

SILCOOL™ TGX450

SAFETY DATA SHEET

1 Product and company identification

Name of chemical (Product name) : SILCOOL™ TGX450

Recommended use of the chemical and restrictions on use

Recommended use: Not available.

Recommended restrictions: Not known.

Manufacturer/Importer/Distributor Information : Momentive Performance Materials Japan LLC
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Tokyo Japan

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Responsible Department : +81-276-31-4118 (night / weekend)
Product Stewardship & Compliance Group

2 Hazard(s) identification

GHS classification:

No classification

GHS label elements:

Pictograms: No symbol

Signal Word: No signal word.

Hazard Statement: Not applicable

Precautionary Statements:

Prevention: Not applicable

Response: Not applicable

Storage: Not applicable

Disposal: Not applicable

Other hazards which do not result in GHS classification: None.

3 Composition/information on ingredients

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Chemical nature: Silicone compound

Mixtures

Chemical Identity	CAS number	Concentration*
Aluminum oxide	1344-28-1	80 - 90%
Boron nitride	10043-11-5	3.5%
Alkoxy Silicone Compound	2314408-63-2	1.0 - 10%
Boron oxide	1303-86-2	0.007%

* Concentration may be shown with a range due to confidentiality.

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

(1) The respirable particle(s) listed above are inextricably bound within the polymer matrix, and therefore does not present an inhalation hazard during normal use of this product. Tooling or machining of the cured product (sanding, cutting, milling) may release hazardous, respirable substances.

4 First-aid measures

General: Get medical attention if symptoms occur.

Inhalation: If inhaled, move victim to fresh air and seek medical attention.

Skin Contact: Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact: Flush thoroughly with water for at least 15 minutes. Get medical assistance.

Ingestion: If swallowed, do NOT induce vomiting. Give a glass of water. Do not give victim anything to drink if he is unconscious. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

5 Fire-fighting measures

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

Unsuitable extinguishing media: No data available.

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Unusual Fire & Explosion Hazards:	In case of fire, carbon monoxide and carbon dioxide may be formed. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.
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.
Protective Measures:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Keep unprotected persons away. Use personal protective equipment. Remove sources of ignition. Keep upwind.
Environmental Precautions:	No data available.
Methods or materials for containment and cleaning up:	Sweep up or vacuum up spillage and collect in suitable container for disposal.
Prevention of secondary hazards:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). See Section 8 of the SDS for Personal Protective Equipment.

7 Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):	Provide adequate general and local exhaust ventilation. Eyewash bottle with clean water.
Safe handling advice:	Wear suitable protective clothing, gloves and eye/face protection. Keep away from sources of ignition - No smoking. Ground container and transfer equipment to eliminate static electric sparks.
Contact avoidance measures:	Do not eat, drink or smoke when using the product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Avoid contact with skin and eyes.
Hygiene measures:	Avoid contact with eyes, skin, and clothing. Wash hands after handling. When using do not eat, drink or smoke.

Storage

Safe storage conditions:	Store in a dark, cool place indoors, with container tightly closed.
Safe packaging materials:	No data available.

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8 Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits:

Chemical name	Type	Exposure Limit Values	Regulation Sources
Aluminum oxide - Dust.	TLV	0.025 mg/m3	Japan. OELs - ISHL. (Workplace Environment Assessment Standards), as amended (04 2020)
Aluminum oxide - Respirable dust.	TWA	0.5 mg/m3	Japan. OELs - JSOH (Recommendation of Occupational Exposure Limits), as amended (05 2021)
Aluminum oxide - Total dust.	TWA	2 mg/m3	Japan. OELs - JSOH (Recommendation of Occupational Exposure Limits), as amended (05 2021)

Occupational Exposure Limits:

Chemical name	Type	Exposure Limit Values	Regulation Sources
Aluminum oxide - Dust.	TLV	0.025 mg/m3	Japan. OELs - ISHL. (Workplace Environment Assessment Standards), as amended (04 2020)
Aluminum oxide - Respirable dust.	TWA	0.5 mg/m3	Japan. OELs - JSOH (Recommendation of Occupational Exposure Limits), as amended (05 2021)
Aluminum oxide - Total dust.	TWA	2 mg/m3	Japan. OELs - JSOH (Recommendation of Occupational Exposure Limits), as amended (05 2021)

Occupational Exposure Limits:

Chemical name	Type	Exposure Limit Values	Regulation Sources
Aluminum oxide - Dust.	TLV	0.025 mg/m3	Japan. OELs - ISHL. (Workplace Environment Assessment Standards), as amended (04 2020)
Aluminum oxide - Respirable dust.	TWA	0.5 mg/m3	Japan. OELs - JSOH (Recommendation of Occupational Exposure Limits), as amended (05 2021)
Aluminum oxide - Total dust.	TWA	2 mg/m3	Japan. OELs - JSOH (Recommendation of Occupational Exposure Limits), as amended (05 2021)
Boron oxide - Dust.	TLV	0.025 mg/m3	Japan. OELs - ISHL. (Workplace Environment Assessment Standards), as amended (04 2020)
Boron oxide - Total dust.	TWA	8 mg/m3	Japan. OELs - JSOH (Recommendation of Occupational Exposure Limits), as amended (05 2021)
Boron oxide - Respirable	TWA	2 mg/m3	Japan. OELs - JSOH

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Chemical name	Type	Exposure Limit Values	Regulation Sources
dust.			(Recommendation of Occupational Exposure Limits), as amended (05 2021)
	TWA	1 mg/m3	Japan. OELs - JSOH (Recommendation of Occupational Exposure Limits), as amended (05 2021)
Boron oxide - Total dust.	TWA	4 mg/m3	Japan. OELs - JSOH (Recommendation of Occupational Exposure Limits), as amended (05 2021)

This product contains one or more substances with an occupational exposure limit. However, the respirable particle(s) of this/these substance(s) are inextricably bound within the polymer matrix. Therefore, we do not expect an exposure to this/these substance(s) during normal use of this product. Tooling or machining of the cured product (sanding, cutting, milling) may release hazardous, respirable substances.

Personal protective equipment (PPE)

- Respiratory Protection:** Use only in well-ventilated areas.
- Hand Protection:** Rubber or plastics gloves
- Eye Protection:** Safety glasses with side shields
- Skin and Body Protection:** Wear rubber boots. Chemical resistant clothing

9 Physical and chemical properties

- Physical state:** solid
- Form:** solid
- Color:** Pink
- Odor:** Mild
- Odor threshold** No data available.
- Melting point/freezing point** No data available.
- Initial boiling point and boiling range** No data available.
- Flammability** No data available.
- Upper/lower limit on flammability or explosive limits**
- Flammability limit - upper (%):** No data available.
- Flammability limit - lower (%):** No data available.
- Explosive limit - upper:** No data available.
- Explosive limit - lower:** No data available.
- Flash Point** > 150 °C
- Evaporation rate** No data available.
- Auto-ignition temperature** No data available.
- Decomposition temperature** No data available.
- SADT** No data available.
- pH** No data available.
- Viscosity, dynamic:** > 2,000,000 mPa·s

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Viscosity, kinematic:	No data available.
Solubility(ies)	
Solubility in water:	Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water)Log Pow	No data available.
Vapor pressure	No data available.
Density	3.1 - 3.2 g/cm ³ (25 °C)
Relative density	No data available.
Vapor density	No data available.

10 Stability and reactivity

Reactivity:	No dangerous reaction if used as recommended.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Freezing. Moisture.
Incompatible Materials:	Acids and bases
Hazardous Decomposition Products:	Carbon oxides Oxides of silicon. Oxides of aluminum. Oxides of boron. 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

Acute toxicity (list all possible routes of exposure)

Oral

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

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Dermal

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

Components:

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Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Inhalation

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

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Respiratory sensitization

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Skin sensitization

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

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Boron oxide No data available.

Carcinogenicity

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Japan Society for Occupational Health: Carcinogen:

Aluminum oxide

Japan. ISHL Designated Carcinogen:

No carcinogenic components identified

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

In vivo

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Reproductive toxicity

Product: No data available.

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Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Aspiration Hazard

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone Compound No data available.

Boron oxide No data available.

Other effects: No data available.

12 Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment

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Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone No data available.

Compound

Boron oxide No data available.

Toxicity to microorganisms

Product: No data available.

Components

Boron nitride No data available.

Alkoxy Silicone No data available.

Compound

Boron oxide No data available.

Chronic hazards to the aquatic environment

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Components:

Boron nitride No data available.

Alkoxy Silicone No data available.

Compound

Boron oxide No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

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Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: No data available.

Hazardous to the ozone layer: Not Regulated

Further Information: No data available.

13 Disposal considerations

General information: none

Disposal methods: This product falls under Industrial Waste based on Wastes Disposal and Public Cleansing Law. Dispose of in accordance with this law and local regulations.

Contaminated Packaging: Dispose of as unused product.

14 Transport information

International regulations

IATA

Not Regulated.

IMDG Code

Not Regulated.

National Regulations

Domestic Standard: In compliance with domestic law.

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. Keep away from food, drink and animal feeding stuffs.

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

Product is not transported in bulk.

15 Regulatory information

Japan CSCL:

Priority Assessment Chemical Substances: Not Regulated

Monitoring Chemical Substances: Not Regulated

Law concerning Pollutant Release and Transfer Register:

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Specified Class 1 substance(s): Not Regulated.
Class 1 Substance(s): Boron compounds
Class 2 Substance(s): Not Regulated.

Industrial Safety and Health Act:

Article 57-2 Regulated Substance(s): Aluminum oxide; Not Regulated

Article 57 Regulated Substance(s) subject to labeling: Aluminum oxide
 Not Regulated

Carcinogens (Enforcement Rule Art. 577-2-3) subject to 30-year storage of work records, etc.: Not Regulated

Organic Solvent Regulation: Not Regulated
Specified Substances Regulation:
Class 1 designated chemical substances: Not Regulated
Class 2 designated chemical substances: Not Regulated
Class 3 designated chemical substances: Not Regulated

Poisonous and Deleterious Substances Control Act:

Specified poisonous substance(s):

Main law: Not Regulated

Cabinet order: Not Regulated

Poisonous Substance(s):

Main law: Not Regulated

Cabinet order: Not Regulated

Deleterious Substance(s):

Main law: Not Regulated

Cabinet order: Not Regulated

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Fire Service Law:		Designated Combustible material (Combustible Solid) Keep away from fire Not applicable to dangerous materials / designated flammables.
High Pressure Gas Safety Law:	Not Regulated	
Act on Prevention of Marine Pollution and Maritime Disaster:	Not Regulated	Octamethylcyclotetrasiloxane Category: Y
Inventory Status:		
REACH:	If purchased from Momentive Performance Materials GmbH in Leverkusen, Germany, all substances in this product have been registered by Momentive Performance Materials GmbH or upstream in our supply chain or are exempt from registration under Regulation (EC) No 1907/2006 (REACH). For polymers, this includes the constituent monomers and other reactants.	Remarks: None.
Australia Industrial Chem. Act (AIC):	Not in compliance with the inventory.	Remarks: None.
Canada DSL Inventory List:	Not in compliance with the inventory.	Remarks: None.
Canada NDSL Inventory:	Not in compliance with the inventory.	Remarks: None.
China Inv. Existing Chemical Substances:	Q (quantity restricted)	Remarks: At least one component is not listed on the existing chemical inventory. However, the unlisted substance(s) is(are) registered by Momentive Performance Materials or exempted from registration. Please contact Momentive Performance Materials for further information on import/production details of this material.
Japan (ENCS) List:	On or in compliance with the inventory	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	Not in compliance with the inventory.	Remarks: None.
New Zealand Inventory of Chemicals:	Not in compliance with the inventory.	Remarks: None.
Philippines PICCS:	Not in compliance with the inventory.	Remarks: None.
Taiwan Chemical Substance Inventory:	Not in compliance with the inventory.	Remarks: None.
US TSCA Inventory:	Not in compliance with the inventory.	Remarks: None.

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16 Other Information

Revision Information: ARGLO_INVSTSARGHS_JP
Issue Date: 01/09/2024
SDS No.:
Disclaimer:

Notice to reader

This material is developed and manufactured for industrial applications only. For medical or other special applications, use after performing safety testing on the product and confirming safety. Never use for human applications such as implant, impregnation, or where a residue may possibly remain in the body.

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 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.

Literature Reference: No data available.