Single Ply Membrane Cleaner (Low VOC)

Version 2.1

Revision Date 01/18/2022

Print Date 01/18/2022

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : JM Single Ply Membrane Cleaner (Low VOC)

Manufacturer or supplier's details

Company : Johns Manville  
 Address : P.O. Box 5108  
 Denver, CO USA 80127  
 Telephone : +1-303-978-2000  
 Emergency telephone : 24-Hour Number: +1-800-424-9300 (CHEMTREC)  
 number

Company : Johns Manville Canada Inc.  
 Address : 5301 42 Avenue  
 Innisfail, AB Canada T4G 1A2  
 Telephone : +1-303-978-2000  
 Emergency telephone : 24-Hour Number: +1-800-424-9300 (CHEMTREC)  
 number

Recommended use of the chemical and restrictions on use

Restrictions on use : For professional users only.  
 Prepared by : productsafety@jm.com

### SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)**

Flammable liquids : Category 2  
 Eye irritation : Category 2A  
 Specific target organ toxicity : Category 3 (Central nervous system)  
 - single exposure

**GHS label elements**

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.  
 H319 Causes serious eye irritation.  
 H336 May cause drowsiness or dizziness.

Precautionary statements : **Prevention:**  
 P210 Keep away from heat/sparks/open flames/hot surfaces.  
 No smoking.  
 P233 Keep container tightly closed.  
 P240 Ground/bond container and receiving equipment.

## JM Single Ply Membrane Cleaner (Low VOC)

Version 2.1

Revision Date 01/18/2022

Print Date 01/18/2022

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.  
 P242 Use only non-sparking tools.  
 P243 Take precautionary measures against static discharge.  
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
 P264 Wash skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/ eye protection/ face protection.

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P235 Keep cool.

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

**Other hazards**

None known.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**
**Chemical nature**

Cleaning agent

**Hazardous components**

Chemical name	CAS-No.	Concentration (%)
acetone; 2-propanone	67-64-1	>= 80 - <= 100

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**SECTION 4. FIRST AID MEASURES**

General advice : Move out of dangerous area.  
 Show this safety data sheet to the doctor in attendance.  
 Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.  
 If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If on skin, rinse well with water.

## JM Single Ply Membrane Cleaner (Low VOC)

Version 2.1

Revision Date 01/18/2022

Print Date 01/18/2022

In case of eye contact	:	If on clothes, remove clothes. Remove contact lenses. Immediately flush eye(s) with plenty of water. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	None known.

### SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO <sub>2</sub> ) Dry chemical Water spray
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	carbon oxides
Specific extinguishing methods	:	Standard procedure for chemical fires.
Further information	:	Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth,

## JM Single Ply Membrane Cleaner (Low VOC)

Version 2.1

Revision Date 01/18/2022

Print Date 01/18/2022

vermiculite) and place in container for disposal according to local / national regulations (see section 13).

### SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
- Advice on safe handling : Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
- Recommended storage temperature : 16 - 27 °C
- Storage period : 9 - 12 Months
- Further information on storage stability : Do not freeze.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
acetone; 2-propanone	67-64-1	TWA	250 ppm	ACGIH
		STEL	500 ppm	ACGIH
		TWA	250 ppm 590 mg/m <sup>3</sup>	NIOSH REL
		TWA	1,000 ppm 2,400 mg/m <sup>3</sup>	OSHA

#### Personal protective equipment

- Respiratory protection : General and local exhaust ventilation is recommended to

## JM Single Ply Membrane Cleaner (Low VOC)

Version 2.1

Revision Date 01/18/2022

Print Date 01/18/2022

maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection Material	:	Impervious gloves
Remarks	:	Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Eye protection	:	Wear safety glasses with side shields or goggles. Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Written instructions for handling must be available at the work place.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	colorless
Odour	:	sweet, pungent
Odour Threshold	:	No data available
pH	:	7
Melting point/freezing point	:	-94 °C
Boiling point/boiling range	:	56.1 °C
Flash point	:	-17 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	12.8 %(V)
Lower explosion limit	:	2.5 %(V)
Vapour pressure	:	241 hPa (20 °C)
Relative vapour density	:	No data available

## JM Single Ply Membrane Cleaner (Low VOC)

Version 2.1

Revision Date 01/18/2022

Print Date 01/18/2022

Relative density : No data available  
 Density : 0.79 g/cm<sup>3</sup> (20 °C)

Solubility(ies)  
 Water solubility : completely soluble

Solubility in other solvents : No data available  
 Partition coefficient: n-octanol/water : No data available  
 Auto-ignition temperature : 465 °C

Thermal decomposition : No data available  
 Viscosity, dynamic : No data available  
 Viscosity, kinematic : No data available

### SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.  
 Chemical stability : Stable under normal conditions.  
 Possibility of hazardous reactions : No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.  
 Strong sunlight for prolonged periods.

Incompatible materials : Oxidizing agents  
 Acids  
 Bases  
 Ammonia  
 Reducing agents  
 halogenated compounds

Hazardous decomposition products : Hazardous decomposition products due to incomplete combustion  
 carbon oxides

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Components:

#### **acetone; 2-propanone:**

Acute oral toxicity : LD50 (Rat, female): 5,800 mg/kg  
 GLP: no

Acute inhalation toxicity : LC50 (Rat, female): 76.0 mg/l  
 Exposure time: 4 h  
 Test atmosphere: vapour  
 GLP: no

Acute dermal toxicity : LD50 (Guinea pig, male and female): > 7,426 mg/kg  
 GLP: no

#### **Serious eye damage/eye irritation**

#### Components:

#### **acetone; 2-propanone:**

Species: Rabbit

**JM Single Ply Membrane Cleaner (Low VOC)**

Version 2.1

Revision Date 01/18/2022

Print Date 01/18/2022

Result: Eye irritation  
Exposure time: 24 h  
Assessment: Irritating to eyes.  
Method: Draize Test

<b>IARC</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>ACGIH</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA (29 CFR 1910 Subpart Z, Toxic and Hazardous Substances).
<b>NTP</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**STOT - single exposure****Components:****acetone; 2-propanone:**

Exposure routes: inhalation (vapour)

Target Organs: Nervous system

Assessment: May cause drowsiness or dizziness.

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity**

No data available

**Persistence and degradability****Components:****acetone; 2-propanone:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 100 %

**Bioaccumulative potential****Components:****acetone; 2-propanone:**

Partition coefficient: n- : log Pow: -0.24 (20 °C)  
octanol/water

**Mobility in soil**

No data available

**JM Single Ply Membrane Cleaner (Low VOC)**

Version 2.1

Revision Date 01/18/2022

Print Date 01/18/2022

**Other adverse effects****Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
Protection of Stratospheric Ozone - CAA Section 602 Class I  
Substances  
Remarks: This product neither contains, nor was  
manufactured with a Class I or Class II ODS as defined by the  
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +  
B).

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with  
chemical or used container.  
Dispose of contents/container to an approved facility in  
accordance with local, regional, national and international  
regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

**SECTION 14. TRANSPORT INFORMATION****International transport regulations**

Land transport

USDOT: UN1090, Acetone, 3, II

TDG: UN1090, Acetone, 3, II

LIMITED QUANTITY if shipped in inner packagings not over 1.0 L (0.3 gallons) net capacity each,  
packed in a strong outer packaging.

Sea transport

IMDG: UN1090, Acetone, 3, II (-20 °C c.c.)

Air transport

IATA/ICAO: UN1090, Acetone, 3, II

**SECTION 15. REGULATORY INFORMATION****TSCA list**

TSCA - 5(a) Significant New Use Rule List of Chemicals : No substances are subject to a  
Significant New Use Rule.

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D) : No substances are subject to TSCA  
12(b) export notification requirements.

## JM Single Ply Membrane Cleaner (Low VOC)

Version 2.1

Revision Date 01/18/2022

Print Date 01/18/2022

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
acetone; 2-propanone	67-64-1	5000	5000

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
 Serious eye damage or eye irritation  
 Specific target organ toxicity (single or repeated exposure)

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

acetone; 2-propanone      67-64-1

#### California Prop. 65

**⚠️ WARNING:** This product can expose you to chemicals including benzene, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### The components of this product are reported in the following inventories:

TSCA : On the inventory, or in compliance with the inventory

DSL : On the inventory, or in compliance with the inventory

## SECTION 16. OTHER INFORMATION

#### Further information

Revision Date : 01/18/2022

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**JM Single Ply Membrane Primer (Low VOC)**

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Trade name : JM Single Ply Primer (Low VOC)

## Manufacturer or supplier's details

Company : Johns Manville  
Address : P.O. Box 5108  
Denver, CO USA 80127  
Telephone : +1-303-978-2000  
Emergency telephone : +1-800-424-9300 (CHEMTREC)  
number

Company : Johns Manville Canada Inc.  
Address : 5301 42 Avenue  
Innisfail, AB Canada T4G 1A2  
Telephone : +1-303-978-2000  
Emergency telephone : +1-800-424-9300 (CHEMTREC)  
number

Recommended use of the chemical and restrictions on use

Restrictions on use : For professional users only.

Prepared by : productsafety@jm.com

**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)**

Flammable liquids : Category 2  
Skin irritation : Category 2  
Eye irritation : Category 2A  
Reproductive toxicity : Category 2  
Specific target organ toxicity : Category 3 (Central nervous system)  
- single exposure  
Specific target organ toxicity : Category 2  
- repeated exposure  
Aspiration hazard : Category 1

**GHS label elements**Hazard pictograms : 

Signal word : Danger

**JM Single Ply Membrane Primer (Low VOC)**

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

- Hazard statements : H225 Highly flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H361 Suspected of damaging fertility or the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.
- Precautionary statements : **Prevention:**  
P201 + P202 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:**  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P331 Do NOT induce vomiting.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
- Storage:**  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P233 Keep container tightly closed.  
P405 Store locked up.

## JM Single Ply Membrane Primer (Low VOC)

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

**Disposal:**

P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

**Other hazards**

None known.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**
**Hazardous components**

Chemical name	CAS-No.	Concentration (%)
benzene, 1-chloro-4-(trifluoromethyl)-	98-56-6	>= 45 - <= 100
toluene	108-88-3	>= 10 - <= 30
crystalline silica	14808-60-7	>= 0.1 - <= 1

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**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
 Show this safety data sheet to the doctor in attendance.  
 Symptoms of poisoning may appear several hours later.  
 Do not leave the victim unattended.
- If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.  
 If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
 Wash contaminated clothing before re-use.  
 If skin irritation persists, call a physician.
- In case of eye contact : In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
 Keep eye wide open while rinsing.  
 Remove contact lenses.  
 Protect unharmed eye.  
 If eye irritation persists, consult a specialist.
- If swallowed : Do NOT induce vomiting.  
 Keep respiratory tract clear.  
 Never give anything by mouth to an unconscious person.  
 If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : None known.

**JM Single Ply Membrane Primer (Low VOC)**

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Foam  
Dry sand
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Hazardous decomposition products due to incomplete combustion  
carbon oxides  
chlorine compounds  
fluorine compounds
- Specific extinguishing methods : Standard procedure for chemical fires.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.  
For safety reasons in case of fire, cans should be stored separately in closed containments.  
Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Evacuate personnel to safe areas.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

## JM Single Ply Membrane Primer (Low VOC)

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

### SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).  
Use only explosion-proof equipment.  
Keep away from open flames, hot surfaces and sources of ignition.
- Advice on safe handling : Avoid formation of aerosol.  
Do not breathe vapours/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Take precautionary measures against static discharges.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Open drum carefully as content may be under pressure.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : No smoking.  
Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage stability : Stable at normal ambient temperature and pressure.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
toluene	108-88-3	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m <sup>3</sup>	NIOSH REL
		ST	150 ppm 560 mg/m <sup>3</sup>	NIOSH REL
		TWA	200 ppm	OSHA
		CEIL	300 ppm	OSHA
		Peak	500 ppm (10 minutes)	OSHA
crystalline silica	14808-60-7	TWA (Respirable fraction)	0.025 mg/m <sup>3</sup>	ACGIH
		TWA (respirable)	10 mg/m <sup>3</sup> / %SiO <sub>2</sub> +2	OSHA

**JM Single Ply Membrane Primer (Low VOC)**

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

		TWA (respirable)	250 mppcf / %SiO <sub>2</sub> +5	OSHA
		TWA (Respirable dust)	0.05 mg/m <sup>3</sup>	NIOSH REL
		TWA (Respirable dust)	0.05 mg/m <sup>3</sup>	OSHA

**Personal protective equipment**

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection  
Material : Solvent-resistant gloves

Remarks : Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection : Tightly fitting safety goggles  
Safety glasses with side-shields  
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.  
Written instructions for handling must be available at the work place.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Color : colourless

Odor : characteristic

**JM Single Ply Membrane Primer (Low VOC)**

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

Odor Threshold	: No data available
pH	: No data available
Melting point/range	: not determined
Boiling point/boiling range	: 111 °C
Flash point	: 7.2 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: 7.0 %(V)
Lower explosion limit	: 1.2 %(V)
Vapour pressure	: 29 hPa (20 °C)
Relative vapour density	: Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density	: No data available
Density	: 1.2 g/cm <sup>3</sup> (20 °C)
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.
Conditions to avoid	: Heat, flames and sparks.

**JM Single Ply Membrane Primer (Low VOC)**

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:  
 carbon oxides  
 nitrogen oxides

**SECTION 11. TOXICOLOGICAL INFORMATION**
**Acute toxicity**
**Product:**

Acute dermal toxicity : Acute toxicity estimate : > 2,000 mg/kg  
 Method: Calculation method

**Acute toxicity**
**Components:**
**benzene, 1-chloro-4-(trifluoromethyl)-:**

Acute oral toxicity : LD50 (Rat, male): 5,546 mg/kg  
 GLP: no

Acute inhalation toxicity : LC50 (Rat, male and female): > 32.03 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Method: OECD Test Guideline 403  
 GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 3,300 mg/kg  
 GLP: no

**Acute toxicity**
**toluene:**

Acute oral toxicity : LD50 Oral (Rat, male): 5,580 mg/kg

Acute inhalation toxicity : LC50 (Rat): 28.1 mg/l  
 Exposure time: 4 h  
 Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 12,267 mg/kg

**Acute toxicity**
**crystalline silica:**

Acute oral toxicity : LD50 (Rat): > 22,500 mg/kg

Acute inhalation toxicity : Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

**JM Single Ply Membrane Primer (Low VOC)**

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

**Skin corrosion/irritation**
**Components:**
**toluene:**

Species: Rabbit

Result: Irritating to skin.

**Respiratory or skin sensitisation**
**Components:**
**benzene, 1-chloro-4-(trifluoromethyl)-:**

Test Type: local lymph node assay (LLNA)

Exposure routes: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: The product is a skin sensitiser, sub-category 1B.

<b>IARC</b>	Group 1: Carcinogenic to humans	
	crystalline silica	14808-60-7
<b>ACGIH</b>	Suspected human carcinogen	
	crystalline silica	14808-60-7
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.	
<b>NTP</b>	Known to be human carcinogen	
	crystalline silica	14808-60-7

**Reproductive toxicity**
**Components:**
**toluene:**

 Reproductive toxicity -  
 Assessment

: Suspected of damaging the unborn child., Some evidence of adverse effects on development, based on animal experiments.

**STOT - single exposure**
**Components:**
**toluene:**

Assessment: May cause drowsiness or dizziness.

**STOT - repeated exposure**
**Components:**
**toluene:**

Assessment: May cause damage to organs through prolonged or repeated exposure.

**JM Single Ply Membrane Primer (Low VOC)**

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

**Aspiration toxicity****Components:****toluene:**

May be fatal if swallowed and enters airways.

**Experience with human exposure****Components:****toluene:**

Skin contact:

Remarks:

Prolonged skin contact may defat the skin and produce dermatitis.

**Further information****Product:**

Remarks: Solvents may degrease the skin.

---

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**Toxicity to fish : LC50 (Danio rerio (zebra fish)): 3 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 0.41 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201**Ecotoxicology Assessment**

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

**crystalline silica:**Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 10,000 mg/l  
Exposure time: 72 h

**JM Single Ply Membrane Primer (Low VOC)**

Version 3.1

Revision Date 07/26/2019

Print Date 07/26/2019

**Persistence and degradability****Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Biodegradability : Result: According to the results of tests of biodegradability this product is not readily biodegradable.  
Method: OECD Test Guideline 301D

**Bioaccumulative potential****Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Bioaccumulation : Bioconcentration factor (BCF): 121.8

Partition coefficient: n-octanol/water : Pow: 5,030 (25 °C)  
log Pow: 3.7 (25 °C)

**toluene:**

Partition coefficient: n-octanol/water : Pow: 2.7

**Mobility in soil**

No data available

**Other adverse effects****Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
Protection of Stratospheric Ozone - CAA Section 602 Class I  
Substances  
Remarks: This product neither contains, nor was  
manufactured with a Class I or Class II ODS as defined by the  
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +  
B).

Additional ecological information : No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Disposal of residual product : Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with  
chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.



**JM Single Ply Membrane Primer (Low VOC)**

Version 3.1

Revision Date 07/26/2019


Print Date 07/26/2019

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

toluene	108-88-3	10 - 30 %
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**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)**

 **WARNING:** This product can expose you to chemicals including benzene, 1-chloro-4-(trifluoromethyl)-, which is/are known to the State of California to cause cancer, and toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**The components of this product are reported in the following inventories:**

TSCA : On the inventory, or in compliance with the inventory

DSL : On the inventory, or in compliance with the inventory

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**SECTION 16. OTHER INFORMATION****Further information**

Revision Date : 07/26/2019

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**JM One-Part Pourable Sealer**

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Trade name : JM One-Part Pourable Sealer

## Manufacturer or supplier's details

Company : Johns Manville  
Address : P.O. Box 5108  
Denver, CO USA 80217-5108  
Telephone : +1-303-978-2000  
Emergency telephone : 24-Hour Number: +1-800-424-9300 (CHEMTREC)  
number

Company : Johns Manville Canada Inc.  
Address : 5301 42 Avenue  
Innisfail, AB Canada T4G 1A2  
Telephone : +1-303-978-2000  
Emergency telephone : 24-Hour Number: +1-800-424-9300 (CHEMTREC)  
number

## Recommended use of the chemical and restrictions on use

Recommended use : Sealant  
Restrictions on use : For professional users only.  
Prepared by : productsafety@jm.com

**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with 29 CFR 1910.1200 and the Hazardous Products Regulations**

Skin irritation : Category 2  
Serious eye damage : Category 1  
Skin sensitisation : Category 1  
Germ cell mutagenicity : Category 2  
Reproductive toxicity : Category 1B  
Specific target organ toxicity : Category 1 (thymus gland)  
- single exposure  
Specific target organ toxicity : Category 1 (thymus gland, Liver, Kidney)  
- repeated exposure (Oral)

**GHS label elements**Hazard pictograms : 

Signal word : Danger

## JM One-Part Pourable Sealer

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

**Hazard statements** : H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H341 Suspected of causing genetic defects.  
 H360 May damage fertility or the unborn child.  
 H370 Causes damage to organs (thymus gland).  
 H372 Causes damage to organs (thymus gland, Liver, Kidney) through prolonged or repeated exposure if swallowed.

**Precautionary statements** :

**Prevention:**  
 P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P260 Do not breathe mist or vapours.  
 P264 Wash skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.  
 P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P362 Take off contaminated clothing and wash before reuse.

**Storage:**  
 P405 Store locked up.

**Disposal:**  
 P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

**Other hazards**

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical nature**

Mixture

**Hazardous components**

Chemical name	CAS-No.	Concentration (% w/w)
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	>= 1 - <= 5
quartz (SiO <sub>2</sub> )	14808-60-7	>= 0.1 - <= 1
titanium dioxide	13463-67-7	>= 0.1 - <= 1
dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	>= 0.1 - <= 1

## JM One-Part Pourable Sealer

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

1,2-ethanediamine, N,N-bis[3-(trimethoxysilyl)propyl]-	74956-86-8	>= 0.1 - <= 1
phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)-	25973-55-1	>= 0.1 - <= 1

Actual concentration or concentration range is withheld as a trade secret

### SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Call a physician if irritation develops or persists.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Protect unharmed eye.  
If eye irritation persists, consult a specialist.
- If swallowed : DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
Gently wipe or rinse the inside of the mouth with water.  
Never give anything by mouth to an unconscious person.  
Get medical attention immediately.  
If breathing is irregular or stopped, administer artificial respiration.
- Most important symptoms and effects, both acute and delayed : Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
Suspected of causing genetic defects.  
May damage fertility or the unborn child.  
Causes damage to organs.  
Causes damage to organs through prolonged or repeated exposure if swallowed.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry powder  
Water spray  
Alcohol-resistant foam
- Unsuitable extinguishing media : High volume water jet
- Hazardous combustion products : carbon oxides  
nitrogen oxides  
Silicon oxides  
tin/tin oxides  
titanium/titanium oxides
- Further information : Standard procedure for chemical fires.

## JM One-Part Pourable Sealer

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Do not breathe vapours/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Observe label precautions.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	TWA	0.1 mg/m <sup>3</sup> (Tin)	OSHA
		TWA	0.1 mg/m <sup>3</sup> (Tin)	ACGIH
		STEL	0.2 mg/m <sup>3</sup> (Tin)	ACGIH
		TWA	0.1 mg/m <sup>3</sup> (Tin)	CA AB OEL
		STEL	0.2 mg/m <sup>3</sup> (Tin)	CA AB OEL
		TWAEV	0.1 mg/m <sup>3</sup>	CA QC OEL

**JM One-Part Pourable Sealer**

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

			(Tin)	
		STEV	0.2 mg/m3 (Tin)	CA QC OEL
		TWA	0.1 mg/m3 (Tin)	CA BC OEL
		STEL	0.2 mg/m3 (Tin)	CA BC OEL
		TWA	0.1 mg/m3 (Tin)	CA ON OEL
		TWA	0.1 mg/m3 (Tin)	NIOSH REL
titanium dioxide	13463-67-7	TWA	10 mg/m3	CA AB OEL
		TWAEV (total dust)	10 mg/m3	CA QC OEL
		TWA (total dust)	15 mg/m3	OSHA
		TWA	10 mg/m3 (Titanium dioxide)	ACGIH
		TWA (Total dust)	10 mg/m3	CA BC OEL
		TWA (respirable dust fraction)	3 mg/m3	CA BC OEL
quartz (SiO <sub>2</sub> )	14808-60-7	TWA (Respirable particulates)	0.025 mg/m3	CA AB OEL
		TWA (Respirable fraction)	0.1 mg/m3	CA ON OEL
		TWAEV (respirable dust)	0.1 mg/m3	CA QC OEL
		TWA (Respirable particulate matter)	0.025 mg/m3	ACGIH
		TWA (respirable)	10 mg/m3 / %SiO <sub>2</sub> +2	OSHA
		TWA (respirable)	250 mppcf / %SiO <sub>2</sub> +5	OSHA
		TWA (Respirable dust)	0.05 mg/m3	NIOSH REL
		TWA (Respirable)	0.025 mg/m3	CA BC OEL
		TWA (Respirable)	0.025 mg/m3 (Silica)	CA BC OEL
		TWA (Respirable dust)	0.05 mg/m3	OSHA

**Personal protective equipment**

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn.

## JM One-Part Pourable Sealer

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

	Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Hand protection	
Material	: Protective gloves
Remarks	: Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Eye protection	: Wear safety glasses with side shields or goggles. Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	: Wear protective clothing, such as long-sleeved shirts and pants. Choose body protection according to the amount and concentration of the dangerous substance at the work place. Remove and wash contaminated clothing before re-use.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Written instructions for handling must be available at the work place.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: various, grey, white
Odour	: mild
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: > 93 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: 1.55
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-	: No data available

**JM One-Part Pourable Sealer**

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

octanol/water	
Auto-ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: 30,000 - 40,000 mPa.s
Viscosity, kinematic	: No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: Stable at normal ambient temperature and pressure.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Exothermic reaction with strong acids. No decomposition if stored and applied as directed.
Conditions to avoid	: Exposure to moisture
Incompatible materials	: Strong acids

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**

Acute oral toxicity	: Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	: Acute toxicity estimate : > 10 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

**Components:****N-(3-(trimethoxysilyl)propyl)ethylenediamine:**

Acute oral toxicity	: LD50 (Rat, male and female): 2,295 mg/kg Method: OPPTS 870.1100 GLP: yes
Acute inhalation toxicity	: LC50 (Rat, male and female): > 1.49 - < 2.44 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OPPTS 870.1300 GLP: yes
Acute dermal toxicity	: LD50 (Rabbit, male and female): > 2,000 mg/kg Method: OPPTS 870.1200 GLP: yes

**quartz (SiO<sub>2</sub>):**

Acute oral toxicity	: LD50 (Rat): > 22,500 mg/kg
Acute inhalation toxicity	: Assessment: The substance or mixture has no acute inhalation toxicity

**JM One-Part Pourable Sealer**

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

**titanium dioxide:**

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.09 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Method: OECD Test Guideline 403

Acute dermal toxicity : Method: Expert judgement  
 Assessment: The substance or mixture has no acute dermal toxicity

**dibutylbis(pentane-2,4-dionato-O,O')tin:**

Acute oral toxicity : LD50 (Rat, female): 1,864 mg/kg  
 Method: OECD Test Guideline 401

Acute inhalation toxicity : Assessment: The substance or mixture has no acute inhalation toxicity  
 Remarks: No data available

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
 Method: OECD Test Guideline 402

**phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)-:**

Acute oral toxicity : LD50 (Rat, male and female): > 7,750 mg/kg  
 Method: OECD Test Guideline 401  
 GLP: no

Acute inhalation toxicity : LC50 (Rat, male and female): > 0.4 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Method: OECD Test Guideline 403  
 GLP: no  
 Assessment: The substance or mixture has no acute inhalation toxicity  
 Remarks: Highest concentration available for testing.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 1,100 mg/kg  
 Method: OECD Test Guideline 402  
 GLP: no  
 Assessment: The substance or mixture has no acute dermal toxicity  
 Remarks: No mortality was observed.

**Skin corrosion/irritation**
**Components:**
**N-(3-(trimethoxysilyl)propyl)ethylenediamine:**

Species: Rabbit  
 Exposure time: 4 h  
 Method: OPPTS 870.2500  
 Result: Mild skin irritation  
 GLP: yes

**JM One-Part Pourable Sealer**

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

Remarks: Based on available data, the classification criteria are not met.

**Skin corrosion/irritation****dibutylbis(pentane-2,4-dionato-O,O')tin:**

Species: Rat

Exposure time: 24 h

Method: OECD Test Guideline 402

Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.

**Serious eye damage/eye irritation****Components:****N-(3-(trimethoxysilyl)propyl)ethylenediamine:**

Species: Rabbit

Result: Irreversible effects on the eye

Method: OECD Test Guideline 405

GLP: yes

**Serious eye damage/eye irritation****dibutylbis(pentane-2,4-dionato-O,O')tin:**

Species: Rabbit

Result: Irreversible effects on the eye

Method: in vitro eye irritation test

Remarks: rabbit eye

**Serious eye damage/eye irritation****1,2-ethanediamine, N,N-bis[3-(trimethoxysilyl)propyl]-:**

Result: Irreversible effects on the eye

**Respiratory or skin sensitisation****Components:****N-(3-(trimethoxysilyl)propyl)ethylenediamine:**

Test Type: Maximisation Test

Exposure routes: Dermal

Species: Guinea pig

Method: OECD Test Guideline 406

Result: The product is a skin sensitiser, sub-category 1B.

GLP: yes

**Respiratory or skin sensitisation****dibutylbis(pentane-2,4-dionato-O,O')tin:**

Test Type: Maximisation Test

Species: Guinea pig

Assessment: May cause sensitisation by skin contact.

Method: OECD Test Guideline 406

**Germ cell mutagenicity****Components:****dibutylbis(pentane-2,4-dionato-O,O')tin:**

Germ cell mutagenicity- : Positive result(s) from in vivo somatic cell mutagenicity tests

## JM One-Part Pourable Sealer

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

Assessment supported by positive results from in vitro mutagenicity assays or chemical structure activity relationship to known germ cell mutagens

<b>IARC</b>	Group 1: Carcinogenic to humans	
	quartz (SiO <sub>2</sub> )	14808-60-7
	Group 2B: Possibly carcinogenic to humans	
	titanium dioxide	13463-67-7
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA (29 CFR 1910 Subpart Z, Toxic and Hazardous Substances).	
<b>NTP</b>	Known to be human carcinogen	
	quartz (SiO <sub>2</sub> )	14808-60-7

### Reproductive toxicity

#### Components:

##### **dibutylbis(pentane-2,4-dionato-O,O')tin:**

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

### STOT - single exposure

#### Components:

##### **N-(3-(trimethoxysilyl)propyl)ethylenediamine:**

Exposure routes: Inhalation  
 Target Organs: Respiratory system  
 Assessment: May cause respiratory irritation.

### STOT - single exposure

##### **dibutylbis(pentane-2,4-dionato-O,O')tin:**

Target Organs: thymus gland  
 Assessment: Causes damage to organs.

### STOT - repeated exposure

#### Components:

##### **dibutylbis(pentane-2,4-dionato-O,O')tin:**

Exposure routes: Ingestion  
 Target Organs: thymus gland  
 Assessment: Causes damage to organs through prolonged or repeated exposure.

### STOT - repeated exposure

##### **phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)-:**

Exposure routes: Ingestion  
 Target Organs: Liver, Kidney  
 Assessment: May cause damage to organs through prolonged or repeated exposure.

**JM One-Part Pourable Sealer**

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****quartz (SiO<sub>2</sub>):**

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 10,000 mg/l  
Exposure time: 72 h

**dibutylbis(pentane-2,4-dionato-O,O')tin:**

Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): > 2 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.0036 mg/l  
aquatic invertebrates : Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EC50 (Desmodesmus subspicatus (green algae)): 2 mg/l  
plants : Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic : 100  
toxicity)

Toxicity to microorganisms : EC50 (activated sludge): 190 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition  
Method: OECD Test Guideline 209

**Persistence and degradability**

No data available

**Bioaccumulative potential****Components:****N-(3-(trimethoxysilyl)propyl)ethylenediamine:**

Partition coefficient: n- : log Pow: -4 - -0.82 (68 °F / 20 °C)  
octanol/water

**phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)-:**

Partition coefficient: n- : log Pow: 7.3 (77 °F / 25 °C)  
octanol/water

**Mobility in soil**

No data available

**Other adverse effects****Product:**

**JM One-Part Pourable Sealer**

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

- Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
- Additional ecological information : Very toxic to aquatic life with long lasting effects.

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

- Waste from residues : Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.
- Contaminated packaging : Dispose of as unused product.

**SECTION 14. TRANSPORT INFORMATION****International transport regulations**

## Land transport

USDOT: Not classified as a dangerous good under transport regulations

TDG: Not classified as a dangerous good under transport regulations

## Sea transport

IMDG: Not classified as a dangerous good under transport regulations

## Air transport

IATA/ICAO: Not classified as a dangerous good under transport regulations

**SECTION 15. REGULATORY INFORMATION****TSCA list**

TSCA - 5(a) Significant New Use Rule List of Chemicals : No substances are subject to a Significant New Use Rule.

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D) : No substances are subject to TSCA 12(b) export notification requirements.

**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Respiratory or skin sensitisation

## JM One-Part Pourable Sealer

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

Reproductive toxicity  
 Germ cell mutagenicity  
 Specific target organ toxicity (single or repeated exposure)  
 Skin corrosion or irritation  
 Serious eye damage or eye irritation

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCOMI Intermediate or Final VOC's (40 CFR 60.489).

### California Prop. 65

**⚠️ WARNING:** This product can expose you to chemicals including crystalline silica, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### The components of this product are reported in the following inventories:

**TSCA** : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

**DSL** : On the inventory, or in compliance with the inventory

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## SECTION 16. OTHER INFORMATION

### Further information

Revision Date : 11/20/2023

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
 CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)  
 CA BC OEL : Canada. British Columbia OEL  
 CA ON OEL : Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.  
 CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants  
 NIOSH REL : USA. NIOSH Recommended Exposure Limits  
 OSHA : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants  
 OSHA : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts

**JM One-Part Pourable Sealer**

Version 3.0

Revision Date 11/20/2023

Print Date 11/20/2023

ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA AB OEL / STEL	:	15-minute occupational exposure limit
CA BC OEL / TWA	:	8-hour time-weighted average
CA BC OEL / STEL	:	short-term exposure limit
CA ON OEL / TWA	:	Time-Weighted Average Limit (TWA)
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term exposure value
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA / TWA	:	8-hour time weighted average
OSHA / TWA	:	8-hour time weighted average

AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**JM Single Ply Sealing Mastic**

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Trade name : JM Single Ply Sealing Mastic

## Manufacturer or supplier's details

Company : Johns Manville  
Address : P.O. Box 5108  
Denver, CO USA 80127  
Telephone : +1-303-978-2000  
Emergency telephone : 24-Hour Number: +1-800-424-9300 (CHEMTREC)  
number

Company : Johns Manville Canada Inc.  
Address : 5301 42 Avenue  
Innisfail, AB Canada T4G 1A2  
Telephone : +1-303-978-2000  
Emergency telephone : 24-Hour Number: +1-800-424-9300 (CHEMTREC)  
number

## Recommended use of the chemical and restrictions on use

Recommended use : Sealant  
Restrictions on use : For professional users only.  
Prepared by : productsafety@jm.com

**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)**

Skin irritation : Category 2

Eye irritation : Category 2A

**GHS label elements**

Hazard pictograms :



Signal word : Warning

Hazard statements : H315 Causes skin irritation.  
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves/ eye protection/ face protection.

**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

## JM Single Ply Sealing Mastic

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

to do. Continue rinsing.  
 P332 + P313 If skin irritation occurs: Get medical advice/  
 attention.  
 P337 + P313 If eye irritation persists: Get medical advice/  
 attention.  
 P362 Take off contaminated clothing and wash before reuse.

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Hazardous components

Chemical name	CAS-No.	Concentration (%)
calcium carbonate	471-34-1	>= 15 - <= 40
Silicic acid, aluminum salt	1335-30-4	>= 10 - <= 30
Stoddard solvent	8052-41-3	>= 5 - <= 10
magnesium carbonate	546-93-0	>= 5 - <= 10
silicon dioxide	112926-00-8	>= 0.1 - <= 1
titanium dioxide	13463-67-7	>= 0.1 - <= 1
quartz (SiO <sub>2</sub> )	14808-60-7	>= 0.1 - <= 1
carbon black	1333-86-4	>= 0.1 - <= 1

Actual concentration or concentration range is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

- General advice : Handle in accordance with good industrial hygiene and safety practice.  
 Show this safety data sheet to the doctor in attendance.  
 Move out of dangerous area.  
 Do not leave the victim unattended.
- If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
 Call a physician if irritation develops or persists.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
 If easy to do, remove contact lens, if worn.  
 Protect unharmed eye.  
 If eye irritation persists, consult a specialist.
- If swallowed : DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
 Gently wipe or rinse the inside of the mouth with water.  
 Never give anything by mouth to an unconscious person.  
 If symptoms persist, call a physician or Poison Control Centre immediately.
- Most important symptoms and effects, both acute and delayed : Causes skin irritation.  
 Causes serious eye damage.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**JM Single Ply Sealing Mastic**

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry powder  
Water spray  
Foam
- Unsuitable extinguishing media : High volume water jet
- Hazardous combustion products : carbon oxides  
nitrogen oxides  
aluminum oxides
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Use personal protective equipment.  
Evacuate personnel to safe areas.  
Keep people away from and upwind of spill/leak.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Should not be released into the environment.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.
- Conditions for safe storage : Keep containers tightly closed in a dry, cool place.
- Materials to avoid : Keep away from oxidizing agents and strongly acid or alkaline materials.
- Recommended storage temperature : 4.4 - 32 °C
- Storage period : 12 Months
- Further information on storage stability : Keep containers tightly closed in a dry, cool and well-ventilated place.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

**JM Single Ply Sealing Mastic**

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Stoddard solvent	8052-41-3	TWA	100 ppm	ACGIH
		TWA	350 mg/m <sup>3</sup>	NIOSH REL
		C	1,800 mg/m <sup>3</sup>	NIOSH REL
		TWA	500 ppm 2,900 mg/m <sup>3</sup>	OSHA
magnesium carbonate	546-93-0	TWA (respirable)	5 mg/m <sup>3</sup>	NIOSH REL
		TWA (total)	10 mg/m <sup>3</sup>	NIOSH REL
		TWA (total dust)	15 mg/m <sup>3</sup>	OSHA
		TWA (respirable fraction)	5 mg/m <sup>3</sup>	OSHA
silicon dioxide	112926-00-8	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA
		TWA (Dust)	80 mg/m <sup>3</sup> / %SiO <sub>2</sub> (Silica)	OSHA
		TWA	6 mg/m <sup>3</sup> (Silica)	NIOSH REL
titanium dioxide	13463-67-7	TWA (total dust)	15 mg/m <sup>3</sup>	OSHA
		TWA	10 mg/m <sup>3</sup> (Titanium dioxide)	ACGIH
quartz (SiO <sub>2</sub> )	14808-60-7	TWA (Respirable fraction)	0.025 mg/m <sup>3</sup>	ACGIH
		TWA (respirable)	10 mg/m <sup>3</sup> / %SiO <sub>2</sub> +2	OSHA
		TWA (respirable)	250 mppcf / %SiO <sub>2</sub> +5	OSHA
		TWA (Respirable dust)	0.05 mg/m <sup>3</sup>	NIOSH REL
		TWA (Respirable dust)	0.05 mg/m <sup>3</sup>	OSHA
carbon black	1333-86-4	TWA	3.5 mg/m <sup>3</sup>	ACGIH
		TWA	3.5 mg/m <sup>3</sup>	NIOSH REL
		TWA	3.5 mg/m <sup>3</sup>	OSHA
		TWA	0.1 mg/m <sup>3</sup> (PAHs)	NIOSH REL
		TWA (inhalable fraction)	3 mg/m <sup>3</sup>	ACGIH

**Personal protective equipment**

Respiratory protection : No personal respiratory protective equipment normally required.  
Where concentrations are above recommended limits or are

## JM Single Ply Sealing Mastic

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

	unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Hand protection Material	: Protective gloves
Remarks	: Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Eye protection	: Wear safety glasses with side shields or goggles. Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	: Wear protective clothing, such as long-sleeved shirts and pants. Remove and wash contaminated clothing before re-use.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Written instructions for handling must be available at the work place.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: paste
Colour	: grey
Odour	: hydrocarbon-like
Odour Threshold	: No data available
pH	: Not applicable
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: Not applicable
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: 6.0 %(V)
Lower explosion limit	: 1.1 %(V)
Vapour pressure	: Not applicable
Relative vapour density	: Not applicable
Relative density	: No data available
Density	: 1.4 g/cm <sup>3</sup> (20 °C)

## JM Single Ply Sealing Mastic

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: 230 °C
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: > 20.5 mm <sup>2</sup> /s (40 °C)

### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: None known.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: carbon oxides aluminum oxides nitrogen oxides

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

##### Product:

Acute oral toxicity	: Acute toxicity estimate : 3,571 mg/kg Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate : 5,000 mg/kg Method: Calculation method

#### Acute toxicity

##### Components:

##### **calcium carbonate:**

Acute oral toxicity	: LD50 (Rat, female): > 2,000 mg/kg Method: OECD Test Guideline 420 GLP: yes
Acute inhalation toxicity	: LC50 (Rat, male and female): > 3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: yes Assessment: The substance or mixture has no acute

**JM Single Ply Sealing Mastic**

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
 Method: OECD Test Guideline 402  
 GLP: yes

**Acute toxicity**
**Silicic acid, aluminum salt:**

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg  
 Method: OECD Test Guideline 423

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.07 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Method: EPA OPP 81-3  
 Assessment: The substance or mixture has no acute inhalation toxicity  
 Remarks: Information given is based on data obtained from similar substances.  
 No mortality was observed.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg  
 Method: OECD Test Guideline 402  
 Remarks: Information given is based on data obtained from similar substances.

**Acute toxicity**
**Stoddard solvent:**

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
 Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.5 mg/l  
 Exposure time: 4 h  
 Test atmosphere: vapour  
 Method: OECD Test Guideline 403  
 Assessment: The substance or mixture has no acute inhalation toxicity  
 Remarks: No mortality was observed.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 3,000 mg/kg  
 Method: OECD Test Guideline 402

**Acute toxicity**
**magnesium carbonate:**

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg  
 Method: OECD Test Guideline 420

**Acute toxicity**
**silicon dioxide:**

Acute oral toxicity : Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : Assessment: The substance or mixture has no acute inhalation toxicity

**JM Single Ply Sealing Mastic**

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

**Acute toxicity****titanium dioxide:**

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.09 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403

Acute dermal toxicity : Method: Expert judgement  
Assessment: The substance or mixture has no acute dermal toxicity

**Acute toxicity****quartz (SiO<sub>2</sub>):**

Acute oral toxicity : LD50 (Rat): > 22,500 mg/kg

Acute inhalation toxicity : Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

**Acute toxicity****carbon black:**

Acute oral toxicity : LD50 (Rat, male and female): > 10,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 5.0 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Method: Expert judgement  
Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation****Components:****Stoddard solvent:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Skin irritation

**Serious eye damage/eye irritation****Product:**

## JM Single Ply Sealing Mastic

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

Result: irritating

### Serious eye damage/eye irritation

#### Components:

##### **Silicic acid, aluminum salt:**

Species: chicken

Result: Irreversible effects on the eye

<b>IARC</b>	Group 1: Carcinogenic to humans	
	quartz (SiO <sub>2</sub> )	14808-60-7
	Group 2B: Possibly carcinogenic to humans	
	titanium dioxide	13463-67-7
	carbon black	1333-86-4

**OSHA** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA (29 CFR 1910 Subpart Z, Toxic and Hazardous Substances).

**NTP** Known to be human carcinogen

	quartz (SiO <sub>2</sub> )	14808-60-7
--	----------------------------	------------

### STOT - repeated exposure

#### Components:

##### **Stoddard solvent:**

Exposure routes: inhalation (vapour)

Target Organs: Central nervous system

Assessment: No significant health effects observed in animals at concentrations of 250 ppmV/6h/d or less.

### Aspiration toxicity

#### Components:

##### **Stoddard solvent:**

May be fatal if swallowed and enters airways.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

##### **Stoddard solvent:**

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (algae)): 0.16 mg/l  
 Test Type: static test  
 Method: OECD Test Guideline 201

## JM Single Ply Sealing Mastic

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

Toxicity to fish (Chronic toxicity) : NOEC: 0.142 mg/l  
 Exposure time: 30 d  
 Remarks: The value is calculated

### quartz (SiO<sub>2</sub>):

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 10,000 mg/l  
 Exposure time: 72 h

### Persistence and degradability

#### Components:

#### Stoddard solvent:

Biodegradability : Result: Readily biodegradable.

### Bioaccumulative potential

#### Components:

#### Stoddard solvent:

Partition coefficient: n-octanol/water : log Pow: 3.5 - 6.4 (20 °C)  
 Method: OECD Test Guideline 117

### Mobility in soil

No data available

### Other adverse effects

#### Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
 Protection of Stratospheric Ozone - CAA Section 602 Class I  
 Substances  
 Remarks: This product neither contains, nor was  
 manufactured with a Class I or Class II ODS as defined by the  
 U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +  
 B).

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of contents/container to an approved facility in  
 accordance with local, regional, national and international  
 regulations.  
 Contaminated packaging : Empty remaining contents.  
 Dispose of as unused product.  
 Do not re-use empty containers.

## SECTION 14. TRANSPORT INFORMATION

### International transport regulations

Land transport

**JM Single Ply Sealing Mastic**

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

USDOT: Not classified as a dangerous good under transport regulations

TDG: Not classified as a dangerous good under transport regulations

Sea transport

IMDG: Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO: Not classified as a dangerous good under transport regulations

**SECTION 15. REGULATORY INFORMATION****TSCA list**

TSCA - 5(a) Significant New Use Rule List of Chemicals : No substances are subject to a Significant New Use Rule.

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D) : No substances are subject to TSCA 12(b) export notification requirements.

**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Skin corrosion or irritation  
Serious eye damage or eye irritation**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.**Clean Air Act**

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**California Prop. 65**

This product does not require a warning under the California Safe Drinking Water and Toxic Enforcement Act (Proposition 65).

**The components of this product are reported in the following inventories:**

TSCA : All substances listed as active on the TSCA inventory

**JM Single Ply Sealing Mastic**

Version 2.0

Revision Date 02/23/2021

Print Date 02/23/2021

DSL : All components of this product are on the Canadian DSL

**SECTION 16. OTHER INFORMATION****Further information**

Revision Date : 02/23/2021

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Trade name : JM TPO LVOC Edge Sealant – Clear

## Manufacturer or supplier's details

Company : Johns Manville  
Address : P.O. Box 5108  
Denver, CO USA 80127  
Telephone : +1-303-978-2000  
Emergency telephone : +1-800-424-9300 (CHEMTREC)  
numberCompany : Johns Manville Canada Inc.  
Address : 5301 42 Avenue  
Innisfail, AB Canada T4G 1A2  
Telephone : +1-303-978-2000  
Emergency telephone : +1-800-424-9300 (CHEMTREC)  
number

## Recommended use of the chemical and restrictions on use

Recommended use : Sealant

Restrictions on use : For professional and industrial installation and use only.

Prepared by : productsafety@jm.com

**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)**

Flammable liquids : Category 2

Skin sensitisation : Category 1

Reproductive toxicity : Category 2

Specific target organ toxicity : Category 2  
- repeated exposure**GHS label elements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.  
H317 May cause an allergic skin reaction.  
H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

Precautionary statements

:

**Prevention:**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**
**Chemical nature**

Adhesives and/or sealants

**Hazardous components**

Chemical name	CAS-No.	Concentration (%)
benzene, 1-chloro-4-(trifluoromethyl)-	98-56-6	>= 60 - <= 80
toluene	108-88-3	>= 5 - <= 10

Actual concentration or concentration range is withheld as a trade secret

**SECTION 4. FIRST AID MEASURES**

## JM TPO LVOC Edge Sealant – Clear

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

General advice	:	Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended. Symptoms of poisoning may appear several hours later.
If inhaled	:	Remove to fresh air immediately. Get medical attention immediately. If breathing is irregular or stopped, administer artificial respiration.
In case of skin contact	:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician if irritation develops or persists.
In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 5 minutes. If easy to do, remove contact lens, if worn. Protect unharmed eye. If eye irritation persists, consult a specialist.
If swallowed	:	DO NOT induce vomiting unless directed to do so by a physician or poison control center. Gently wipe or rinse the inside of the mouth with water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician or Poison Control Centre immediately.
Most important symptoms and effects, both acute and delayed	:	May cause an allergic skin reaction. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure.
Protection of first-aiders	:	If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Notes to physician	:	Treat symptomatically.

### SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Carbon dioxide (CO <sub>2</sub> ) Water spray Dry chemical Foam Halons
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Vapours may form flammable mixture with air Vapours are heavier than air and may spread along floors.
Hazardous combustion products	:	carbon oxides Hydrogen chloride gas Hydrogen fluoride

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Use personal protective equipment.  
Evacuate personnel to safe areas.  
Keep people away from and upwind of spill/leak.  
Remove all sources of ignition.  
Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Should not be released into the environment.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Keep in suitable, closed containers for disposal.

**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : Use explosion-proof equipment.  
Electrical equipment should be protected to the appropriate standard.  
Take measures to prevent the build up of electrostatic charge.  
Use only in area provided with appropriate exhaust ventilation.  
Keep away from open flames, hot surfaces and sources of ignition.
- Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.  
Keep away from flames, such as a pilot light, and any object that sparks, such as an electric motor.  
Do not use sparking tools.  
Use only in area provided with appropriate exhaust ventilation.  
Provide exhaust ventilation close to floor level.  
Do not breathe vapours or spray mist.  
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.  
For personal protection see section 8.
- Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.  
To maintain product quality, do not store in heat or direct sunlight.  
Use explosion-proof equipment.
- Materials to avoid : Keep away from oxidizing agents and strongly acid or alkaline materials.

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

Recommended storage temperature : 16 - 27 °C  
 Storage period : 12 Months  
 Further information on storage stability : Do not freeze.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
toluene	108-88-3	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m <sup>3</sup>	NIOSH REL
		ST	150 ppm 560 mg/m <sup>3</sup>	NIOSH REL
		TWA	200 ppm	OSHA
		CEIL	300 ppm	OSHA
		Peak	500 ppm (10 minutes)	OSHA

**Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
toluene	108-88-3	Toluene	In blood	Prior to last shift of workweek	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g Creatinine	ACGIH BEI

**Engineering measures** : Provide exhaust ventilation close to floor level.

**Personal protective equipment**

Respiratory protection : General and local exhaust ventilation is recommended to

## JM TPO LVOC Edge Sealant – Clear

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection Material	:	Solvent-resistant gloves
Remarks	:	Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Eye protection	:	Wear safety glasses with side shields or goggles.
Skin and body protection	:	Wear protective clothing, such as long-sleeved shirts and pants.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Written instructions for handling must be available at the work place.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	colorless
Odour	:	pleasant, acetone-like
Odour Threshold	:	No data available
pH	:	No data available
Melting point/range	:	not determined
Initial boiling point and boiling range	:	139 °C
Flash point	:	4 °C
Evaporation rate	:	2 (n-Butyl acetate = 1.0)
Flammability (solid, gas)	:	Not applicable

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

Upper explosion limit	: 10.5 %(V)
Lower explosion limit	: 0.9 %(V)
Vapour pressure	: 40 hPa (20 °C)
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.20 g/cm <sup>3</sup> (20 °C)
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: 480 °C
Thermal decomposition	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Vapours may form explosive mixture with air. Stable under recommended storage conditions.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Oxidizing agents Strong acids and strong bases Amines Ammonia Copper halogenated compounds isocyanates
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: carbon oxides Hydrogen chloride gas Hydrogen fluoride

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity**

Not classified based on available information.

**Product:**

Acute inhalation toxicity : Acute toxicity estimate : > 200 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 2,000 mg/kg  
Method: Calculation method

**Acute toxicity****Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Acute oral toxicity : LD50 (Rat, male): 5,546 mg/kg  
GLP: no

Acute inhalation toxicity : LC50 (Rat, male and female): > 32.03 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 3,300 mg/kg  
GLP: no

**Acute toxicity****toluene:**

Acute oral toxicity : LD50 Oral (Rat, male): 5,580 mg/kg

Acute inhalation toxicity : LC50 (Rat): 28.1 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 12,267 mg/kg

**Skin corrosion/irritation****Components:****toluene:**

Species: Rabbit  
Result: Irritating to skin.

Respiratory sensitisation: Not classified based on available information.

**Respiratory or skin sensitisation****Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Test Type: local lymph node assay (LLNA)  
Exposure routes: Skin contact

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

Species: Mouse  
Method: OECD Test Guideline 429  
Result: The product is a skin sensitiser, sub-category 1B.

<b>IARC</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
<b>NTP</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity****Components:****toluene:**

Reproductive toxicity - Assessment : Suspected of damaging the unborn child., Some evidence of adverse effects on development, based on animal experiments.

**STOT - single exposure****Components:****toluene:**

Assessment: May cause drowsiness or dizziness.

**STOT - repeated exposure****Components:****toluene:**

Assessment: May cause damage to organs through prolonged or repeated exposure.

**Aspiration toxicity**

Not classified based on available information.

**Components:****toluene:**

May be fatal if swallowed and enters airways.

**Experience with human exposure****Components:****toluene:**

Skin contact:

Remarks: Prolonged skin contact may defat the skin and produce dermatitis.

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

**Further information****Product:**

Remarks: Solvents may degrease the skin.

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 3 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 2 mg/l  
aquatic invertebrates : Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 0.41  
mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

**Ecotoxicology Assessment**

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

**Persistence and degradability****Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Biodegradability : Result: According to the results of tests of biodegradability this  
product is not readily biodegradable.  
Method: OECD Test Guideline 301D

**Bioaccumulative potential****Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Bioaccumulation : Bioconcentration factor (BCF): 121.8

Partition coefficient: n- : Pow: 5,030 (25 °C)  
octanol/water : log Pow: 3.7 (25 °C)

**toluene:**

Partition coefficient: n- : Pow: 2.7  
octanol/water

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

**Mobility in soil**

No data available

**Other adverse effects****Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : Toxic to aquatic life with long lasting effects.

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

**SECTION 14. TRANSPORT INFORMATION****International transport regulations**

Land transport

USDOT (Special Provision 149): UN1133, Adhesives, 3, II

TDG: UN1133, Adhesives, 3, II

LIMITED QUANTITY if shipped in inner packagings not over 5.0 L (1.3 gallons) net capacity each, packed in a strong outer packaging.

Sea transport

IMDG: UN1133, Adhesives, 3, II

Air transport

IATA/ICAO: UN1133, Adhesives, 3, II

**SECTION 15. REGULATORY INFORMATION****TSCA list**

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D) : The following substance(s) is/are subject to TSCA 12(b) export notification requirements:  
benzene, 1-chloro-4-(trifluoromethyl)-

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

TSCA - 5(a) Significant New Use Rule List of Chemicals : No substances are subject to a Significant New Use Rule.

**EPCRA - Emergency Planning and Community Right-to-Know Act**
**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
toluene	108-88-3	1000	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
 Respiratory or skin sensitisation  
 Reproductive toxicity  
 Specific target organ toxicity (single or repeated exposure)

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

toluene	108-88-3	5 - 10 %
---------	----------	----------

**Clean Air Act**

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

toluene	108-88-3	5 - 10 %
---------	----------	----------

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

toluene	108-88-3	5 - 10 %
---------	----------	----------

**California Prop. 65**

**⚠️ WARNING:** This product can expose you to chemicals including benzene, 1-chloro-4-(trifluoromethyl)-, which is/are known to the State of California to cause cancer, and toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**The components of this product are reported in the following inventories:**

TSCA : On the inventory, or in compliance with the inventory

DSL : On the inventory, or in compliance with the inventory

**SECTION 16. OTHER INFORMATION**

**JM TPO LVOC Edge Sealant – Clear**

Version 2.0

Revision Date 03/23/2020

Print Date 03/23/2020

**Further information**

Revision Date : 03/23/2020

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

## JM Single Ply LVOC Caulk - Black

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : JM Single Ply LVOC Caulk - Black

Manufacturer or supplier's details

Company : Johns Manville  
 Address : P.O. Box 5108  
 Denver, CO USA 80127  
 Telephone : +1-303-978-2000  
 Emergency telephone : +1-800-424-9300 (CHEMTREC)  
 number

Company : Johns Manville Canada Inc.  
 Address : 5301 42 Avenue  
 Innisfail, AB Canada T4G 1A2  
 Telephone : +1-303-978-2000  
 Emergency telephone : +1-800-424-9300 (CHEMTREC)  
 number

Recommended use of the chemical and restrictions on use

Recommended use : Sealant

Restrictions on use : For professional and industrial installation and use only.

Prepared by : productsafety@jm.com

### SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)**

Flammable liquids : Category 2

Skin irritation : Category 2

Germ cell mutagenicity : Category 1B

Carcinogenicity : Category 1A

Aspiration hazard : Category 1

**GHS label elements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H340 May cause genetic defects.

## JM Single Ply LVOC Caulk - Black

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

H350 May cause cancer.

Precautionary statements

:

**Prevention:**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces.

No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P331 Do NOT induce vomiting.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

**Other hazards**

None known.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**
**Chemical nature**

Adhesives and/or sealants

**Hazardous components**

Chemical name	CAS-No.	Concentration (%)
solvent naphtha (petroleum), light aliph.	64742-89-8	>= 10 - < 30
carbon black	1333-86-4	>= 1 - < 5
benzene	71-43-2	>= 0.1 - < 1

Actual concentration or concentration range is withheld as a trade secret

**JM Single Ply LVOC Caulk - Black**

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.  
Symptoms of poisoning may appear several hours later.
- If inhaled : Remove to fresh air immediately. Get medical attention immediately.  
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Call a physician if irritation develops or persists.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Protect unharmed eye.  
If eye irritation persists, consult a specialist.
- If swallowed : DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
Gently wipe or rinse the inside of the mouth with water.  
Never give anything by mouth to an unconscious person.  
Get medical attention immediately.  
If breathing is irregular or stopped, administer artificial respiration.
- Most important symptoms and effects, both acute and delayed : May be fatal if swallowed and enters airways.  
Causes skin irritation.  
May cause genetic defects.  
May cause cancer.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Water spray  
Dry chemical  
Foam  
Halons
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
- Hazardous combustion : carbon oxides

**JM Single Ply LVOC Caulk - Black**

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

products

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Use personal protective equipment.  
Evacuate personnel to safe areas.  
Keep people away from and upwind of spill/leak.  
Remove all sources of ignition.  
Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Should not be released into the environment.

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Keep in suitable, closed containers for disposal.

**SECTION 7. HANDLING AND STORAGE**

Advice on protection against fire and explosion : Use explosion-proof equipment.  
Electrical equipment should be protected to the appropriate standard.  
Take measures to prevent the build up of electrostatic charge.  
Use only in area provided with appropriate exhaust ventilation.  
Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling : For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.  
To maintain product quality, do not store in heat or direct sunlight.  
Use explosion-proof equipment.

Materials to avoid : Keep away from oxidizing agents and strongly acid or alkaline materials.

Recommended storage temperature : 16 - 27 °C

Storage period : 12 Months

Further information on storage stability : Protect from frost, heat and sunlight.

**JM Single Ply LVOC Caulk - Black**

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
solvent naphtha (petroleum), light aliph.	64742-89-8	TWA	500 ppm 2,000 mg/m <sup>3</sup>	OSHA
carbon black	1333-86-4	TWA	3.5 mg/m <sup>3</sup>	ACGIH
		TWA	3.5 mg/m <sup>3</sup>	NIOSH REL
		TWA	3.5 mg/m <sup>3</sup>	OSHA
		TWA	0.1 mg/m <sup>3</sup> (PAHs)	NIOSH REL
		TWA (inhalable fraction)	3 mg/m <sup>3</sup>	ACGIH
benzene	71-43-2	TWA	0.5 ppm	ACGIH
		STEL	2.5 ppm	ACGIH
		TWA	0.1 ppm	NIOSH REL
		ST	1 ppm	NIOSH REL
		TWA	10 ppm	OSHA
		CEIL	25 ppm	OSHA
		Peak	50 ppm (10 minutes)	OSHA
		PEL	1 ppm	OSHA CARC
		STEL	5 ppm	OSHA CARC

**Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
benzene	71-43-2	S-Phenylmercapturic acid	Urine	End of shift (As soon as possible after exposure ceases)	25 µg/g creatinine	ACGIH BEI
		t,t-Muconic acid	Urine	End of shift (As soon as possible after exposure ceases)	500 µg/g creatinine	ACGIH BEI

**Personal protective equipment**

Respiratory protection : No personal respiratory protective equipment normally required.  
 General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are

**JM Single Ply LVOC Caulk - Black**

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection Material	:	Solvent-resistant gloves
Remarks	:	Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Eye protection	:	Wear safety glasses with side shields or goggles.
Skin and body protection	:	Wear protective clothing, such as long-sleeved shirts and pants.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Written instructions for handling must be available at the work place.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	:	liquid
Colour	:	black
Odour	:	hydrocarbon-like
Odour Threshold	:	No data available
pH	:	No data available
Melting point/range	:	not determined
Boiling point/boiling range	:	98 °C
Flash point	:	-4 °C
Evaporation rate	:	not determined
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	6.7 %(V)
Lower explosion limit	:	1.1 %(V)

**JM Single Ply LVOC Caulk - Black**

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

Vapour pressure	: 48 hPa (20 °C)
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.428 g/cm <sup>3</sup> (20 °C)
Solubility(ies)	
Water solubility	: immiscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: 215 °C
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: 48 mPa.s (20 °C)
Viscosity, kinematic	: No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: None known.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Oxidizing agents Strong acids and strong bases

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity**

Not classified based on available information.

**Product:**

Acute dermal toxicity	: Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
-----------------------	---

**Acute toxicity**

**JM Single Ply LVOC Caulk - Black**

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

**Components:****solvent naphtha (petroleum), light aliph.:**

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Method: OECD Test Guideline 401  
Remarks: Information given is based on data obtained from similar substances.

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.61 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: No mortality was observed.  
Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: Information given is based on data obtained from similar substances.

**Acute toxicity****carbon black:**

Acute oral toxicity : LD50 (Rat, male and female): > 10,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 5.0 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Method: Expert judgement  
Assessment: The substance or mixture has no acute dermal toxicity

**Acute toxicity****benzene:**

Acute oral toxicity : LD50 (Rat, male): > 2,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, female): 43.767 mg/l, 13700 ppm  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 8,260 mg/kg  
Method: OECD Test Guideline 402

**Skin corrosion/irritation****Components:****solvent naphtha (petroleum), light aliph.:**

## JM Single Ply LVOC Caulk - Black

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

Species: Rabbit  
 Method: OECD Test Guideline 404  
 Result: Skin irritation  
 Remarks: Information taken from reference works and the literature.

### Skin corrosion/irritation

#### benzene:

Species: Rabbit  
 Exposure time: 4 h  
 Method: OECD Test Guideline 404  
 Result: Irritating to skin.

### Serious eye damage/eye irritation

#### Components:

#### benzene:

Species: Rabbit  
 Result: Irritating to eyes.

Respiratory sensitisation: Not classified based on available information.

### Germ cell mutagenicity

#### Components:

#### benzene:

Germ cell mutagenicity- Assessment : In vivo tests showed mutagenic effects

### Carcinogenicity

#### Components:

#### benzene:

Carcinogenicity - Assessment : Human carcinogen.

<b>IARC</b>	Group 1: Carcinogenic to humans	
	benzene	71-43-2
	Group 2B: Possibly carcinogenic to humans	
	carbon black	1333-86-4
<b>OSHA</b>	OSHA specifically regulated carcinogen	
	benzene	71-43-2
<b>NTP</b>	Known to be human carcinogen	
	benzene	71-43-2

### STOT - single exposure

#### Components:

solvent naphtha (petroleum), light aliph.:

**JM Single Ply LVOC Caulk - Black**

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

Exposure routes: Inhalation  
Target Organs: Central nervous system  
Assessment: May cause drowsiness or dizziness.

**STOT - repeated exposure****Components:****benzene:**

Exposure routes: Ingestion  
Target Organs: hematopoietic system  
Assessment: Causes damage to organs through prolonged or repeated exposure.

Exposure routes: inhalation (vapour)  
Target Organs: hematopoietic system  
Assessment: Causes damage to organs through prolonged or repeated exposure.

**Aspiration toxicity**

May be fatal if swallowed and enters airways.

**Components:****solvent naphtha (petroleum), light aliph.:**

May be fatal if swallowed and enters airways.

**benzene:**

May be fatal if swallowed and enters airways.

---

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****solvent naphtha (petroleum), light aliph.:**

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): 8.2 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: semi-static test

Toxicity to daphnia and other : EL50 (Daphnia magna (Water flea)): 4.5 mg/l  
aquatic invertebrates : End point: Immobilization  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (algae)): 3.1 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201

NOELR (Pseudokirchneriella subcapitata (algae)): 0.5 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201

## JM Single Ply LVOC Caulk - Black

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 2.6 mg/l  
 Exposure time: 21 d  
 Test Type: semi-static test  
 Method: OECD Test Guideline 211

### benzene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 5.3 mg/l  
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 10 mg/l  
 Exposure time: 48 h  
 Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 100 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : EC10 (Pimephales promelas (fathead minnow)): 0.8 mg/l  
 Exposure time: 32 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Ceriodaphnia dubia): 3 mg/l  
 Exposure time: 7 d

Toxicity to microorganisms : IC50 (activated sludge): 13 mg/l  
 Exposure time: 24 h

### Persistence and degradability

#### Components:

#### benzene:

Biodegradability : Biodegradation: 100 %

### Bioaccumulative potential

#### Components:

#### benzene:

Bioaccumulation : Bioconcentration factor (BCF): 13

Partition coefficient: n-octanol/water : log Pow: 2.13 (25 °C)  
 pH: 7

### Mobility in soil

No data available

### Other adverse effects

#### Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
 Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +

## JM Single Ply LVOC Caulk - Black

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

B).

Additional ecological information : Harmful to aquatic life.  
Harmful to aquatic life with long lasting effects.

### SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues : Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

### SECTION 14. TRANSPORT INFORMATION

**International transport regulations**

Land transport  
USDOT (Special Provision 149): UN1133, Adhesives, 3, II  
TDG: UN1133, Adhesives, 3, II

LIMITED QUANTITY if shipped in inner packagings not over 5.0 L (1.3 gallons) net capacity each, packed in a strong outer packaging.

Sea transport  
IMDG: UN1133, Adhesives, 3, II

Air transport  
IATA/ICAO: UN1133, Adhesives, 3, II

### SECTION 15. REGULATORY INFORMATION

**TSCA list**

TSCA - 5(a) Significant New Use Rule List of Chemicals : No substances are subject to a Significant New Use Rule.

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D) : No substances are subject to TSCA 12(b) export notification requirements.

**EPCRA - Emergency Planning and Community Right-to-Know Act**

**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
benzene	71-43-2	10	1000

**JM Single Ply LVOC Caulk - Black**

Version 2.1

Revision Date 03/31/2020

Print Date 03/31/2020

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
Skin corrosion or irritation  
Aspiration hazard  
Germ cell mutagenicity  
Carcinogenicity

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

benzene	71-43-2	0.1 - 0.9999 %
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**Clean Air Act**

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**California Prop. 65**

**⚠️ WARNING:** This product can expose you to chemicals including benzene, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**The components of this product are reported in the following inventories:**

TSCA : On the inventory, or in compliance with the inventory

DSL : On the inventory, or in compliance with the inventory

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**SECTION 16. OTHER INFORMATION****Further information**

Revision Date : 03/31/2020

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.