



## HarcoSil 20-164 17-HSS-20-164

### 1. IDENTIFICATION

**Product Identifier:** HarcoSil 20-164 High Solids Silicone Roof Coating

**Use:** Polysiloxane coating.

**Manufacturer:** Neptune Coatings

**Manufacturer Phone:** +1 702-410-5500

**Emergency Phone:** +1 800-424-9300

**Emergency Contact:** Chemtrec

### 2. HAZARDS IDENTIFICATION

**GHS Hazard Classification:** Acute Toxicity – Category 4

Reproductive Toxicity – Category 2

Single Target Organ Toxicity (STOT) Repeated Exposure – Category 2

Skin Corrosion – Category 2

Skin Sensitizer – Category 1

**GHS Hazard Symbols:**



**GHS Signal Word:** Warning Warning

**GHS Hazard Statements:** H302 – Harmful if swallowed.

H315 – Causes skin irritation.

H317 – May cause an allergic skin reaction.

H361 – Suspected of damaging fertility.

H373 – May cause damage to organs through prolonged or repeated exposure. Affected organs: cardiovascular/hematological (hematopoiesis).

**GHS Precautionary Statements:**

**Prevention:**

P260 – Do not breathe fumes/mist/vapour/spray.

P262 – Do not get in eyes, on skin, or on clothing.

P273 – Avoid release to the environment.

P280 – Wear protective gloves/protective clothing/eye protection/face protection

**Response:**

P303+P361+P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 – IF IN EYES: Rinse cautiously for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P310+314 – Immediately call a Poison Control Center/doctor and get medical advice/attention if you feel unwell.

P403+P233+P235 – Store in a well ventilated place. Keep container tightly closed. Keep cool.

**Storage:**

**Disposal:**

P501 – Dispose of contents/containers to waste in accordance with local/regional/ national/international regulations.

Other Hazards which do not Not applicable.

result in GHS classification:

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name                                                  | Common or Other Name                                             | CAS Number | Percent by Weight |
|----------------------------------------------------------------|------------------------------------------------------------------|------------|-------------------|
| Silica, crystalline, quartz                                    | Quartz                                                           | 14808-60-7 | 5 - 25            |
| Titanium dioxide                                               | Titanium dioxide                                                 | 13463-67-7 | 2 - 9             |
| N-[bis[(butan-2-ylideneamino)oxy] methylsilyl]oxybutan-2-imine | Butan-2-one-O,O'-(methyldisilyldiyl)trioxime                     | 22984-54-9 | 1 - 5             |
| 3-triethoxysilylpropan-1-amine                                 | 3-triethoxysilylpropan-1-amine; amino alkyl silane               | 919-30-2   | 1 - 5             |
| Octamethylcyclotetrasiloxane*                                  | 2,2,4,4,6,6,8,8-octamethyl- 1,3,5,7,2,4,6,8-tetroxatetrasiloxane | 556-67-2   | 0.1 - 0.8         |
| Other Ingredients                                              |                                                                  |            | 64.2 - 92.9       |

Neptune Coatings Corporation.

4260 Wagon Trail Avenue ■ Las Vegas ■ NV 89118 ■ USA

Tel. +1 (702) 410-5500 ■ Fax +1 (702) 410-5889 ■ info@neptunecoatings.com ■

\* Octamethylcyclotetrasiloxane (D4) is classified under GHS as Reproductive Toxicity – Category 2 (H361 – Suspected of damaging fertility) based on reproductive studies in animals. See Section 11 for further details.

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentration applicable, are classification as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## 4. FIRST AID INFORMATION

IF POISONING IS SUSPECTED, immediately contact the poison control center, doctor or nearest hospital. Have the product container, label or Safety Data Sheet with you when calling a poison control center or doctor, or going for treatment. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

**Inhalation:** The affected person should be moved to fresh air and made comfortable. Obtain medical attention as a precaution.

**Eye Contact:** Do not attempt to remove solids or gums from the eye. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes, holding the eyelids open. After 5 minutes, remove contact lenses if present and possible, and continue rinsing. Obtain medical attention immediately.

**Skin Contact:** Remove contaminated clothing. Wash gently and thoroughly with water and non-abrasive soap. If symptoms persist, obtain medical attention. Contaminated clothing should be laundered before re-use.

**Ingestion:** Never give anything by mouth if victim is rapidly losing consciousness, is unconscious or convulsing. DO NOT INDUCE VOMITING. Have victim rinse out mouth and drink 8 to 10 oz. (240 to 300 ml) of water or milk to dilute the material in stomach. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Repeat the administration of water/milk. Obtain medical attention immediately.

### Most Important Symptoms/Effects:

At high vapour concentrations, curing by-product has a narcotic action with reversible effects. Prolonged exposure to curing by-product vapours can cause headache, nausea, central nervous system depression, anesthesia and dizziness.

Eye contact: Moderate irritation. Can cause burns.

Dermal contact: Mild irritation; may cause transient reddening of the skin.

Ingestion: Very low toxicity. May cause irritation and obstruction of the gastro-intestinal tract.

Indication of Immediate Medical Attention and Special Treatment Needed: There is no specific antidote if ingested. Treat symptomatically

## 5. FIRE FIGHTING MEASURES

### Suitable Extinguishing Media:

Dry chemical, CO<sub>2</sub>, water spray, chemical foam.

### Unsuitable Extinguishing Media:

Do not use water jet as an extinguisher as this may spread the fire.

### Specific Hazards:

Hazardous combustion products: carbon dioxide, carbon monoxide, formaldehyde, silicon dioxide, nitrogen oxide.

### Special Protective Equipment and Precautions for Firefighters:

Self-Contained Breathing Apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. Full protective clothing should be worn at all times.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures:

Make sure all personnel involved in the clean-up follow good industrial hygiene practices. A small spill can be handled routinely. Use adequate ventilation and equipment, and wear protective clothing as detailed in Section 8 Exposure Controls / Personal Protection and/or the product label.

### Methods and Materials for Containment and Cleaning Up:

Restrict access to area of spill. Provide ventilation and protective clothing as required for the situation. Cover with dry lime or soda ash. Scrape up liquid coating with cardboard or rag and place in a closed container.

### Environmental Precautions:

Review local, regional and/or national regulations for disposal. Silicone wastes can often be incinerated in approved facilities. Solid waste can often be sent to designated landfill sites.

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Tel. +1 (702) 410-5500 ■ Fax +1 (702) 410-5889 ■ [info@neptunecoatings.com](mailto:info@neptunecoatings.com) ■

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling:

KEEP OUT OF REACH OF CHILDREN. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Avoid breathing vapours. Wear full protective clothing and equipment as detailed in Section 8 Exposure Controls / Personal Protection. After work, rinse gloves and remove protective equipment, and wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking, applying cosmetics or using the toilet. Wash contaminated clothing before re-use and separate from household laundry.

### Conditions for Safe Storage, Including any Incompatibilities:

Store in cool dry conditions. Keep container tightly sealed when not in use. Protect product and contaminated materials from uncontrolled release into the environment, or from access by animals, birds or unauthorized people. Clean up spilled material immediately.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control Parameters:

| Chemical Name                                                  | OSHA PEL                                  | ACGIH TLV               | Other                                                                         | NTP/IARC/ OSHA Carcinogen | Canada TLV                                                                           |
|----------------------------------------------------------------|-------------------------------------------|-------------------------|-------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------|
| Silica, crystalline, quartz*                                   | 10/(%silica+2) respirable dust.           | 0.0025mg/m <sup>3</sup> | Not established                                                               | IARC Group 1 carcinogen   | Ontario 0.1 mg/m <sup>3</sup> (respirable fraction);<br>Quebec 0.1 mg/m <sup>3</sup> |
| Titanium dioxide*                                              | 15 mg/m <sup>3</sup> 8 hr TWA, Total dust | 10 mg/m <sup>3</sup>    | 5 mg/m <sup>3</sup> AEL DuPont, 8 & 12 hr respirable dust                     | IARC Group 2B carcinogen  | 10 mg/m <sup>3</sup>                                                                 |
| N-[bis[(butan-2-ylideneamino)oxy] methylsilyl]oxybutan-2-imine | Not established                           | Not established         | Not established                                                               | Not established           | Not established                                                                      |
| 3-triethoxysilylpropan-1-amine                                 | Not established                           | Not established         | Not established                                                               | Not established           | Not established                                                                      |
| Octamethylcyclotetrasiloxane*                                  | Not established                           | Not established         | Not established                                                               | Not established           | Not established                                                                      |
| Methyl Ethyl Ketoxime (MEKO)**                                 | Not established                           | Not established         | 3 ppm TWA; 10 ppm STEL; 10 ppm workplace environmental exposure level (AIIHA) | Not established           | Not established                                                                      |

REL = recommended exposure limit; STEL = short-term exposure limit; TLV = threshold limit value; TWA = time weighted average

\* Components are bound in the formulation and are not an exposure concern in the mixture or cured product.

\*\* Methyl Ethyl Ketoxime (MEKO) is a curing by-product that is released when the coating comes in contact with humid air. It is recommended to keep workplace exposure levels below 3 ppm.

### Appropriate Engineering Controls:

If necessary, ensure work areas have adequate ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV. Provide separate washing/shower and eating facilities.

### Individual Protection Measures:

**General:** Avoid breathing dusts, vapours or aerosols. Avoid contact with eye, skin and clothing. Wash thoroughly after handling, and before eating, drinking, applying cosmetics or handling tobacco.

**Eye/Face Protection:** Safety glasses / chemical splash goggles.

**Skin Protection:** Impervious gloves, coveralls and/or aprons may be useful to prevent contamination of skin and clothing. Choose gloves to protect hands against chemicals depending on the concentration specific to the place of work. Breakthrough time is not determined for the product. Change gloves often. We recommend clarifying the resistance of chemicals to protective gloves with the glove manufacturer. Wash hands before breaks and at the end of the workday.

**Respiratory Protection:** General and local exhaust ventilation is recommended to maintain vapour exposures below the recommended limits. Where concentrations are unknown or are above the recommended limits, a NIOSH/MSHA approved respirator with an organic vapour cartridge should be used. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

## 9. Physical and Chemical Properties

**Appearance:** Smooth, viscous liquid.

**Odour:** Almost odourless.

**Odour Threshold:** Not available.

**pH:** Not available.

**Melting Point:** Not applicable.

**Freezing Point:** Not applicable.

**Initial Boiling Point:** Not available.

**Boiling Point Range:** Not available.

**Flash Point:** 88 °C (190.4 °F) PMC, ASTM D-93

**Evaporation Rate:** Not applicable.

**Flammability:** Not applicable.

**Upper/Lower Flammability Limits:** Not applicable.

**Vapour Pressure:** Negligible at 25 °C (77 °F).

**Vapour Density:** Not applicable.

**Relative Density:** 1.32

**Solubility(ies):** Water – insoluble. Soluble in most organic solvents.

**Partition Coefficient (n-octanol/water):** x

**Auto-Ignition Temperature:** Not applicable.

**Decomposition Temperature:** Not available.

**Viscosity:** 4,000 cP

**Explosive Properties:** Not applicable.

**Oxidizing Properties:** Not applicable.

**VOC Content:** 48.7 g/L (0.406 lb/US gallon)

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## 10. STABILITY AND REACTIVITY

### Reactivity:

Not reactive under normal use and storage conditions.

### Stability:

Stable under normal use and storage conditions.

### Possibility of Hazardous Reactions:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

### Conditions to Avoid:

Temperatures above the flash point.

### Incompatible Materials:

Strong oxidizers. Concentrated acids or bases cause degradation of polymer. Boiling water may soften and weaken material.

### Hazardous Decomposition Products:

Combustion will produce carbon dioxide, carbon monoxide, silicon dioxide and nitrogen oxides. A component of this product can generate formaldehyde at approximately 150 °C (300 °F) and above in the atmosphere containing oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant and potential carcinogen.

## 11. TOXICOLOGICAL INFORMATION

| Relevant routes of exposure: | Acute Effects                                                                                                                      | Chronic Effects                                                                                                                                                |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation                   | Not normally an inhalation hazard. At high vapour concentrations, curing by-product has a narcotic action with reversible effects. | Prolonged exposure to high vapour concentrations of curing by-product can cause headache, nausea, central nervous system depression, anesthesia and dizziness. |
| Ingestion                    | Very low toxicity. May cause irritation and obstruction to gastro-intestinal tract.                                                | Effects unknown.                                                                                                                                               |
| Skin Contact                 | Mild irritation; may cause transient reddening of the skin.                                                                        | Effects unknown.                                                                                                                                               |
| Eye Contact                  | Moderate irritation. Can cause burns.                                                                                              | Effects unknown.                                                                                                                                               |
| Other                        | Component is suspected of damaging fertility.                                                                                      | Component is suspected of damaging fertility.                                                                                                                  |

### Octamethylcyclotetrasiloxane (D4):

Range finding reproductive studies were conducted (whole body inhalation, 70 days prior to mating, gestation and lactation), with D4. Rats were exposed to 70 and 700 ppm. In the 700 ppm group, there was a statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observed in the pups and no exposure related pathological findings were found. A two-year, combined chronic/carcinogenicity study, during which rats were exposed to D4 by inhalation, data showed a statistically significant increase in a benign uterine tumour in female rats exposed at the highest level – a level much higher than the low levels that consumers or workers may encounter. An expert panel of independent scientists who reviewed the results of this research concur that the finding seen in the two-year study occurred through a biological pathway that is specific to the rat and is not relevant to humans. Therefore, this observed effect does not indicate a potential health hazard to humans. In developmental toxicity studies, rats and rabbits were exposed to D4 at concentrations up to 700 ppm and 500 ppm respectively. No teratogenic effects (birth defects) were observed in either study.

### Acute Toxicity:

| Product           | Silica, crystalline, quartz | Titanium dioxide                                                | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane                                                                                                                       |
|-------------------|-----------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| No data available | No data available           | LD50 oral, rat >5,000 mg/kg; LD50 dermal, rabbit >10,000 mg/kg. | LD50, oral, rat, >5,000 mg/kg.                                | No data available               | LD50 oral, rat 4,800 mg/kg (OECD Guideline 401); LC50 inhalation, rat, 4hr. > 12.1 mg/kg; LC50 inhalation, rat, 4hr., 36 mg/L (OECD Guideline 403) |

### Skin Irritation:

| Product                                                     | Silica, crystalline, quartz | Titanium dioxide                        | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine         | Octamethylcyclotetrasiloxane                            |
|-------------------------------------------------------------|-----------------------------|-----------------------------------------|---------------------------------------------------------------|-----------------------------------------|---------------------------------------------------------|
| Mild irritation; may cause transient reddening of the skin. | May cause mild irritation.  | Slight or no skin irritation in rabbit. | Sensitization possible. Irritates the skin.                   | Irritant for skin and mucous membranes. | Non-irritating to the skin, rabbit (OECD Guideline 404) |

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## Eye Irritation:

| Product                              | Silica, crystalline, quartz | Titanium dioxide                       | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane                             |
|--------------------------------------|-----------------------------|----------------------------------------|---------------------------------------------------------------|---------------------------------|----------------------------------------------------------|
| Moderate irritation. Can cause burns | May cause eye irritation.   | Slight or no eye irritation in rabbit. | Irritates the eyes.                                           | Irritant effect.                | Non-irritating to the eyes, rabbit (OECD Guideline 405). |

## Mutagenicity:

| Product                         | Silica, crystalline, quartz       | Titanium dioxide                           | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane                                                                                                                                                               |
|---------------------------------|-----------------------------------|--------------------------------------------|---------------------------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No adverse effects anticipated. | No evidence of mutagenic effects. | No genetic damage in animals and bacteria. | No data available                                             | No data available               | Negative, in vitro, Salmonella typhimurium (OECD Guideline 471); Negative, in vitro, Mouse Lymphoma Assay (OECD guideline 476); Negative, in vivo, Micronucleus test, (OECD Guideline 453) |

## Carcinogenicity:

| Product                         | Silica, crystalline, quartz           | Titanium dioxide                       | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane                                                                                                                       |
|---------------------------------|---------------------------------------|----------------------------------------|---------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| No adverse effects anticipated. | IARC Group 1 carcinogen (inhalation). | IARC Group 2B carcinogen (inhalation). | No data available.                                            | No data available.              | Inhalation, rat-female, 24 months, 150 mg/kg, NOAEC (OECD Guideline 453); Inhalation, rat-male, 24 months, >700 mg/kg, NOAEC (OECD Guideline 453). |

NOTE: Silicon, crystalline, quartz and titanium dioxide are fully bound in the product formulation and is not an inhalation hazard in either the mixture or cured product.

## Reproductive Toxicity:

| Product            | Silica, crystalline, quartz          | Titanium dioxide                                | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane                                                                                               |
|--------------------|--------------------------------------|-------------------------------------------------|---------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| No data available. | No evidence of reproductive effects. | Animal testing showed no reproductive toxicity. | No data available.                                            | No data available.              | Rat, inhalation, 300 mg/kg, NOAEL parents (OECD Guideline 416); Rat, inhalation, 300 mg/kg, NOAEL F1 (OECD Guideline 416). |

## Teratogenicity:

| Product                         | Silica, crystalline, quartz        | Titanium dioxide                                 | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane                                                                                                                      |
|---------------------------------|------------------------------------|--------------------------------------------------|---------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| No adverse effects anticipated. | No evidence of teratogenic effects | Animal testing showed no developmental toxicity. | No data available.                                            | No data available.              | Rabbit, inhalation, 18 days, 500 mg/kg, NOAEL (OECD Guideline 414); Rabbit, inhalation, 18 days, 300 mg/kg, NOAEL maternity (OECD Guideline 414). |

## Specific Target Organ Toxicity (STOT) – Single Exposure:

| Product           | Silica, crystalline, quartz | Titanium dioxide  | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane |
|-------------------|-----------------------------|-------------------|---------------------------------------------------------------|---------------------------------|------------------------------|
| No data available | No data available           | No data available | No data available                                             | No data available               | No data available            |

## Specific Target Organ Toxicity (STOT) – Repeated Exposure:

| Product           | Silica, crystalline, quartz | Titanium dioxide                                   | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine                                                                      | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane |
|-------------------|-----------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------|
| No data available | No data available           | No toxicologically significant effects were found. | May cause damage to organs through prolonged or repeated exposure. Affected organs: cardiovascular/ hematological (hematopoiesis). | No data available               | No data available            |

NOTE: Silicon, crystalline, quartz and titanium dioxide are fully bound in the product formulation and is not an inhalation hazard in either the mixture or cured product.

## Aspiration Hazard:

| Product            | Silica, crystalline, quartz | Titanium dioxide   | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane |
|--------------------|-----------------------------|--------------------|---------------------------------------------------------------|---------------------------------|------------------------------|
| No data available. | No data available.          | No data available. | No data available.                                            | No data available.              | No data available.           |

## Chronic Toxicity:

| Product                                    | Silica, crystalline, quartz                                                                                                                                                                              | Titanium dioxide   | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane                                                                                           |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Potential for pulmonary edema, dermatitis. | IARC has classified crystalline silica as carcinogenic to humans. Long term exposure to products containing crystalline silica may cause silicosis, irritation of the nose, throat or respiratory tract. | No data available. | No data available.                                            | No data available.              | Inhalation, rat, 150 mg/kg, 24 months, NOAEC (OECD Guideline 453); Dermal, rabbit, 3 weeks, NOAEL (OECD Guideline 410) |

NOTE: Silica, crystalline, quartz and titanium dioxide are fully bound in the product formulation and is not an inhalation hazard in either the mixture or cured product.

NOTE: Curing by-product, methylethylketoxime (MEKO); male rats and mice exposed to MEKO throughout their lifetime developed liver tumours. Many commonly used chemicals cause liver tumours in rats and mice. The relevance to humans is unknown.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity – Acute:

| Product            | Silica, crystalline, quartz | Titanium dioxide                                                                                                                        | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane                                                         |
|--------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------|
| No data available. | Unlikely to be harmful.     | LC50, 96h, Pimephales promelas (fathead minnow), >1,000 mg/L;<br>EC50, 72h, Pseudokirchneriella subcapitata (green algae), >1,000 mg/L. | No data available.                                            | No data available.              | LC50, 96h, Oncorhynchus mykiss, ≥ 0.022 mg/L; EC50, 48h, Daphnia magna, >0.015 mg/L. |

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## Ecotoxicity - Chronic:

| Product           | Silica, crystalline, quartz | Titanium dioxide  | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane                                                                                                                    |
|-------------------|-----------------------------|-------------------|---------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| No data available | Unlikely to be harmful.     | No data available | No data available                                             | No data available               | NOEC, 93d, Oncorhynchus mykiss, $\geq$ 0.0044 mg/L; NOEC, 21d, Daphnia magna, 0.0079 mg/L; EC50, 96h, Selenastrum capricornatum, $>0.022$ mg/L. |

## Persistence and Degradability:

| Product            | Silica, crystalline, quartz | Titanium dioxide  | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane |
|--------------------|-----------------------------|-------------------|---------------------------------------------------------------|---------------------------------|------------------------------|
| No data available. | No data available.          | Does not degrade. | No data available.                                            | No data available.              | Not biodegradable.           |

## Bioaccumulative Potential:

| Product            | Silica, crystalline, quartz | Titanium dioxide        | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane |
|--------------------|-----------------------------|-------------------------|---------------------------------------------------------------|---------------------------------|------------------------------|
| No data available. | No data available.          | Does not bioaccumulate. | No data available.                                            | No data available.              | Bioaccumulating              |

## Mobility in Soil:

| Product            | Silica, crystalline, quartz | Titanium dioxide   | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane |
|--------------------|-----------------------------|--------------------|---------------------------------------------------------------|---------------------------------|------------------------------|
| No data available. | No data available.          | No data available. | No data available.                                            | No data available.              | No data available.           |

## Other Adverse Effects:

| Product            | Silica, crystalline, quartz | Titanium dioxide   | N-[bis[(butan-2-ylideneamino)oxy]methylsilyl]oxybutan-2-imine | 3-triethoxysilyl propan-1-amine | Octamethylcyclotetrasiloxane |
|--------------------|-----------------------------|--------------------|---------------------------------------------------------------|---------------------------------|------------------------------|
| No data available. | No data available.          | No data available. | No data available.                                            | No data available.              | No data available.           |

## 13. DISPOSAL CONSIDERATIONS

### Disposal Methods:

Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## 14. TRANSPORT INFORMATION

|                                                        | Land Transport (TDG/ USDOT) | Sea Transport (AND/MDG) | Air Transport (IATA-DGR) |
|--------------------------------------------------------|-----------------------------|-------------------------|--------------------------|
| This material is not subject to transport regulations. |                             |                         |                          |
| UN Number                                              |                             |                         |                          |
| UN Proper Shipping Name                                |                             |                         |                          |
| Transport Hazard Class                                 |                             |                         |                          |
| Packing Group                                          |                             |                         |                          |
| Environmental Hazards                                  |                             |                         |                          |

Special Precautions for User:

Not applicable.

Transport in Bulk According to Annex II of Marpol 73/78 and the IBC Code:

Not available.

## 15. REGULATORY INFORMATION

### Canadian Federal Regulations

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR), and the MSDS contains all the information required by the HPR.

### DSL Inventory:

All chemical substances in this material are included in or exempted from the DSL.

### US Federal Regulations

#### TSCA Inventory:

All chemical substances in this material are included in or exempted from the TSCA.

#### CERCLA Reportable Quantity:

None present on none present in regulated quantities.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity:

This material does not contain any components with a section 304 EHS RQ.

#### SARA 311/312 Hazard Categories:

Not applicable.

#### SARA 302 Extremely Hazardous Substance:

No chemicals in this material are subject to reporting requirements of SARA Title III, Section 302

#### SARA 313 Emergency Release Notification:

This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

### US State Regulations

#### U.S. California Proposition 65

No ingredient regulated by CA Prop 65 as per list issued on May 25th, 2018 present.

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## U.S. New Jersey Worker and Community Right-to-Know Act

Silica, crystalline, quartz 5 – 25%

Titanium dioxide 2 – 9%

Note: both components are fully bound in the product formulation and are not an inhalation hazard in either the mixture or cured product.

## U.S. Massachusetts Right-to-Know Act– Substance List

Silica, crystalline, quartz 5 – 25%

Titanium dioxide 2 – 9%

Note: both components are fully bound in the product formulation and are not an inhalation hazard in either the mixture or cured product.

## U.S. Pennsylvania Right-to-Know Act – Hazardous Substances

No ingredient regulated by PA Right-to-know Law present.

## U.S. Rhode Island Right-Know Act

No ingredient regulated by RI Right-to-Know law present.

## Other Regulations

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

The ingredients of this product are reported in the following inventories:

|                        |                                         |
|------------------------|-----------------------------------------|
| AICS (Australia)       | On or in compliance with the inventory. |
| DSL (Canada)           | On or in compliance with the inventory. |
| ENCs/ISHL (Japan)      | On or in compliance with the inventory. |
| IECSC (China)          | On or in compliance with the inventory. |
| KECI (Korea)           | On or in compliance with the inventory. |
| NZIoC (New Zealand)    | On or in compliance with the inventory. |
| PICCS (Philippines)    | On or in compliance with the inventory. |
| REACH (European Union) | On or in compliance with the inventory. |
| TSCA (USA)             | On or in compliance with the inventory. |

## National Fire Protection Association (NFPA)



## 16. OTHER INFORMATION

**Issue Date (D/M/Y):** 25/01/2022

**Replaces (D/M/Y):** N/A

To our knowledge, all the technical information in this document is true and accurate at the date of publication of this technical data sheet and remain subject to modification without prior notice. The user can contact Neptune Coatings to verify the accuracy of the information before to specify the product or before to order it. We warranty that our product are compliant with the standards of quality control established by Neptune Coatings. We don't accept any liability regarding the coverage ratio, the performances or any wound resulting from the use of the product. The responsibility of Neptune Coatings if any is limited to the replacement of the product. No other warranty is given by Neptune Coatings directly or indirectly, by legal route or otherwise, regarding the suitability of the product to a given application.

**Neptune Coatings Corporation.**

4260 Wagon Trail Avenue ■ Las Vegas ■ NV 89118 ■ USA

Tel. +1 (702) 410-5500 ■ Fax +1 (702) 410-5889 ■ [info@neptunecoatings.com](mailto:info@neptunecoatings.com) ■