

MATERIAL: TECHSIL® SILICONE INK

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| | | |
|------------|-----------------------------|---|
| 1.1 | Product Name: | Techsil® Silicone Ink |
| 1.2 | Supplier: | Techsil Ltd 34 Bidavon Industrial Estate Waterloo Road Bidford on Avon Warwickshire B50 4JN Tel: +44(0)1789 773232 Fax: +44(0)1789 774239 Email: sales@techsil.co.uk |
| 1.3 | Emergency Telephone: | +44(0)7971 228794 |

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture:

Classification under CLP:

Health Hazards

Specific Target Organ Toxicity - Category 2¹
Repeated Exposure

H373: May cause damage to organs through prolonged or repeated exposure.

Target Organs

1. Lung

2.2 Label Elements:

Contains

QUARTZ



Signal words:

Warning

Hazard statements:

H373: May cause damage to organs through prolonged or repeated exposure to fumes.

Precautionary statements:

Prevention:

P260: Do not breathe dust/fumes/gas/mist/vapours/spray.

Disposal:

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Unknown toxicity - Health

| | |
|--|-----|
| Acute toxicity, oral | 0 % |
| Acute toxicity, dermal | 0 % |
| Acute toxicity, inhalation, vapor | 0 % |
| Acute toxicity, inhalation, dust or mist | 0 % |

Additional Information:

This product is a mixture containing polymer compounds and hazardous substances as listed in section 3. The relevant hazardous classification according to CLP Directive 1272/2008 is stated in section 2 of this SDS. Although the preparation is classified as a hazardous preparation it does not present a danger to human health by inhalation, ingestion or contact with the skin or to aquatic environment in the form in which it is placed on the market. According to Annex I No. 1.3.4.1 of the Directive 1272/2008 such preparations do not require a label.

2.3 Other Hazards:

No data available.

Contact Details

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Polydimethylsiloxane containing vinyl groups, with platinum catalyst, fillers, crosslinker, an inhibitor and pigment(s).

3.1 Substances:

-

3.2 Mixtures:

General information: No data available.

| Chemical name | Concentration | CAS-No. | EC No. | REACH Registration No. | M-Factor: | Notes |
|---------------------|---------------|-------------|-----------|------------------------|--------------------|-------|
| QUARTZ | 20 - <50% | 14808-60-7 | 238-878-4 | Exempt | No data available. | # |
| CYCLOSILOXANE ESTER | 1 - <5% | 113684-56-3 | | 01-0000016083-78-XXXX | No data available. | |

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

This substance has workplace exposure limit(s).

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

Classification

| Chemical name | Classification | Notes |
|---------------------|---------------------------|-------|
| QUARTZ | STOT RE: 2: H373; | |
| CYCLOSILOXANE ESTER | Aquatic Chronic: 4: H413; | |

CLP: Regulation No. 1272/2008.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures:

General: Get medical attention if symptoms occur.

Inhalation: Move to fresh air. Get medical attention if symptoms occur.

Eye contact: Rinse the eye with water immediately. If eye irritation persists: Get medical advice/attention.

Skin Contact: After contact with skin, remove product mechanically. Wash area with soap and water.

Ingestion: If swallowed, do NOT induce vomiting. Give a glass of water. Consult a physician for specific advice.

4.2 Most Important Symptoms and Effects, both Acute and Delayed:

None known.

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed:

Hazards: No information about adverse effects due to exposure.

Treatment: If swallowed, do NOT induce vomiting. Give a glass of water.

SECTION 5: FIREFIGHTING MEASURES

General Fire Hazards: Use standard firefighting procedures and consider the hazards of other involved materials. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

5.1 Extinguishing Media:

Suitable extinguishing media: All standard extinguishing agents are suitable.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire.

5.2 Special Hazards Arising from the Substance or Mixture:

In case of fire, carbon monoxide and carbon dioxide may be formed.

5.3 Advice for Firefighters:

Special firefighting procedures: Product may charge electrostatically during pouring or filling. Keep away from sources of ignition - No smoking. All equipment used when handling the product must be grounded.

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Special protective equipment for fire-fighters: Wear self-contained breathing apparatus and protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Caution: Contaminated surfaces may be slippery. Use personal protective equipment.

6.2 Environmental Precautions:

Do not allow runoff to sewer, waterway or ground.

6.3 Methods and Material for Containment and Cleaning-Up:

Pick up with vacuum or absorbent solid, store in closed container for disposal. Caution: Contaminated surfaces may be slippery. Clean surface thoroughly to remove residual contamination..

6.4 Reference to Other Sections:

Caution: Contaminated surfaces may be slippery. Prevent runoff from entering drains, sewers, or streams.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

Wear appropriate personal protective equipment.

Storage conditions: Keep away from sources of ignition - No smoking. Store in original container.

7.2 Conditions for Safe Storage, Including and Incompatibilities:

Keep away from sources of ignition - No smoking. Store in original container.

Storage Stability: Material is stable under normal conditions.

7.3 Specific End Use(s):

No data available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Occupational Exposure Limits

| Chemical name | Type | Exposure Limit Values | Source |
|--------------------------------------|------|-----------------------|---|
| QUARTZ - Respirable. | TWA | 0,1 mg/m3 | UK. EH40 Workplace Exposure Limits (WELs) (12 2011) |
| Calcium Carbonate - Respirable. | TWA | 4 mg/m3 | UK. EH40 Workplace Exposure Limits (WELs) (12 2011) |
| Calcium Carbonate - Inhalable | TWA | 10 mg/m3 | UK. EH40 Workplace Exposure Limits (WELs) (12 2011) |
| Calcium Carbonate - Inhalable dust. | TWA | 10 mg/m3 | UK. EH40 Workplace Exposure Limits (WELs) (12 2011) |
| Calcium Carbonate - Respirable dust. | TWA | 4 mg/m3 | UK. EH40 Workplace Exposure Limits (WELs) (12 2011) |

Biological Limit Values

None

8.2 Exposure Controls:

Appropriate Engineering Controls: Eyewash bottle with clean water. Use only in well-ventilated areas.

Individual protection measures, such as personal protective equipment

General information: Do not eat, drink or smoke when using the product. Wash hands after handling. Eye washes and showers for emergency use. Avoid contact with skin and eyes.

Eye/face protection: Advice: There is no risk to health due to contact with the chemical. Use hand protection to prevent mechanically injuries.

Skin protection

Hand Protection: Advice: There is no risk to health due to contact with the chemical. Use hand protection to prevent mechanically injuries.

Other: No data available.

Respiratory Protection: No protection is ordinarily required under normal conditions of use and with adequate ventilation.

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Hygiene measures: Ensure adequate ventilation, especially in confined areas. Wash hands after handling. When using do not eat, drink or smoke.

Environmental exposure controls: No data available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

| | |
|---|---|
| Appearance: | |
| Physical state: | Liquid |
| Form: | Liquid |
| Colour: | Blue |
| Odour: | Odourless |
| Odour threshold: | No data available. |
| pH: | No data available. |
| Freezing point: | No data available. |
| Boiling point: | > 260 °C (1,013 hPa) (No data available.) |
| Flash point: | 300 °C (Closed Cup) |
| Evaporation Rate: | No data available. |
| Flammability (solid, gas): | No data available. |
| Flammability Limit - Upper (%): | No data available. |
| Flammability Limit - Lower (%): | No data available. |
| Vapour pressure: | No data available. |
| Vapour density (air=1): | No data available. |
| Density: | ca. 1,27 g/cm ³ |
| Relative density: | No data available. |
| Solubility(ies): | |
| Solubility in Water: | Insoluble |
| Solubility (other): | No data available. |
| Partition coefficient (n-octanol/water) | No data available. |
| Log Pow: | |
| Autoignition Temperature: | ca. 450 °C |
| Decomposition Temperature: | No decomposition if stored and applied as directed. |
| SADT: | No data available. |
| Viscosity, dynamic: | 150.000 mPa·s |
| Viscosity, kinematic: | No data available. |
| Explosive properties: | No data available. |
| Oxidizing properties: | No data available. |

9.2 Other Information:

No data available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No data available.

10.2 Chemical Stability:

Material is stable under normal conditions.

10.3 Possibility of Hazardous Reactions:

Hazardous polymerisation does not occur.

10.4 Conditions to Avoid:

Avoid contact with acids and oxidizing substances.

10.5 Incompatible Materials:

Strong Acids, Strong Bases

10.6 Hazardous Decomposition Products:

Oxides of silicon. Carbon oxides Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

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SECTION 11: TOXICOLOGICAL INFORMATION

General information: Experience has shown, that the above mentioned product can be used without any danger to health, as long as the usual conditions of industrial hygiene are observed.

Information on likely routes of exposure

Inhalation: No data available.

Ingestion: No data available.

Skin Contact: No data available.

Eye contact: No data available.

11.1 Information on Toxicological Effects:

Acute toxicity

Oral

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

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER LD 50 (Rat): 5.000 mg/kg

Dermal

Product: ATEmix: 54.330,11 mg/kg

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER LD 50 (Rat): 2.000 mg/kg

Inhalation

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

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER No data available.

Repeated dose toxicity

Product: No data available.

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER No data available.

Skin Corrosion/Irritation:

Product: No data available.

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER No data available.

Serious Eye Damage/Eye

Irritation:

Product: No data available.

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER (Rabbit): No eye irritation

Respiratory or Skin

Sensitization:

Product: No data available.

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER Magnusson-Kligmann (Guinea Pig): Did not cause sensitization on laboratory animals.

Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER No data available.

Contact Details

| | |
|---|--|
| In vivo | |
| Product: | No data available. |
| Specified substance(s) | |
| QUARTZ | No data available. |
| CYCLOSILOXANE ESTER | Micronucleus test Oral (Mouse): negative (not mutagenic) |
| Carcinogenicity | |
| Product: | No data available. |
| Specified substance(s) | |
| QUARTZ | No data available. |
| CYCLOSILOXANE ESTER | No data available.. |
| Reproductive toxicity | |
| Product: | No data available. |
| Specified substance(s) | |
| QUARTZ | No data available. |
| CYCLOSILOXANE ESTER | No data available. |
| Specific Target Organ Toxicity - Single Exposure | |
| Product: | No data available. |
| Specified substance(s) | |
| QUARTZ | No data available. |
| CYCLOSILOXANE ESTER | No data available. |
| Specific Target Organ Toxicity - Repeated Exposure | |
| Product: | No data available. |
| Specified substance(s) | |
| QUARTZ | No data available. |
| CYCLOSILOXANE ESTER | No data available. |
| Target Organs: | |
| QUARTZ | Lungs |
| Aspiration Hazard | |
| Product: | No data available. |
| Specified substance(s) | |
| QUARTZ | No data available. |
| CYCLOSILOXANE ESTER | No data available. |
| Other effects: | No data available. |

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:

Acute toxicity

Fish

Product: No data available.

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER EC50 (Daphnia magna, 48 h): > 8 mg/l

Chronic Toxicity

Fish

Product: No data available.

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

QUARTZ No data available.

CYCLOSILOXANE ESTER No data available.

Contact Details

Toxicity to Aquatic Plants

Product: No data available.
Specified substance(s)
QUARTZ No data available.
CYCLOSILOXANE ESTER No data available.

12.2 Persistence and Degradability:

Biodegradation

Product: No data available.
Specified substance(s)
QUARTZ No data available.
CYCLOSILOXANE ESTER No data available.

BOD/COD Ratio

Product: No data available.
Specified substance(s)
QUARTZ No data available.
CYCLOSILOXANE ESTER No data available.

12.3 Bioaccumulative Potential:

Product: No data available.
Specified substance(s)
QUARTZ No data available.
CYCLOSILOXANE ESTER No data available.

12.4 Mobility in Soil:

Known or predicted distribution to environmental compartments

QUARTZ No data available.
CYCLOSILOXANE ESTER No data available.

12.5 Results of PBT and vPvB Assessment:

QUARTZ No data available.
CYCLOSILOXANE ESTER No data available.

12.6 Other Adverse Effects:

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

General information: The generation of waste should be avoided or minimized wherever possible.
See Section 8 for information on appropriate personal protective equipment.
Do not discharge into drains, water courses or onto the ground.
Disposal methods: Can be incinerated when in compliance with local regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 UN Number:

-

14.2 UN Proper Shipping Name:

-

14.3 Transport Hazard Class(es):

-

14.4 Packing Group:

-

14.5 Environmental Hazards:

-

14.6 Special Precautions for User:

Keep away from food, drink and animal feeding stuffs. This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

14.7 Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code:

Not applicable

Contact Details

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health & Environmental Regulations/Legislation Specific for the Substance or Mixture:

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

Regulation (EC) No. 850/2004 on persistent organic pollutants: none

Regulation (EC) No. 649/2012 Import and export of dangerous chemicals: none

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended: none

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC):

None

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use: none

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: none

Directive 96/82/EC (Seveso III): on the control of major accident hazards involving dangerous substances: none

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: none

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work: none

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out.

Inventory Status

| | | |
|--|-------------------------|----------------|
| Australia AICS: | q (quantity restricted) | Remarks: None. |
| Canada DSL Inventory List: | q (quantity restricted) | Remarks: None. |
| EU EINECS List: | y (positive listing) | Remarks: None. |
| Japan (ENCS) List: | y (positive listing) | Remarks: None. |
| China Inventory of Existing Chemical Substances: | y (positive listing) | Remarks: None. |
| Korea Existing Chemicals Inv. (KECI): | y (positive listing) | Remarks: None. |
| Canada NDSL Inventory: | n (Negative listing) | Remarks: None. |
| Philippines PICCS: | y (positive listing) | Remarks: None. |
| US TSCA Inventory: | y (positive listing) | Remarks: None. |
| New Zealand Inventory of Chemicals: | y (positive listing) | Remarks: None. |
| Taiwan. Taiwan inventory (CSNN): | y (positive listing) | Remarks: None. |

SECTION 16: OTHER INFORMATION

Phrases used in s.2 and s.3: H373: May cause damage to organs through prolonged or repeated exposure.
H413: May cause long lasting harmful effects to aquatic life.

Contact Details

DISCLAIMER

This 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 other process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy themselves as to the suitability of such information for their particular use.

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