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# SILGLAZE-N10

# SAFETY DATA SHEET

# PRODUCT AND COMPANY IDENTIFICATION

Product name: SILGLAZE-N10

Recommended use: Sealant

Limitations on use: For industrial use only.

Manufacturer/Importer/Distr

ibutor Information

Momentive Performance Materials Asia Pacific Pte, Ltd.

81 SCIENCE PARK DRIVE, THE CHADWICK #02-02, 118257

Singapore

Contact person : commercial.services@momentive.com

**Telephone** : +65-6496-2121 **Telefax** : +65-6496-2122

**Emergency telephone** 

number

+65 3165 2217 / +65 3158 1074

Responsible Department : Product Stewardship & Compliance

# 2 HAZARDS IDENTIFICATION

GHS classification:

**Health Hazards:** 

Skin sensitizer Category 1

**GHS** label elements:

Symbol(s):



Signal Word: Warning

Hazard Statement(s): May cause an allergic skin reaction.

**Precautionary Statements** 

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work

clothing should not be allowed out of the workplace. Wear protective

gloves.

**Response:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash

occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instructions on this label). Take off contaminated clothing and wash

it before reuse.

Storage: Not applicable

**Disposal:** Dispose of contents/ container to an approved facility in accordance with

local, regional, national and international regulations.

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Other hazards which do not result in classification:

Primary hazards: No data available.

**Specific hazards:** No data available.

# 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Mixture of polydimethylsiloxanes, fillers and cross-linkers.

**Substance or Preparation:** 

**Mixtures** 

Hazardous ingredients:

| Chemical Identity                          | CAS<br>number | Concentration* |
|--|---------------|----------------|
| methyl tris-(methyl ethyl ketoximo) silane | 22984-54-9    | <10%           |
| butanone oxime vinylsilane                 | 2224-33-1     | <10%           |
| Aminoethyl aminopropyl trimethoxy silane   | 1760-24-3     | <10%           |
| Octamethylcyclotetrasiloxa ne              | 556-67-2      | <10%           |

<sup>\*</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

# 4 FIRST AID MEASURES

**Inhalation:** Get medical attention.

Eye contact: Rinse immediately with plenty of water and seek medical advice.

**Skin Contact:** Wash with plenty of soap and water.

**Ingestion** Do not induce vomiting. Get medical attention immediately.

**Likely Acute or Delayed** 

Symptoms/Effects

None known.

**Notes to the physician:** Treatment is symptomatic and supportive.

# 5 FIRE-FIGHTING MEASURES

**Extinguishing media:** Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing

media:

Avoid water in straight hose stream; will scatter and spread fire.

Specific hazard arising from

the chemical:

By heating and fire, irritating vapors/gases may be formed. In case of fire,

carbon monoxide and carbon dioxide may be formed.

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Special fire-fighting procedures:

Remove sources of combustibles. Extinguish the fire using fire-fighting media listed above. Cool surrounding tanks, buildings and so on by

spraying with water to prevent the fire extension.

The fire fighting should be done from the windward side, with suitable

respiratory protective device, if necessary.

Special protective action for

fire fighters:

Wear self-contained breathing apparatus and protective clothing.

# 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Keep unauthorized personnel away.

Keep upwind.

Environmental Precautions: Do not allow runoff to sewer, waterway or ground.

Methods and material for containment and cleaning up:

Put in an empty container for recovery after preventing spill by sand or sandbags, if the amount of spill is large. Put in an empty container for

recovery after wiping or soaking up in an inert material, if the amount of spill

is small.

Notification Procedures: Remove sources of ignition.

#### ' HANDLING AND STORAGE

Precautions for safe handling: Keep away from sources of ignition - No smoking. Avoid inhalation of

vapors and spray mists. Use only with adequate ventilation. Methyl ethyl ketoxime (MEKO; 2-Butanone-oxime) is formed during processing

Condition for safe storage, including any incompatibilities:

Store in a dark, cool place indoors, with container tightly closed.

# 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriated engineering control measures:

Wear suitable gloves and eye/face protection.

**Occupational Exposure Limits:** 

| Chemical name         | Туре | Exposure Limit Values | Source   |
|-----------------------|------|-----------------------|--|
| Silica - Particulate. | TWA  | 10 mg/m3              | Singapore. PELs. (Workplace Safety and<br>Health (Permissible Exposure Levels of<br>Toxic Substances) Order), as amended<br>(2006) |

None known.

Personal protective equipment (PPE)

Respiratory Protection: Gas mask for organic gas if MEKO exposure limits are exceeded (3 ppm 8-

hr TWA, recommended workplace exposure guideline.

**Eye Protection:** Safety glasses with side shields

Hand Protection: Chemical resistant gloves

**Skin Protection:** Chemical resistant boots. Chemical resistant clothing

Hygiene measures: Avoid contact with eyes, skin, and clothing. Wash hands after handling.

When using do not eat, drink or smoke.

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# SILGLAZE-N10

# PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** 

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Physical state: solid
Form: Paste
Color: Colorless
Odor: Faint

Odor Threshold:No data available.pH:No data available.Melting Point:Not appliedBoiling Point:Not applicable

Flash Point: 63 °C

Evaporation Rate:

Flammability (solid, gas):

Flammability Limit - Upper (%):

Flammability Limit - Lower (%):

Vapor pressure:

No data available.

No data available.

No data available.

Relative vapor density:

Density:

1.04 g/cm3 (23 °C)

Relative density:

No data available.

Solubility(ies)

Solubility in Water: Insoluble

Solubility (other): No data available.

Partition coefficient (n-octanol/water) Log

No data available.

Pow:

Auto-ignition temperature: 450 °C

**Decomposition Temperature:** No decomposition if stored and applied as directed.

SADT:

Viscosity, dynamic:

Viscosity, kinematic:

Viscosity, kinematic:

Sample:

No data available:

> 20.5 mm2/s (40 °C)

Explosive properties:

No data available:

No data available:

Particle characteristics

Particle Size:

Particle Size Distribution:

No data available.

Specific surface area:

No data available.

No data available.

No data available.

No data available.

Crystallinity:

No data available.

Other information

Self-ignition: 450 °C/842 °F

Miscible (water): immiscible

# 10 STABILITY AND REACTIVITY

**Incompatible Materials:** Moisture.

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**Chemical Stability:** Material is stable under normal conditions.

Possibility of hazardous

reactions:

Hazardous polymerization does not occur.

Conditions to avoid: Keep away from heat, sparks and open flame.

**Hazardous Decomposition** 

**Products:** 

Reacts with water/moisture liberating Methylethylketoxime (MEKO) = 2-Butanone-oxime. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed

due to oxidative degradation.

#### 11 **TOXICOLOGICAL INFORMATION**

# Information on likely routes of exposure

Inhalation: No data available.

**Skin Contact:** No data available.

Eve contact: No data available.

Ingestion: No data available.

# Acute toxicity (list all possible routes of exposure)

Oral

**Product:** Not classified for acute toxicity based on available data.

Components:

methyl tris-(methyl ethyl

ketoximo) silane

No data available.

butanone oxime vinylsilane

Aminoethyl aminopropyl

trimethoxy silane

No data available. No data available.

Octamethylcyclotetrasiloxan

LD 50, Rat, > 4,800 mg/kg, OECD-Guideline 401 (Acute Oral Toxicity), Not classified

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Dermal

**Product:** Not classified for acute toxicity based on available data.

Components:

methyl tris-(methyl ethyl

ketoximo) silane

No data available.

butanone oxime vinylsilane

No data available.

Aminoethyl aminopropyl

LD 50, Rabbit, > 2,000 mg/kg

trimethoxy silane

Octamethylcyclotetrasiloxan

LD 50, Rat, > 2,375 mg/kg, OECD Test Guideline 402, Not classified

e

Inhalation

Product: Not classified for acute toxicity based on available data.

Components:

methyl tris-(methyl ethyl

ketoximo) silane

No data available.

butanone oxime vinylsilane Aminoethyl aminopropyl

No data available.

trimethoxy silane

Category 4 Inhalation - dust and mist

Octamethylcyclotetrasiloxan

LC50, Rat, male and female, 4 h, 36 mg/l, Aerosol, OECD Test Guideline

403, Not classified

Repeated dose toxicity

**Product:** No data available.

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Components:

methyl tris-(methyl ethyl No data available.

ketoximo) silane

butanone oxime vinylsilane No data available.

Aminoethyl aminopropyl

NOAEL Rat, Oral, 28 d, >= 500 mg/kg

trimethoxy silane

Octamethylcyclotetrasiloxan No data available.

Skin Corrosion/Irritation

**Product:** No data available.

Components:

methyl tris-(methyl ethyl

ketoximo) silane

Corrosive

butanone oxime vinylsilane

Corrosive OECD Test Guideline 404, Rabbit, No skin irritation

Aminoethyl aminopropyl trimethoxy silane

OECD Test Guideline 404, Rabbit, Non irritating

Octamethylcyclotetrasiloxan

Serious Eye Damage/Eye Irritation

Product: No data available.

Components:

methyl tris-(methyl ethyl

Irritating to eyes.

ketoximo) silane

butanone oxime vinylsilane Risk of serious damage to eyes.

Aminoethyl aminopropyl

trimethoxy silane

OECD Test Guideline 405, Rabbit, Strongly irritating.

OECD-Guideline 405 (Acute Eye Irritation/Corrosion), Rabbit, Non Octamethylcyclotetrasiloxan

irritating

Respiratory or Skin Sensitization

**Product:** Causes sensitization on guinea-pigs. No human information is available.

Components:

methyl tris-(methyl ethyl

ketoximo) silane

Sensitisation, skin, May cause sensitization.

butanone oxime vinylsilane

Sensitisation, skin, May cause sensitization.

Aminoethyl aminopropyl

trimethoxy silane

OECD Guideline 429 (LLNA), Guinea Pig, positive

Maximisation Test, OECD-Guideline 406 (Skin Sensitisation), Guinea Octamethylcyclotetrasiloxan

Pig, Not sensitizing

Carcinogenicity

Product: No data available.

Components:

methyl tris-(methyl ethyl

No data available.

ketoximo) silane

butanone oxime vinylsilane Aminoethyl aminopropyl

No data available. No data available.

trimethoxy silane

Octamethylcyclotetrasiloxan Inhalation

**Germ Cell Mutagenicity** 

In vitro

Product: No data available.

Components:

methyl tris-(methyl ethyl

Aminoethyl aminopropyl

ketoximo) silane

No data available.

butanone oxime vinylsilane

No data available. No data available.

trimethoxy silane

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Octamethylcyclotetrasiloxan

Ames-Test, OECD-Guideline 471 (Genetic Toxicology: Salmonella typhimurium, Reverse Mutation Assay):, negative (not mutagenic) Mouse Lymphoma Assay (OECD Guidline 476): , negative (not

mutagenic)

In vivo

Product: No data available.

Components:

methyl tris-(methyl ethyl ketoximo) silanemethyl tris-

(methyl ethyl ketoximo)

silane

butanone oxime

vinylsilanebutanone oxime

vinylsilane

Aminoethyl aminopropyl

trimethoxy silaneAminoethyl aminopropyl trimethoxy

silane

Octamethylcyclotetrasilox

aneOctamethylcyclotetrasilo

xane

No data available.

No data available.

No data available.

Chromosomal aberration, OECD 475, Inhalation, Rat, male and female,

negative

Dominant lethal assay, OECD 478, Oral, Rat, male and female, negative

Reproductive toxicity

No data available. Product:

Components:

methyl tris-(methyl ethyl

ketoximo) silane

butanone oxime vinylsilane Aminoethyl aminopropyl

trimethoxy silane

No data available. No data available.

No data available.

Octamethylcyclotetrasiloxan Category 2

**Specific Target Organ Toxicity - Single Exposure** 

**Product:** No data available.

Components:

methyl tris-(methyl ethyl

ketoximo) silane

No data available.

No data available.

butanone oxime vinylsilane Aminoethyl aminopropyl

No data available.

trimethoxy silane

Octamethyl cyclotetrasilox an

No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Components:

methyl tris-(methyl ethyl Category 2 (Cardiovascular system)

ketoximo) silane

butanone oxime vinylsilane Category 2 (blood system) Aminoethyl aminopropyl Category 2 (Respiratory Tract)

trimethoxy silane

Octamethylcyclotetrasiloxan No data available.

**Aspiration Hazard** 

No data available. Product:

Components:

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methyl tris-(methyl ethyl

ketoximo) silane butanone oxime vinylsilane

Aminoethyl aminopropyl trimethoxy silane

Octamethylcyclotetrasiloxan

No data available.

No data available. No data available.

No data available.

#### Information on health hazards

#### Other hazards

**Product:** 

This product will liberate methyl-ethyl-ketoxime (MEKO) on curing, contact with water or moisture in the air.

The toxicity of pure MEKO is characterized by:

Mild skin irritation, severe eye irritation, and systemic toxicity after inhalation or long term exposure. The acute inhalation 4-hr LC50 was > 4.8 mg/L.

Long-term inhalation studies (>28 days) with 2-butanone-oxime in male rats and mice showed at concentrations of 10 ppm and higher atrophy of the mucous membrane of the nose in rats and mice. This effect is most probably due to the irritating potential of 2-butanone-oxime.

Central nervous system effects (motor function, narcotic), which were reversible, when exposure is terminated, were observed at high concentrations. Acute exposure to 400 ppm in air caused effects on blood chemistry (methemoglobinemia).

MEKO has been shown to elicit skin sensitization in Guinea pigs, but no sensitization has been reported in humans.

After life long inhalation exposure to the maximum concentration of 375 ppm liver carcinomas were observed in male rats and mice. In male rats exposed to concentrations of 75 ppm benign liver tumors were observed. The lowest test concentration of 15 ppm caused no tumors.

The relevance of these tumors to humans is unknown.:

# Additional toxicological Information under the conditions of use:

No data available.

#### 12 **ECOLOGICAL INFORMATION**

# **Ecotoxicity:**

**Toxicity to Aquatic Plants** 

Product: No data available.

Components:

methyl tris-(methyl ethyl

ketoximo) silane

No data available.

butanone oxime vinylsilane

No data available.

Aminoethyl aminopropyl trimethoxy silane

EC50, Algae (Pseudokirchneriella subcapitata), 96 h, 8.8 mg/l NOEC, Algae (Pseudokirchneriella subcapitata), 3.1 mg/l

Octamethylcyclotetrasiloxan

ErC50, Selenastrum capricornutum, 96 h, >, 0.022 mg/l, No toxicity at the

limit of solubility

# Toxicity to microorganisms

**Product:** Components: No data available.

methyl tris-(methyl ethyl ketoximo) silane

No data available.

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butanone oxime vinylsilane Aminoethyl aminopropyl trimethoxy silane

No data available. No data available.

Octamethylcyclotetrasiloxan No data available.

# Acute hazards to the aquatic environment:

Fish

**Product:** No data available.

Components:

No data available. methyl tris-(methyl ethyl

ketoximo) silane

butanone oxime vinylsilane No data available.

Aminoethyl aminopropyl

LC50, Lepomis macrochirus, > 100 mg/l

trimethoxy silane

Octamethylcyclotetrasiloxan LC50, Oncorhynchus mykiss, 96 h, >, 0.022 mg/l, No toxicity at the limit

of solubility

**Aquatic Invertebrates** 

**Product:** No data available.

Components:

methyl tris-(methyl ethyl No data available.

ketoximo) silane

butanone oxime vinylsilane Aminoethyl aminopropyl

No data available.

trimethoxy silane

EC50, Daphnia magna, 48 h, 87.4 mg/l

Octamethylcyclotetrasiloxan

EC50, Daphnia magna, 48 h, >, 0.015 mg/l, No toxicity at the limit of

# Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Components:

methyl tris-(methyl ethyl No data available.

ketoximo) silane

No data available. butanone oxime vinylsilane Aminoethyl aminopropyl No data available.

trimethoxy silane

NOEC, Oncorhynchus mykiss, 93 d, >=, 0.0044 mg/l, No toxicity at the Octamethylcyclotetrasiloxan

limit of solubility

**Aquatic Invertebrates** 

Product: No data available.

Components:

methyl tris-(methyl ethyl

ketoximo) silane

No data available.

butanone oxime vinylsilane Aminoethyl aminopropyl

No data available. No data available.

trimethoxy silane

NOEC, Daphnia magna, 21 d, >, 0.015 mg/l, No toxicity at the limit of

Octamethylcyclotetrasiloxan solubility

Persistence and Degradability

**Biodegradation** 

**Product:** No data available.

Components:

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methyl tris-(methyl ethyl

ketoximo) silane

No data available.

No data available.

butanone oxime vinylsilane Aminoethyl aminopropyl

Aminoethyl aminopropyl No data available. trimethoxy silane

Octamethylcyclotetrasiloxan

3.7 %, 29 d, 310 Ready Biodegradability - CO2 in Sealed Vessels

(Headspace Test), Not readily biodegradable., Persistent

#### **BOD/COD Ratio**

**Product:** No data available.

Components:

methyl tris-(methyl ethyl

No data available.

ketoximo) silane butanone oxime vinylsilane

No data available.

Aminoethyl aminopropyl

No data available.

trimethoxy silane

Octamethylcyclotetrasiloxan

No data available.

# Bioaccumulative potential

# **Bioconcentration Factor (BCF)**

**Product:** No data available.

Components:

methyl tris-(methyl ethyl

No data available.

ketoximo) silane

butanone oxime vinylsilane No data available. Aminoethyl aminopropyl No data available.

trimethoxy silane

Octamethylcyclotetrasiloxan 12,400

e

# Partition Coefficient n-octanol / water (log Kow)

**Product:** No data available.

Components:

methyl tris-(methyl ethyl

No data available.

ketoximo) silane

butanone oxime vinylsilane
Aminoethyl aminopropyl

No data available.
No data available.

trimethoxy silane

Octamethylcyclotetrasiloxan No data available.

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# Mobility in soil:

**Product:** No data available.

Components:

methyl tris-(methyl ethyl

No data available.

ketoximo) silane

butanone oxime vinylsilane No data available. Aminoethyl aminopropyl No data available.

trimethoxy silane

Octamethylcyclotetrasiloxan No data available.

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# Results of PBT and vPvB assessment:

**Product:** No data available.

Components:

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methyl tris-(methyl ethyl

ketoximo) silane

butanone oxime vinylsilane Aminoethyl aminopropyl

trimethoxy silane

Octamethylcyclotetrasiloxan

e

No data available.

No data available.

No data available.

Other adverse effects:

Other hazards

**Product:** No data available.

# 13 Disposal considerations

# 14 TRANSPORT INFORMATION

# **ADR**

Not Regulated.

#### **IATA**

Not Regulated.

# **IMDG Code**

Not Regulated.

Special precautions for user: This product is not regarded as dangerous goods according to the

national and international regulations on the transport of

dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Product is not transported in bulk.

# 15 REGULATORY INFORMATION

# Safety, health and environmental regulations/legislation specific for the substance or mixture

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.

# Fire Safety (Petroleum and Flammable Materials) Regulations

Not applicable

# International regulations

# **Montreal protocol**

Not applicable

# Stockholm convention

Not applicable

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# Rotterdam convention

Not applicable

# **Kyoto protocol**

Not applicable

**Inventory Status** 

Australia Industrial Chem. Act

(AIIC):

Canada DSL Inventory List:

On or in compliance with the

inventory

Q (quantity restricted)

Remarks: None.

Remarks: Please contact your supplier for further information on

the inventory status of this

material.

Not in compliance with the Canada NDSL Inventory:

inventory.

China Inv. Existing Chemical

Substances:

Japan (ENCS) List:

Korea Existing Chemicals Inv.

(KECI):

New Zealand Inventory of

Chemicals: Philippines PICCS:

Taiwan Chemical Substance

Inventory:

On or in compliance with the

inventory

On or in compliance with the

inventory

On or in compliance with the

inventory

On or in compliance with the

inventory On or in compliance with the

inventory On or in compliance with the

inventory

US TSCA Inventory: Q (quantity restricted) Remarks: None.

Remarks: Low Volume

Exemption

#### 16 OTHER INFORMATION

**Revision Information:** ARGLO INVSTSARGHS SG

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# Notice to reader

Unless otherwise specified in section 1, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives.

# **Further Information**

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 warrantyor 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.

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