

# Material Safety Data Sheet

## 1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Name	MSR1000
1.2 Recommended use of the chemical and restrictions on use	SEALANT & ADHSIVE
1.3 Manufacturer's information	
Company Name	Wonik Cube Co., Ltd.
Address	640, Pa Jae-ro, Muncheon-myeon, Chungcheongbuk-do
Emergency telephone number	043-261-8900
1.4 Company information	
Company Name	DAEHEUNG CHEMICAL CO., LTD.
Address	52, Sandan-ro15beon-gil, Pyeongtaeksi, Gyeonggi-do
Emergency telephone number	031-663-5251

## 2. HAZARD IDENTIFICATION

2.1 Hazard, Risk classification                      Skin sensitization : Category 1

2.2 GHS label elements

Symbol



Signal word    Warning

Harmful Risk phrases                                H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.

Precautions

Prevention    P264 Wash hand thoroughly after handling.  
P280 Wear protective gloves/protective clothing  
P261 Avoid breathing dust/fume/gas/mist/vapours/ spray.  
P272 Contaminated work clothing should not be allowed out of the workplace.

Corresponding                                         P302+P352 IF ON SKIN: Wash with plenty of water and soap  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
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.

Storage    Not applicable

Disposal    P501 Dispose of contents/container in accordance with local/regional/country/international regulations.

2.3 Other hazards not included in the hazard classification criteria : No other hazards or physical hazards

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No	Contents(%)
Silylated polyurethane resin	Secret 1	10 ~ 30
Calcium carbonate	471-34-1	40 ~ 70
Diisononyl phtalate	68515-48-0	10 ~ 15
N-β(Amino ethyl)raminopropyl trimethoxy silane	1760-24-1	0.1 ~ 1
Titanium dioxide	13463-67-7	1~5

Ingredients not listed in the table are non-hazardous or trade secret ingredients

### 4. FIRST AID MEASURES

4.1 Eye contact	Rinse immediately with water for 15 minutes. Get medical attention.
4.2 In case of skin contact	Wash with water and soap
4.3 Inhalation	Remove to fresh air. If symptoms persist, get medical attention.
4.4 Ingestion	Get medical attention
4.5 Other precautions	Treat according to the person's condition and degree of exposure. Treat symptomatically. Detailed For data, please contact Wonik Cube.

### 5. FIRE FIGHTING MEASURES

5.1 Suitable (improper) extinguishing media	
suitable extinguishing media	In case of large fire, use dry chemical or foam extinguishing agent. For small fires, use carbon dioxide or dry chemical. Water can be used to cool containers exposed to fire
improper extinguishing media	Do not allow water extinguishing agents to come into contact with the contents of the container.
5.2 Specific hazards arising from chemicals	Trace amounts of carbon oxides and incompletely burned carbon compounds. silicon dioxide. formaldehyde. nitrogen oxides. metal oxide
5.3 Protective equipment and precautions for fire-fighting measures	Determine if evacuation or isolation is necessary according to local emergency plans. Cool fire-exposed containers with water spray. Personal respirator and protective clothing must be worn when extinguishing large chemical fires.

### 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, protective equipment and emergency procedures	Avoid skin and eye contact Do not breathe vapors Don't eat
6.2 Environmental precautions	Do not allow large amounts of water to enter sewage or surface water.
6.3 Methods and material for containment and cleaning up	Follow all personal protective equipment recommendations in MSDS. If it is possible to pump the material contained in the embankment, store the material in an appropriate container. Wipe or scrape off and place in container for recovery or disposal. Wipe the area thoroughly as spilled material can cause slippage even in small amounts. For final cleaning, wipe off material thoroughly or completely absorb and dispose of. In case of leakage, disposal or release of this material, applicable laws and regulations apply. You must decide which laws apply

### 7. HANDLING AND STORAGE

7.1 Precautions for safe handling	Use with adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapors. Do not eat. Properly manage industrial hygiene. Wash hands after handling, especially before eating, drinking, or smoking
7.2 Safe storage	Take appropriate precautions and store away from oxidizing materials. Keep container closed and away from water and moisture.

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

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

Name	CAS No.	permissible density
Diisononyl phthalate	68515-48-0	5 mg/m <sup>3</sup> (TWA)
Titanium dioxide	13463-67-7	5 mg/m <sup>3</sup> (TWA)
Calcium carbonate	471-34-1	10 mg/m <sup>3</sup> (TWA)

Calcium carbonate : This material is strongly bound in the product and cannot be separated, so it does not affect the dust inhalation hazard.

8.2 Appropriate engineering controls                      Local exhaust system: recommended  
General ventilation: recommended

8.3 Personal protective equipment

Protective equipment for normal handling    - Respiratory protection: Adequate local exhaust ventilation is not provided or exposure measurements are recommended.  
If exposure limits are exceeded, wear respirator. An industrial hygiene expert can judge the suitability of the current engineering management device.  
- Suitable respiratory protection: organic vapor type.  
- Eye protection: Suitable protective equipment- Wear minimum safety glasses.  
- Hand protection: Wear chemical protective gloves if sensitive skin is a problem or prolonged contact.  
- Body protection: It is appropriate to wash during mealtimes and shift work.  
- Hygiene precautions: Properly manage industrial hygiene. Wash hands after handling, especially before eating, drinking, or smoking.

Spill protection    - Respiratory protection: Use a personal respirator (SCBA) or other ventilated respirator.  
- Eye protection: full respirator recommended  
- Body protection: It is appropriate to wash during mealtimes and shift work.  
- Precautions: Avoid skin and eye contact. Do not breathe vapors. Do not eat. Take appropriate protective measures.

CAUTION: The above precautions are for handling at room temperature. Additional precautions may be required for elevated temperature or use as aerosols or sprays.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Physical Form    Paste  
Color    White, Grey, Black, ETC(Other order colors)

9.2 Odor    weak odor  
9.3 Odor threshold    No data  
9.4 pH    No data  
9.5 Melting point / freezing point                      No data  
9.6 Boiling point    No data  
9.7 Flash point    > 100°C(Seta Closed Cup)  
9.8 Evaporation Rate    No data  
9.9 Flammability (solid, gas)                              No data  
9.10 Upper/lower flammability or explosive limits    No data  
  
9.11 Vapor Pressure    No data  
9.12 Solubility    No data  
9.13 Vapor Density    No data  
9.14 Specific gravity    1.53±0.03  
9.15 N-octanol/water partition coefficient              No data  
9.16 Autoignition temperature                              No data  
9.17 Decomposition Temperature                              No data  
9.18 Viscosity    No data  
9.19 Molecular weight    No data

The above data is not prepared for product specifications. For related data, please contact Wonik Cube.

## 10. STABILITY AND REACTIVITY

10.1 Possibility of chemical stability and adverse reaction	Stability. No dangerous polymerization reaction occurs.
10.2 Conditions to avoid	Not applicable.
10.3 Substances to avoid	Can react with a strong oxidizing agent. Water, moisture, or humid air can form harmful steam.
10.4 Hazardous materials generated during decomposition	Very small amounts of carbon dioxide and incompletely burned carbon compounds. Silicon dioxide. Formaldehyde. Nitrogen oxide. metallic oxide

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information about possible routes of exposure

Respiratory	No exposures expected
Oral	Expected to be exposed
Eye, skin	Expected to be exposed

### 11.2 Health hazard information

#### Acute toxicity

Oral	LD50 > 10,000 mg/kg Rat
Percutaneous	LD50 > 3,160mg/kg Rabbit
Inhalation	LD50 > 16.6mg/kg Rat

Eyes: Direct contact may cause temporary redness and discomfort.

Skin: May cause mild irritation. May cause an allergic reaction.

Inhalation: Mildly irritating to the respiratory tract. Vapors released during curing may cause dizziness.

Ingestion: Low toxicity due to ingestion under normal use.

#### chronic toxicity

Eyes: Direct contact may cause temporary redness and discomfort.

Skin: May cause mild irritation. May cause an allergic reaction.

Inhalation: Mildly irritating to the respiratory tract. Vapors released during curing may cause dizziness.

Ingestion: Low toxicity due to ingestion under normal use.

Skin corrosive or irritant	See Section 3
Severe eye damage or irritation	See Section 3
Respiratory sensitization	See Section 3
Skin sensitization	See Section 3
Carcinogenicity	No data
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
Inhalation hazard	See Section 3

## 12. ECOLOGICAL INFORMATION

### 12.1 Ecotoxicity

#### environmental impact

Acute: > 102mg/l – 96 h, Chronic: > 74 mg/l – 48 h

### 12.2 Persistence and degradability

ENVIRONMENTAL kinetics and mobility: The product is a solid and does not contain high concentrations of water-soluble components that may dissolve in the product. Therefore, it is difficult to see that it is harmful to soil organisms.  
Water quality: Solid substance, insoluble in water.

### 12.3 Bioaccumulation

Bioaccumulation potential in animals and plants: No bioaccumulation potential

### 12.4. Soil mobility

No data

### 12.5. Other harmful effects

Effects on wastewater treatment plants: No adverse effects expected on bacteria

### 13. DISPOSAL CONSIDERATIONS

13.1 Disposal method	Dispose of contents and container in accordance with local regulations.
13.2 Disposal considerations	Dispose of contents container in accordance with applicable regulations.

### 14. TRANSPORT INFORMATION

14.1 Classification and regulation according to the Ship Safety Act Dangerous Goods Shipping and Storage Rules	UN number: Not applicable to IMDG code. Class: Not applicable to the IMDG Code. Packing Group: Not applicable to the IMDG Code. Applicable Dangerous Goods (PSN): Not applicable to the IMDG Code. Technical Name: Not applicable to the IMDG Code. Marine Pollutant (Yes/No): Not applicable to the IMDG Code. Hazard labeling: Not applicable to the IMDG code.
14.2 Precautions for transportation	It must be transported in accordance with applicable laws. Refer to Section 7-2 for handling. In case of leakage See Section 6 for safety measures.
14.3 Classification and regulation by other foreign transport-related regulations	
Air transport(IATA-DGR)	UN number: not subject to IATA regulations Class: Not applicable to IATA regulations Packing Group: Not subject to IATA regulations Applicable Dangerous Goods (PSN): Not subject to IATA regulations Technical Name: Not subject to IATA regulations Hazard labeling: Not subject to IATA regulations

### 15. REGULATORY INFORMATION

15.1 Regulation by the Industrial Safety and Health Act	
Prohibited substances such as manufacturing	Not applicable
Hazardous Substances Subject to Permission	Not applicable
Harmful factors subject to exposure standard setting	Calcium carbonate
Harmful factors subject to acceptance criteria setting	Not applicable
Hazardous Substances to be Managed	Not applicable
Harmful factors subject to work environment measurement	Calcium carbonate
Harmful factors subject to special health examination	Calcium carbonate
15.2 Regulation by Chemical Substance Control Act	Not applicable
15.3 Regulation under dangerous goods safety management law	Not applicable to dangerous goods
15.4 Regulation by waste management law	In case of disposal, it must be disposed of in accordance with the Waste Management Act Article 13 Waste Treatment Standards.
15.5 Other domestic and foreign regulations	
Chemical inventory	
AICS	All ingredients listed or exempted
IECSC	All ingredients listed or exempted
KECL	All ingredients listed, exempted or declared
PICCS	All ingredients listed or exempted
HSNO	All ingredients listed or exempted
EINECS	No data
TSCA	No data
ENCS/ISHL	No data
DSL	No data

## 16. OTHER INFORMATION

16.1 Source of material : Wonik Cube Co., Ltd.

16.2 Date First 2012-04-13

16.3 Revision number and date

Revision number 3 time

Revision Date 2021-04-08

16.4 Etc

The information provided in this safety data sheet is accurate to the best of our knowledge, information and conviction as of the date of publication. This information has been prepared solely as a guide for safe handling, use, handling, storage, transportation, disposal and leakage and should not be regarded as a warranty or quality specification of any kind. The information provided pertains only to the product specified at the top of this safety data sheet and is not valid when this substance is used in combination with other substances or used in other processes unless otherwise specified in the text. Users of this substance should review this information and recommendations in accordance with the specifics of the user's intended handling, use, treatment and storage, including, if possible, the suitability of the product in this Safety Data Sheet in the user's final product. evaluation is also included