

# MATERIAL SAFETY DATA SHEET

Multiseal

FILE NO.:  
MSDS DATE: 30 / 10 / 2019

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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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**PRODUCT NAME:** Multiseal Modified Silicone Sealant

**DISTRIBUTER:** Toolway Industries Ltd.  
**ADDRESS:** 1-280 Hunter's Valley Road, Woodbridge, ON, Canada L4H 3V9.  
**PHONE:** (905) 326-5450

**EMERGENCY PHONE:** +82-43-537-4932  
**CHEMTREC PHONE:**  
**OTHER CALLS:** +82-70+4417+8557

**PRODUCT USE:** Multi-purpose modified silicone  
**Hazard Classification:** Sealant Harmful, Irritant, Sensitizing  
**PREPARED BY:** Toolway Industries Ltd.

### SECTION 1 NOTES:

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## SECTION 2: HAZARDS IDENTIFICATION

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### 2.1 Harmfulness. Risk classification

Severe eye damage / eye irritation: Category 2  
Skin sensitization: Category 1

### 2.2 Warning label items, including precautionary statements

- Pictogram
  
- Signal word: Warning
- Hazard statement:
  - Causes severe eye irritation
  - May cause an allergic skin reaction
- Precautionary statements:
  - (prevention)
    - Wash hands thoroughly after handling.
    - Wear protective gloves / protective clothing.
    - Avoid breathing dust / fume / gas / mist / vapors / spray.
    - Do not remove contaminated clothing from the work area.
    - Avoid contact with skin and eyes.
    - Handle it outdoors or in a well-ventilated area.
    - If it gets on your eyes, wash it carefully with water for a few minutes.
    - If possible, remove contact lenses. Continue to wash.
    - If eye irritation persists, seek medical advice / attention.
    - If on skin, wash with plenty of soap and water.
    - If skin irritation or rash occurs, seek medical advice / attention.
    - Take necessary measures.
    - Wash contaminated clothing before reuse.
  - (Save)
    - Not applicable
  - (Disposal)
    - Dispose of contents container according to applicable regulations.

All. Harmfulness. Other hazards not covered by the Hazard Classification Hazards (NFPA)  
no data

### SECTION 2 NOTES:

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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- 3.1 Classification of single product / mixture: Mixture  
3.2. Common name for this product: urethane resin (colored liquid)

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Substance	Common name	CAS No.	Content(%)
Silylatesurethanepolymer	-	9009-54-5	20 - 30
Diisononyl phthalate	-	68515-48-0	15 - 30
Vinyltrimethoxysilane	-	78-08-0	1- 10
Limestone	-	471-34-1	40 - 60

## SECTION 3 NOTES:

## SECTION 4: FIRST AID MEASURES

- 4.1. When you get into your eyes  
Immediately flush with water for 15 minutes. Get medical attention.
- 4.2. Contact with skin  
Remove from skin and immediately wash with water for 15 minutes. Get medical attention if irritation develops or persists.
- 4.3 When inhaled  
Move to fresh air. If symptoms persist, seek medical attention.
- 4.4 When you ate  
Get medical attention.
- 4.5 Other physician's notes  
Treat according to human condition and exposure.  
Treat symptomatically.

## SECTION 4 NOTES:

## SECTION 5: FIRE-FIGHTING MEASURES

- 5.1 Suitable (and inappropriate) extinguishing agents  
Suitable extinguishing media For large fires, use dry chemical or foam extinguishing agents.  
In case of minor fire, use carbon dioxide or dry chemical.  
Water may be used to cool containers exposed to fire.  
Unsuitable extinguishing media Do not allow waterlogged material to come in contact with the contents of the container. Suitable (and inappropriate) extinguishing agents  
Suitable extinguishing media For large fires, use dry chemical or foam extinguishing agents.  
In case of minor fire, use carbon dioxide or dry chemical.  
Water may be used to cool containers exposed to fire.  
Unsuitable extinguishing media Do not allow waterlogged material to come in contact with the contents of the container.  
In case of a large fire, It is necessary to cut off the supply of the combustion source at the disaster area and use the extinguishing agent Digest.  
Sprinkle water to prevent the spread of combustion and try to cool the buildings. move  
Move containers as quickly as possible to a safe location.
- 5.2 Specific hazards arising from chemicals  
Carbon oxides and incompletely burned carbon compounds Very small amounts, silicon dioxide, nitrogen oxides, formaldehyde
- FIRE AND EXPLOSION HAZARD** Potential Explosion Hazards in Heating  
Some can ride, but not easily ignite  
Non-flammable, the material itself does not burn, but decomposes on heating to produce a corrosive / toxic fume  
May happen

## 5.3. Protective equipment and precautions for fire-fighting measures

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Determine if evacuation or isolation is necessary according to your local emergency plan.  
Use water spray to cool containers exposed to fire. Large fires involving chemicals must be worn on personal respirators and protective clothing.

SECTION 5 NOTES:

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Do not breathe vapor. Do not eat.

### 6.2 Measures to Protect the Environment

Do not introduce large quantities into sewage or surface water.

### 6.3 How to purge or remove

Observe all personal protective equipment recommendations in the MSDS. If you can pump blocked material into the levee, store the material in an appropriate container. Wipe or scrape for collection or disposal and place in container. Clean the area thoroughly, as there is a risk that even a small amount of spilled material may cause slip. The last cleaning may require steam, solvent or detergent. Wipe off the material thoroughly or completely absorb and dispose of it as there is a possibility of natural fever. Applicable laws and regulations apply to the substances used in leaking, disposal or leaking of foreign substances. You must decide what laws apply.

SECTION 6 NOTES:

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## SECTION 7: HANDLING AND STORAGE

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### 7.1 Safety Handling Tips

Use with adequate ventilation. The product emits methyl ethyl ketoxime (MEKO) upon exposure to water or moist air. Provide ventilation during use or other protective equipment to control the concentration of methyl ethyl ketoxime (MEKO). The product releases flammable methyl alcohol when exposed to water or moist air.

Provide ventilation during use to control the concentration of methyl alcohol within the exposure limits, or ventilated or self-contained breathing apparatus

Wear it. Avoid contact with skin and eyes. Do not breathe vapor. Do not eat. Remove contaminated clothing immediately. To manage industrial hygiene properly. Wash hands before eating, drinking or smoking, especially after handling.

### 7.2 Safe storage methods

Take proper precautions and keep away from oxidizing materials. Keep container tightly closed and keep away from water and moisture.

SECTION 7 NOTES:

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 8.1 Exposure standards for chemicals, biological exposure standards, etc.

Substance	CAS No.	Allowable concentration
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Diisononyl phthalate	68515-48-0	
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On contact with water or moist air, ethyl methyl ketoxime is formed.

Provide adequate ventilation to control exposure within the following guidelines:

: TWA: 3 ppm, STEL: 10 ppm.

Contact with water or moist air produces methyl alcohol.

OSHA Allowable Exposure Limit (PEL) TWA 200 ppm and ACGIH TLV - Skin: TWA 200 ppm

Provide adequate ventilation to manage exposures within the exposure limit of 250 ppm of short-term exposure limit (STEL).

### 8.2 Appropriate engineering controls

Local exhaust: recommended

General ventilation facilities: recommended

### 8.3 Personal protective equipment

Respiratory protection

Respiratory protection Wear respiratory protection when appropriate local exhaust ventilation is not provided or if exposure measurement results exceed recommended exposure limits. An industrial hygienist should be aware of the suitability of the current engineering

Eye protection

Appropriate protective equipment - Wear minimum safety goggles.

Hand protection

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Wear chemical resistant gloves.

Body protection

Wash off when eating and when finished.

When contact with skin, remove contaminated clothing as soon as possible and wash contaminated area with cold water.

Protective gloves for chemicals are recommended.

Caution Avoid contact with skin and eyes. Do not breathe vapor. Do not eat. Take appropriate protective measures.

Additional information

The product releases methyl ethyl ketoxime (MEKO) if exposed to water or humid air. Provide ventilation during use or other protective equipment to control the concentration of methyl ethyl ketoxime (MEKO). The product releases flammable methyl alcohol when exposed to water or moist air. Provide ventilation system during use or ventilator or self-contained breathing apparatus to keep methyl alcohol concentration within the exposure limits.

Caution: The above instructions are for handling at room temperature. Additional precautions may be required when using this product as a temperature rise or as an aerosol or spray.

SECTION 8 NOTES:

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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9.1. Appearance	Paste
9.2 Odor	Slight odor
9.3 Odor threshold	Not available
9.4 pH	Not available
9.5 Softening point/freezing point	Not available
9.6 Initial boiling point	Not available
9.7 Flash point	Not available
9.8 Evaporation rate	Not available
9.9 Flammability(solids, gas)	Not available
9.10 Upper/lower flammability or explosive limits	Not available
9.11 Vapor pressure	Not available
9.12 Solubility(water)	Not available
9.13 Vapor density	Not available
9.14 Specific gravity	1.56
9.15 N-Octanol/water partition coefficient	Not available
9.16 Autoignition temperature	Not available
9.17 Decomposition temperature	Not available
9.18 Viscosity(25°C,mPa.s(cps))	Not available
9.19 Molecular weight(weight average)	Not available

SECTION 9 NOTES:

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## SECTION 10: STABILITY AND REACTIVITY

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10.1 Chemical stability and potential for adverse reactions.

- Hazardous polymerization does not occur.

10.2 Conditions to avoid (electrostatic discharge, shock, vibration, etc.)

- Not applicable

10.3 Materials to avoid

- May react with strong oxidizing agents. Water, moisture or moist air may form harmful vapors.

10.4 Hazardous Substances

- Generated upon Decomposition Carbon oxides and incompletely burned carbon compounds Very small amounts. Silicon dioxide. Nitrogen oxides. Formaldehyde

SECTION 10 NOTES:

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## SECTION 11: TOXICOLOGICAL INFORMATION

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11.1 Information about possible exposure paths

(Respiratory): No exposure expected

(Oral): expected exposure

(Eye, skin): expected exposure

11.2. Health Hazard Information

Acute Toxicity

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Substance acute toxicity  
Vinyltrimethoxysilane LD50: 2,326 mg/kg - (Oral)Rat  
LD50: < 1,800 mg/kg - skin robbit

Eye: May cause severe irritation with direct contact.  
SKIN: May cause mild irritation. Repeated skin contact may cause an allergic skin reaction.  
Inhalation: Mildly irritates the respiratory tract. Vapors released during curing may cause dizziness  
Ingestion: Low toxicity due to ingestion under normal use.

## Chronic Toxicity

SKIN: May cause skin irritation and skin irritation and dryness on repeated or prolonged contact.  
Inhalation: May cause intoxication through prolonged or repeated exposure through inhalation.  
INGESTION: Repeated ingestion or ingestion may cause internal damage.  
Other specifics: Experimental studies on rodents have shown that methyl ethyl ketoxime (MEKO) temporarily affects the ability of blood to carry oxygen (methemoglobinemia). If you stop exposure, it will recover again. Rodents exposed to MEKO over a longer period of life have increased liver tumor rates.  
This product may produce methanol if exposed to moisture or humid air. Excessive exposure to methanol may cause visual impairment and nervous system effects.

- Skin corrosion / irritation: See Section 3.
- Serious eye damage / eye irritation: See section 3.
- Respiratory sensitization: See Section 3.
- Skin sensitization: See Section 3.
- Carcinogenicity

CAS No.	Chemical substance name	content% (w/w)	Note
78-08-0	Vinyltrimethoxysilane	1 - <10	Annex I of EU Directive 67/548/EEC - Carc. Cat. 3 (Substances which cause concern for man owing to possible carcinogenic effects).

- Germ cell mutagenicity: See section 3.
- Reproductive toxicity: See Section 3.
- Specific target organ toxicity (single exposure): See Section 3
- Specific target organ toxicity (repeated exposure): See Section 3
- Aspiration hazard: See Section 3.

## SECTION 11 NOTES:

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## SECTION 12: ECOLOGICAL INFORMATION

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### 12.1 Ecotoxicity

#### Environmental impact

Acute: No adverse effects expected for aquatic organisms.

Chronic: No adverse effects expected for aquatic organisms.

### 12.2 Persistence and degradability

ENVIRONMENTAL FATE AND MORTARITY: This product is a solid and does not have a high concentration of water soluble components that may dissolve in the product. Therefore, it is difficult to see that it harms soil organisms.

Water quality: A solid substance insoluble in water.

### 12.3 Bioaccumulation

Possibility of accumulation in water: Not likely to accumulate in vivo.

### 12.4 Soil mobility: Not available

### 12.5 Other harmful effects

Impact on Wastewater Treatment Plants: No anticipated adverse effects on bacteria.

## SECTION 12 NOTES:

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## SECTION 13: DISPOSAL CONSIDERATIONS

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### 13.1 Disposal method

Dispose of contents and container in accordance with local regulations.

### 13.2 Disposal considerations

Dispose of contents container according to the regulations.

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RCRA HAZARD CLASS:

SECTION 13 NOTES:

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## SECTION 14: TRANSPORT INFORMATION

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### 14.1 Classification and Regulation by Ship's Shipping and Storage Regulations (IMDG):

UN Number: Not applicable to IMDG code.

Class: Not applicable to IMDG code.

Packing Group: Not applicable to IMDG code.

Hazardous Material (PSN): Not applicable to IMDG code.

Technical Name: Not applicable to IMDG code.

Marine pollutant (Yes / No): Not applicable to IMDG code.

Hazard label: Not applicable to IMDG code.

### 14.2 Transport notes:

Transport in accordance with applicable law. See Handling Tier 7, Paragraph 2.

Refer to Section 6 for safety precautions in the event of a spill.

### 14.3 Classification and regulation by other foreign transport regulations

Air Transport (IATA-DGR) Air Transport (IATA-DGR)

UN Number: Not applicable to IATA regulations.

Class: Not applicable to IATA regulations.

Packing Group: Not applicable to IATA regulations.

Hazardous Materials (PSN): Not applicable to IATA regulations.

Technical Name: Not applicable to IATA regulations.

Hazard label: Not applicable to IATA regulations.

SECTION 14 NOTES:

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## SECTION 15: REGULATORY INFORMATION

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### 15.1 Regulations under the Industrial Safety and Health Law

Prohibited Substance: No Substance

Permitted Substance: No Substance

Controlled substance: No such substance

### 15.2 REGULATORY INFORMATION

15.3 Dangerous Substances Controlled by the Safety Management Act Non-hazardous materials

15.4 Waste management regulations Disposal should be in accordance with the Waste Management Act.

15.5 Other domestic and foreign regulations

Chemical List

EINECS All ingredients are listed or exempted

TSCA All chemicals in this material are listed on or excluded from the TSCA inventory.

AICS All components listed or exempted

IECSC All components listed or exempted

ENCS / ISHL All ingredients are listed or exempted from ENCS / ISHL.

KECL All ingredients listed, waived, or reported

PICCS All ingredients are listed or exempted

HSNO All ingredients listed or exempted

DSL Not available

SECTION 15 NOTES:

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## SECTION 16: OTHER INFORMATION

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### 16.1 Source of data

Korea Occupational Safety and Health Agency provided MSDS: <http://www.kosha.or.kr>

Corporate Solution From Thomson Micromedex (<http://csi.micromedex.com>)

European Chemical Substances Information System (ECB-ESIS) (<http://ecb.jrc.it/esis>)

The ECOTOX Database, EPA (<http://cfpub.epa.gov/ecotox>)

IUCLID Chemical Data Sheet, EC-ECB

International Chemical Safety Cards (ICSC) (<http://www.nihs.go.jp/ICSC>)

TOXNET, U.S. National Library of Medicine (<http://toxnet.nlm.nih.gov>)

The Chemical Database, The Department of Chemistry at the University of Akron

(<http://ull.chemistry.uakron.edu/erd>)

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Industrial poisoning handbook, Shin Kwang Publishing Co.

Dangerous Goods Information Management System, National Emergency Management Agency (<http://hazmat.nema.go.kr>)

Chemical Information System, National Institute of Environmental Research (<http://ncis.nier.go.kr>)

16.2 Initial Date: November 25, 2017

16.3 Number of revisions and last revision date: 0 / -

16.4 Others

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