## Allcosil No. 3 – Silicone Gum

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#### **IDENTIFICATION OF SUBSTANCE**

#### 1.1 Product Identifier:

Identification on the label/Trade name: Allcosil No. 3- Silicone Gum

#### Relevant Identified uses of the substance and uses advised against:

1.2.1 Identified uses:

1

Silicone Component of Allcosil No. 3. Allcosil No. 3acts as a tough, permanent release agent for many surfaces.

1.2.2 Uses advised against:

Not available

#### 1.3 Details of the Supplier of the material safety data sheet:

J. Allcock & Sons Ltd., Textile Street,

West Gorton, Manchester, M12 5DL

Fax: + 44 (0)161 223 0173

Email: ja@allcocks.co.uk

Tel: +44 (0)161 223 7181

+44 (0)161 223 7181 1.4 Emergency telephone number:

#### 2 HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture:

#### 2.1.1 Classification:

# <u>Classification according to Regulation (EC) No</u> <u>1272/2008:</u> Flammable liquid: Category 2.

Skin irritation: Category 2. Reproductive toxicity: Category 2

Specific target organ toxicity – single exposure: Category 3 Specific target organ toxicity – repeated exposure: Category 2

Chronic aquatic toxicant: Category 2. H225: Highly flammable liquid and vapour. H315: Causes skin irritation.

H361: Suspected of damaging the unborn child H336: May cause drowsiness or dizziness.

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

H411: Toxic to aquatic life with long lasting effects

## Classification according to EU directive 67/548/EEC/1999/45 EC

| F; R11 | Xn; R48/20 | R65 | R63 | Xi; R38 | R67 | N; R51/53 |

R11; Highly flammable. R65; Harmful: may cause lung damage if swallowed. R38; Irritating to skin. R48/20; Harmful: danger of serious damage to health by prolonged exposure through inhalation. R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R63; Possible risk of harm to the unborn child. R67; Vapours may cause drowsiness and dizziness.

#### 2.2 Label elements:

## 2.2.1 Classification according to Regulation (EC) No

1272/2008: Pictograms:



Signal Word:

Danger

#### Hazard Statements:

H225: Highly flammable liquid and vapour. H315: Causes skin irritation.

H336: May cause drowsiness or dizziness.

H361: Suspected of damaging fertility or the unborn child

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

H411: Harmful to aquatic life with long lasting effects

#### Precautionary Statements:

P201: Obtain special instructions before use

P210: Keep away from heat/sparks/open flames/hot surfaces. -- No smoking.

P233: Keep container tightly closed.

P240: Ground / bond container and receiving equipment.

P273: Avoid release to environment

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

P403: Store in a well-ventilated place. Keep cool



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#### 2.3 Other hazards

Static-accumulating flammable liquid
Vapours may form explosive mixture with air
May generate flammable hydrogen gas. Avoid contact with water, alcohol, acidic, basic, or oxidizing materials

#### COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.1 Substance/Mixture:

The product in question is a solution of reactive siloxane polymers in a mixture of toluene and a low boiling point white spirit.

#### 3.2 Ingredients:

3

Hazardous Ingredients:

| Substance Name                             | % by<br>weight | CAS#           | EINECS<br>No. | REACH<br>Registration<br>Number | Classification<br>according to EU<br>directive<br>67/548/EEC/1999/45 EC: | Classification<br>according to<br>Regulation (EC) No<br>1272/2008:   |
|--|----------------|----------------|---------------|---------------------------------|--|--|
| Naphtha (petroleum),<br>hydrotreated light | >=50 - <70     | 64742-<br>49-0 | 265-151-9     | n/a                             | F:R11, Xi:R38,<br>Xn:R48/20,R65<br>N; R51/53,R67                         | Flam. Liq. 2; H225 Skin<br>Irrit. 2; H315 Repr. 2;<br>H361d STOT SE 3;<br>H336<br>Asp. Tox. 1;<br>H304 Aquatic Chronic<br>2; H411                  |
| n-Hexane                                   | >=3-<5         | 110-54-3       | 203-777-6     | n/a                             | F:R11; Xi:R38;<br>Xn:R65-48/20,R67;<br>N:R51/53<br>Repr.Cat.3; R62       | Aquatic Chronic 2<br>H411,<br>Repr. 2; H361<br>STOT RE 2; H373<br>Asp. Tox. 1 H304,<br>Flam. Liq. 2 H225,<br>STOT SE 3 H336,<br>Skin Irrit. 2 H315 |
| Octamethylcyclotetrasiloxane               | 0.1 – 0.25     | 556-67-2       | 209-136-7     | 01-2119529238-<br>36            | Repr.Cat.3; R62 R53  | Flam. Liq. 3; H226<br>Repr. 2: H361f Aquatic<br>Chronic 4; H413  |

#### 4 FIRST-AID MEASURES

#### 4.1 Description of first aid measures:

#### 4.1.1 Protection of first aiders

First aid responders should pay attention to self-protection, use the recommended personal protective equipment when the potential for exposure exists.

#### 4.1.2 In case of inhalation:

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

## 4.1.3 In case of skin contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes Get medical attention.

Wash clothing before reuse. Thoroughly

clean shoes before reuse.

## 4.1.4 In case of eyes contact:

Flush eyes with water as a precaution.

Get medical attention if irritation develops/persists.

#### 4.1.5 In case of ingestion:

Seek immediate medical attention. Do not induce vomiting. Rinse mouth thoroughly with water.



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#### 4.2 Most important symptoms and effects, both acute and delayed:

Headache, dizziness, drowsiness, nausea and other CNS effects. Itching, pain, redness, swelling of skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Vapours may cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure.

#### 4.3. Indication of any immediate medical attention and special treatment needed:

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately. This light hydrocarbon material, or a component, may be associated with cardiac sensitisation following very high exposures (well above occupational exposure limits) or with concurrent exposure to high stress levels or heart stimulating substances like epinephrine. Administration of such substances should be avoided.

#### FIRE-FIGHTING MEASURES

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#### 5.1 Extinguishing Media:

#### 5.1.1 Suitable extinguishing media:

On large fires use AFFF alcohol compatible foam or water spray (fog). On small fires use AFFF alcohol compatible foam, CO2 or water spray (fog). Water mist can be used to cool fire exposed containers. Most fire extinguishing media will cause hydrogen release. Thus, in poorly ventilated or confined spaces, the accumulation of hydrogen may result in flash fire or explosion if ignited. Applying foam may release flammable hydrogen gas that can be trapped under the foam.

#### 5.1.2 Unsuitable extinguishing media:

High volume water jet.

#### 5.2 Specific Hazards arising from the substance or mixture:

Vapours are heavier than air and can travel along ground to remote ignition sources.

Electrostatic charges may be generated during transfer of product from its container.

Ensure that all equipment is electrically earthed.

Vapours may form explosive mixtures with air.

Do not use a solid water stream as it may scatter and spread fire

Hazardous Combustion Products:

Smoke, Fume, Incomplete combustion products, Oxides of carbon, Silica, Formaldehyde, Hydrogen, Silicone Oxides.

#### 5.3 Advice for fire-fighters:

Fire Fighting Instructions:

Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapours, cool unopened containers, and to protect personnel attempting to stop a leak. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards:

Highly flammable. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Flammability Properties:

Flash Point [Method]: <0C (32F) [ASTM D-56]

Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 7.0 LEL: 1.1 [Extrapolated]

Autoignition Temperature: >200°C (392°F) [Extrapolated]

## 6 ACCIDENTAL RELEASE MEASURES

## 6.1 Personal precautions, protective equipment and emergency procedures:

Notification procedures:

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Protective measures:

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders. For emergency responders: Respiratory protection: half-face or full-face respirator with filter(s) for organic vapour and, when applicable, H2S, or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to aromatic hydrocarbons are recommended. Note: gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

#### 6.2 Environmental precautions:

Large Spills:

Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas. Prevent spreading over a wide area (eg by containment or oil barriers). Local authorities should be advised if significant spillages cannot be contained.



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#### 6.3 Methods of containment and cleaning up:

Land Spill:

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapour suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other noncombustible material and transfer to containers. Large Spills: Water spray may reduce vapour, but may not prevent ignition in enclosed spaces. Recover by pumping or with suitable absorbent.

Water Spill

Stop leak if you can do so without risk. Eliminate sources of ignition. Warn other shipping. If the Flash Point exceeds the Ambient Temperature by 10°C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

#### 6.4 Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

#### 7 HANDLING AND STORAGE

#### 7.1 Precautions for safe handling:

Avoid contact with skin. Prevent exposure to ignition sources, for example use non-sparking tools and explosion proof equipment. Potentially toxic/irritating fumes/vapour may be evolved from heated or agitated material. Use only with adequate ventilation. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics – Code of practice for the avoidance of hazards due to static electricity).

Loading/Unloading Temperature:

[Ambient]

Transport Temperature:

[Ambient]

Static Accumulator:

This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

#### 7.2 Conditions for safe storage, including any incompatibilities:

Ample fire water supply should be available. A fixed sprinkler/deluge system is recommended. The container choice, for example storage vessel, may affect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Outside or detached storage preferred. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be earthed and bonded to prevent accumulation of static charge

Storage Temperature

[Ambient]

Storage Pressure:

[Ambient]

Suitable Containers/Packing:

Tank Trucks; Drums; Railcars; Barges Suitable

Materials and Coatings (Chemical Compatibility):

Carbon Steel; Stainless Steel; Polyethylene; Polypropylene; Teflon;

Polyester Unsuitable Materials and Coatings:

Natural Rubber; Butyl Rubber; Ethylene-proplyene-diene monomer (EPDM); Polystyrene

Shelf Life

Material if kept in dark, dry conditions and not exposed to extreme temperatures or left opened has a shelf life of 12 months from date of purchase

#### 7.3 Specific end use(s):

These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions

For further information regarding the use of silicones/organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these types of materials in consumer aerosol applications that has been developed by the silicones industry (www.SEHSC.com) or contact the dow corning service group



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#### 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

| 0.1 Control paran            |   | •                   | 1                  |            |  |
|------------------------------|---|---------------------|--------------------|------------|--|
| Components                   | CAS-No.   | Value Type (Form of | Control parameters | Basis      |  |
|                              |   | Exposure)           |                    |            |  |
| n-Hexane                     | 110-54-3  | TWA                 | 20ppm              | 2006/15/EC |  |
|                              |   |                     | 72/mg/m3           |            |  |
| Further Information          | Indicative  |                     |                    |            |  |
|                              |   | TWA                 | 20ppm              | GB EH40    |  |
|                              |   |                     | 72 mg/m3           |            |  |
| Further Information          | Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used |                     |                    |            |  |
| Octamethylcyclotetrasiloxane | 556-67-2  | TWA                 | 10 ppm             | DCC OEL    |  |

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

| Chemical Name | End Use   | Exposure Routes | Potential Health Effects   | Value    |
|---------------|-----------|-----------------|----------------------------|----------|
| n-Hexane      | Workers   | Skin Contact    | Long-term systemic effects | 11mg/kg  |
|               | Workers   | Inhalation      | Long-term systemic effects | 75mg/m3  |
|               | Consumers | Skin Contact    | Long-term systemic effects | 5.3mg/kg |
|               | Consumers | Inhalation      | Long-term systemic effects | 16mg/m3  |
|               | Consumers | Ingestion       | Long-term systemic effects | 4ma/ka   |

| Chemical Name                | End Use   | Exposure Routes | Potential Health Effects   | Value           |
|------------------------------|-----------|-----------------|----------------------------|-----------------|
| Octamethylcyclotetrasiloxane | Workers   | Inhalation      | Acute Systemic Effects     | 73mg/m3         |
|                              | Workers   | Inhalation      | Acute Local Effects        | 74.5mg/m3       |
|                              | Workers   | Inhalation      | Long-term Systemic Effects | 73mg/m3         |
|                              | Workers   | Inhalation      | Long-term Local Effects    | 14.9mg/m3       |
|                              | Consumers | Inhalation      | Acute Systemic Effects     | 13mg/m3         |
|                              | Consumers | Inhalation      | Acute Local Effects        | 13mg/m3         |
|                              | Consumers | Inhalation      | Long-term Systemic Effects | 13mg/m3         |
|                              | Consumers | Inhalation      | Long-term Local Effects    | 2.6mg/m3        |
| _                            | Consumers | Ingestion       | Acute Systemic Effects     | 3.7mg/kg bw/day |
|                              | Consumers | Ingestion       | Long-term Systemic Effects | 3.7mg/kg bw/day |

#### Derived No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

| Chemical Name                | Habitat                | Value        |
|------------------------------|------------------------|--------------|
| Octamethylcyclotetrasiloxane | Fresh Water            | 0.00044 mg/l |
|                              | Marine Water           | 0.000044mg/l |
|                              | Fresh Water Sediment   | 0.128mg/kg   |
|                              | Marine Sediment        | 0.013mg/kg   |
|                              | Soil                   | 0.15mg/kg    |
|                              | Sewage Treatment Plant | 10mg/l       |

#### 8.2.2 Individual protection measures:

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

## Eye/face protection:

If contact is likely, safety glasses + side shields are recommended.

#### Hand protection:

Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves. Antistatic, Impervious and flame retardant gloves are recommended.

Nitrile, CEN standards EN 420 and EN 374 provide general requirements and lists of glove types. Wash hands before breaks and at the end of the workday. Change gloves often.

#### Body protection:

Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

Chemical / oil resistant clothing if contact with material is likely. Flame retardant antistatic protective clothing.

#### Respiratory protection:

If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Half-face filter respirator Type A filter material, European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 provide filter recommendations.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.



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#### Specific Hygiene Measures:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

8.2.3 Environmental exposure controls:

9

See Sections 6, 7, 12, 13.

#### PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties:

Appearance: Clear, hazy, viscous liquid. Physical Liquid

 state: Colour:
 Colourless

 Odour:
 Solvent

 pH:
 Neutral

 Melting point/range (°C):
 N/A

 Boilling point/range (°C):
 110

Boiling point/range (°C):

Flash point (°C):

Evaporation rate:

110

5 (Tag closed cup)

N/A

Flammability (soild,gas):

Highly flammable.

Ignition temperature (°C):

Upper/lower flammability/explosive limits:

N/A

Forms explosive mixtures in air.

Vapour density: N/A
Relative Density (g cm<sup>-</sup> @ 25°C 0.9

3) Solubility: Insoluble in water.

Auto-ignition temperature (°C): > 200Decomposition temperature (°C): N/AViscosity (mm² s<sup>-1</sup>, cSt): @ 25°C 19,000

9.2 Physical hazards:

Not available.

#### 10 STABILITY AND REACTIVITY

#### 10.1 Reactivity:

Hydrogen is liberated on contact with water, alcohols, acidic or basic materials, many metals or metallic compounds and can form explosive mixtures in air.

#### 10.2 Chemical stability:

Reacts slowly with atmospheric moisture.

#### 10.3 Possibility of hazardous reactions:

Some hydrogen gas may be released. Hydrogen is flammable and can form explosive mixtures with air. Highly flammable liquid and vapour. Can react with string oxidising agents. Hazardous decomposition products will be formed at elevated temperatures, including formaldehyde.

#### 10.4 Conditions to avoid:

All possible sources of ignition. Exposure to moisture. Handling operations that can promote accumulation of static charges.

#### 10.5 Incompatible materials:

Strong oxidising agents. Water.

#### 10.6 Hazardous decomposition products:

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Silica. Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde. Hydrogen.



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## 11 TOXICOLOGICAL INFORMATION

## 11.1 Toxicokinetics, metabolism and distribution:

Dangerous amounts can be absorbed through the skin, eye contact, Inhalation and ingestion.

#### 11.2 Information on toxicological effects:

Toxicological effects for Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (25 % wt/wt):

| Naphtha (petroleum) hydrotreated | Limit                         | Assessment                      | Remarks                              |
|----------------------------------|-------------------------------|---------------------------------|--------------------------------------|
| light                            |                               |                                 |                                      |
| Acute Oral Toxicity              | LD50 (Rat): 5840mg/kg         |                                 | Based on data from similar materials |
| Acute Inhalation Toxicity        | LC50 (Rat): >25.2mg/l         |                                 | Based on data from similar materials |
|                                  | Exposure time: 4h             |                                 |                                      |
|                                  | Test Atmosphere: Vapour       |                                 |                                      |
| Acute Dermal Toxicity            | LD50 (Rat): >2800 - 3100mg/kg | The substance or mixture has no | Based on data from similar materials |
|                                  |                               | acute dermal toxicity           |                                      |

| n-Hexane                  | Limit                           | Assessment                      | Remarks |
|---------------------------|---------------------------------|---------------------------------|---------|
| Acute Oral Toxicity       | LD50 (Rat): > 5000mg/kg         |                                 |         |
|                           | Method: OECD Test Guideline 401 |                                 |         |
| Acute Inhalation Toxicity | LC50 (Rat): > 31.86mg/l         | The substance or mixture has no |         |
|                           | Exposure time: 4h               | acute inhalation toxicity       |         |
|                           | Test Atmosphere: vapour         |                                 |         |
|                           | Method OECD Test Guidance 403   |                                 |         |
| Acute Dermal Toxicity     | LD50 (Rabbit): >2,000 mg/kg     |                                 |         |

| Octamehylcyclotetrasiloxane | Limit                    | Assessment                         | Remarks            |
|-----------------------------|--------------------------|------------------------------------|--------------------|
| Acute Oral Toxicity         | LD50 (Rat): > 4,800mg/kg | The substance or mixture has no    | Based on test data |
|                             |                          | acute oral toxicity                |                    |
| Acute Inhalation Toxicity   | LC50 (Rat): 2975 ppm     | The substance or mixture has no    | Based on test data |
|                             | Exposure time: 4h        | acute inhalation toxicity          |                    |
|                             | Test atmosphere: Vapour  |                                    |                    |
| Acute Dermal Toxicity       | LD50 (Rabbit): >2.5ml/kg | The substance/mixture has no acute | Based on test data |
|                             |                          | dermal toxicity                    |                    |

## Skin Corrosion/irritation:

Causes skin irritation

| Components                       | Species | Results            | Remarks                          |
|----------------------------------|---------|--------------------|----------------------------------|
| Naphtha (petroleum) hydrotreated | Rabbit  | Skin Irritation    | Based on data of similar methods |
| light                            |         |                    |                                  |
| n-Hexane                         | Rabbit  | Skin Irritation    |                                  |
| Octamehylcyclotetrasiloxane      | Rabbit  | No Skin Irritation | Based on test data               |

## Serious eye damage/irritation:

Not classified based on available information

| Components                             | Species | Results           | Remarks            |
|--|---------|-------------------|--------------------|
| Naphtha (petroleum) hydrotreated light | Rabbit  | No eye irritation |                    |
| n-Hexane                               | Rabbit  | No eye irritation |                    |
| Octamehylcyclotetrasiloxane            | Rabbit  | No eye irritation | Based on test data |

## Respiratory or Skin sensitization:

Skin Sensitization: Not classified based on available information

Respiratory sensitization: Not classifiable based on available information

| Components                  | Test Type         | Exposure     | Species    | Result              | Remarks                     |
|-----------------------------|-------------------|--------------|------------|---------------------|-----------------------------|
|                             |                   | routes       |            |                     |                             |
| Naphtha (petroleum)         | Maximization Test | Skin Contact | Guinea Pig | Negative            | Based on data from similar  |
| hydrotreated light          | (GPMT)            |              |            |                     | methods                     |
| n-Hexane                    | Local lymph node  | Skin Contact | Mouse      | Negative            |                             |
|                             | assay (LLNA)      |              |            |                     |                             |
| Octamehylcyclotetrasiloxane | Maximization Test |              | Guinea Pig | Does not cause skin | No known sensitising effect |
|                             | (GPMT)            |              |            | sensitization       | based on test data          |



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Germ cell mutagenicity: Not classified based on available information

| Components                  | Area                  | Test Type   | Result   | Remarks                                    |
|-----------------------------|-----------------------|---|----------|--|
| Naphtha (petroleum)         | Genotoxicity in vitro | Chromosome aberration test in vitro   | Negative | Based on data from similar materials       |
| hydrotreated light          |                       |   |          |  |
| n-Hexane                    | Genotoxicity in vitro | Bacterial reverse mutation assay (AMES)                                       | Negative | Weight of evidence does not support        |
|                             |                       | In vitro mammalian cell gene mutation test                                    | Positive | classification as a germ cell mutagen      |
|                             | Genotoxicity in vivo  | Rodent dominant lethal test (germ cell) (Mouse) (Vapour)                      | Negative |  |
| Octamehylcyclotetrasiloxane | Genotoxicity in vitro | Bacterial reverse mutation assay (AMES)                                       | Negative | Based on test data, Animal testing did not |
|                             |                       | Mutagenicity (in vitro mammalian cytogenetic test)                            | Negative | show any mutagenic effects                 |
|                             |                       | Chromosome aberration test in vitro   | Negative |  |
|                             |                       | In vitro sister chromatid exchange assay in mammalian cells                   | Negative |  |
|                             |                       | DNA damage and repair, unscheduled DNA synthesis in mammalian cells           | Negative |  |
|                             | Genotoxicity in vivo  | Mammalian erythrocyte micronucleus test (in vivo) (Rat) (Inhalation of vapour | Negative |  |
|                             |                       | Rodent dominant lethal test (germ cell) (Mouse) (ingestion)                   | Negative |  |

Carcinogenicity: Not classified based on available information

| I | Components | Test Type              |                                 | Exposure routes     | Species | Result   |
|---|------------|------------------------|---------------------------------|---------------------|---------|----------|
|   | n-Hexane   | Exposure time: 2 years | Method: OECD Test Guideline 451 | Inhalation (vapour) | Rat     | Negative |

Reproductive toxicity:

| Components                                | Area of Effect                   | Test Type  | Exposure routes        | Species                    | Result                           | Remarks   |  |
|---|----------------------------------|--|------------------------|----------------------------|----------------------------------|---|--|
| Naphtha (petroleum)<br>hydrotreated light | Fertility                        | Two-generation reproduction toxicity study                 | Inhalation<br>(Vapour) | Rat                        | Negative                         | Based on data form similar materials  |  |
|   | Foetal development               | Embryo-foetal development                                  | Inhalation<br>(Vapour) | Mouse                      | Negative                         | Based on data form similar materials  |  |
| n-Hexane                                  | Reproductive toxicity assessment |  |                        |                            |                                  | ome evidence of adverse effects on sexual function ar<br>rtility, and/or on development, based on animal<br>periments |  |
| Octamehylcyclotetrasiloxane               | fertility                        | Two-generation reproduction toxicity study                 | Inhalation<br>(Vapour) | Rat, Male<br>and<br>female | Effects on fertility             | Based on test data  |  |
|   | Foetal development               | Prenatal<br>development toxicity<br>study (teratogenicity) | Inhalation<br>(Vapour) | Rabbit                     | No effects on foetal development | Based on test data  |  |
|   | Reproductive toxicity            |  |                        |                            | Suspected of damaging fertility  | Some evidence of adverse effects on<br>sexual function and fertility, based on<br>animal experiments                  |  |

STOT – Single exposure: May cause drowsiness or dizziness:

| Components                             | Assessment                        | Remarks                              |  |
|--|-----------------------------------|--------------------------------------|--|
| Naphtha (petroleum) hydrotreated light | May cause drowsiness or dizziness | Based on data from similar materials |  |
| n-Hexane                               | May cause drowsiness or dizziness |                                      |  |

STOT – repeated exposure:

| Not classified based on available information: |  |                     |   |  |  |  |
|--|--|---------------------|---|--|--|--|
| Components Target organs                       |  | Exposure routes     | Assessment  |  |  |  |
| n-Hexane Central nervous system                |  |                     | may cause damage to organs through prolonged or repeated exposure                 |  |  |  |
| Octamehylcyclotetrasiloxane                    |  | Ingestion           | No significant health effects observed in animals at concentrations of 100mg/kg   |  |  |  |
|  |  |                     | bw or less  |  |  |  |
|  |  | Inhalation (vapour) | No significant health effects observed in animals at concentrations of 1mg/l/6h/d |  |  |  |
|  |  |                     | or less   |  |  |  |
|  |  | Skin Contact        | No significant health effects observed in animals at concentrations of 200mg/kg   |  |  |  |
|  |  |                     | bw or less  |  |  |  |



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Repeated dose toxicity:

| Components                  | Test Type                            | Exposure routes     | Species | Remarks                            |
|-----------------------------|--------------------------------------|---------------------|---------|------------------------------------|
| Naphtha (petroleum)         | NOAEL: 24,300 mg/m3 ( 13 w exposure) | Inhalation (vapour) | Rat     | Based on data from similar methods |
| hydrotreated light          |                                      |                     |         |                                    |
| n-Hexane                    | LOAEL: 10.6mg/l (16 w exposure)      | Inhalation (vapour) | Rat     |                                    |
| Octamehylcyclotetrasiloxane |                                      | Ingestion           | Rat     | Based on test data                 |
|                             |                                      | Inhalation (vapour) | Rat     | Based on test data                 |
|                             |                                      | Skin Contact        | Rabbit  | Based on test data                 |

#### Aspiration toxicity:

Not classified based on available information

| Components   | Components Remarks |  |  |
|--|--------------------|--|--|
| Naphtha (petroleum) The substance is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration |                    |  |  |
| hydrotreated light   |                    |  |  |
| n-Hexane The substance is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspir                 |                    |  |  |

#### 11.3 Other Information:

For the Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (25 % wt/wt):

Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting maycause chemical pneumonitis or pulmonary oedema. Very high exposure (confined spaces / abuse) to light hydrocarbons may result in abnormal heart rhythm (arrhythmias). Concurrent high stress levels and/or co-exposure to high levels of hydrocarbons (above occupational exposure limits), and to heart-stimulating substances like epinephrine, nasal decongestants, asthma drugs, or cardiovascular drugs may initiate arrhythmias.

For Toluene (51% wt/wt):

Product may emit formaldehyde vapour at temperatures above 150°C in the presence of air. Formaldehyde vapour is a suspected carcinogen, toxic by inhalation and irritating to eyes and the respiratory system. Exposure limits should be strictly respected.

For octamethylcyclotetrasiloxane:

Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700ppm) only. Studies to date have not determined if these effects occur through pathways that are relevant to humans. Based on the available information on its potential to cause harm to human health, Heath Canada, in a 2008 screening assessment, has concluded that octamethylcyclotetrasiloxane is not entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health (<a href="http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=2481B508-1">http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=2481B508-1</a>). Repeated exposure in rats to D4 resulted in protoporpyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporpyrin accumulation the relevance of this finding to humans is unknown.

## 12 ECOLOGICAL INFORMATION

12.1 Toxicity:

| Components                            | Test Type   | Species                                       | Method              | Remarks            |
|---------------------------------------|---|---|---------------------|--------------------|
| Naphtha (petroleum)                   | LL50: 12mg/l  | Oncorhynchus                                  | OECD Test Guideline | Based on data from |
| hydrotreated light Exposure time: 96h |   | mykiss (Rainbow                               | 203                 | similar materials  |
|                                       | Test Substance: Water Accommodated Fraction         | Trout)  |                     |                    |
|                                       | EL50: 3mg/l   | Daphnia magna                                 | OECD Test Guideline | Based on data from |
|                                       | Exposure time: 48h                                  | (water flea)                                  | 202                 | similar materials  |
|                                       | Test Substance: Water Accommodated Fraction         |   |                     |                    |
|                                       | EL50: 30-100mg/l                                    | Pseudokirchneriella                           | OECD Test Guideline | Based on data from |
|                                       | Exposure time: 72h                                  | subcapitata (Green                            | 201                 | similar materials  |
|                                       | Test Substance: Water Accommodated Fraction         | algea)  |                     |                    |
|                                       | NOEC50: 0.17mg/l                                    | Daphnia Magna                                 | OECD Test Guideline | Based on data from |
|                                       | Exposure time: 21d                                  | (water flea)                                  | 211                 | similar materials  |
|                                       | Test Substance: Water Accommodated Fraction         |   |                     |                    |
|                                       | Ecotoxicity assessment Chronic aquatic toxicity: To | ic to aquatic life with long lasting effects. |                     |                    |
| n-Hexane                              | LC50: 2.5mg/l                                       | Pimephales                                    |                     |                    |
|                                       | Exposure time: 96h                                  | promelas (fathead                             |                     |                    |
|                                       |   | minnow)                                       |                     |                    |
|                                       | EC50: 3.88mg/l                                      |   |                     |                    |
|                                       | Exposure time: 48h                                  | (Water flea)                                  |                     |                    |
|                                       | EC50: 55mg/l  | Pseudokrchneriella                            | OECD Test Guideline | Based on data from |
|                                       | Exposure time: 72h                                  | subcapitata (green                            | 201                 | similar materials  |
|                                       | algea)  |   |                     |                    |
| Octamehylcyclotetrasiloxane           |   |   |                     | _                  |



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| Components                            | Test Type                               | Species  | Method          | Remarks                                |
|---------------------------------------|---|--|-----------------|--|
| Octamehylcyclotetrasiloxane           | LC50: >0.022mg/l<br>Exposure time: 96h  | Oncorhynchus mykiss (rainbow trout)                  |                 | No toxicity at the limit of solubility |
|                                       | EC50: >0.015g/l<br>Exposure time: 48h   | Daphnia sp.  |                 | No toxicity at the limit of solubility |
|                                       | EC50: 0.022mg/l<br>Exposure time: 96h   | Pseudokirchneriella subcapitata (Green algea)        |                 | No toxicity at the limit of solubility |
|                                       | NOEC: 0.022mg/l<br>Exposure time: 96h   | Pseudokirchneriella subcapitata (Green algea)        |                 |  |
|                                       | IC50: >10,000mg/l                       |  | ISO 8192        |  |
|                                       | NOEC: >=0.0044mg/l                      | Oncorhynchus mykiss (rainbow trout)                  |                 | No toxicity at the limit of solubility |
|                                       | NOEC: >0.0079mg/l<br>Exposure time: 21d | Daphnia sp.  |                 | No toxicity at the limit of solubility |
| M-factor (chronic aquatic toxicity) : | = 1 Ecotoxicology                       | y Assessment: may cause long lasting harmful effects | to aquatic life | -                                      |

#### 12.2 Persistence and degradability:

Organic solvents may evaporate into the atmosphere, where they degrade. Siloxanes are removed from water by sedimentation or binding to sewage sludge. In soil, siloxanes are degraded.

For Naphtha (petroleum), hydrotreated light: Biodegradability:

Result: Readily biodegradable Biodegradation: 77% Exposure time: 28d

Method: OECD Test Guideline 301F

For n-Hexane:

Biodegradability:

Result: Readily biodegradable Biodegradation: 98% Exposure time: 28d

Based on data from similar materials

For Octamethylcyclotetrasiloxane:

Biodegradability:

Result: Not readily biodegradable

Biodegradation: 3.7% Exposure time: 28d

Method: OECD Test Guideline 310

Stability in water:

Degradation half-life: 69.3 – 144h (24.6°C) pH: 7

Method: OECD Test Guideline 111

12.3 Bioaccumulative potential:

| Component                        | coefficient                            | Log Pow       | Remarks          |
|----------------------------------|--|---------------|------------------|
| Naphtha (petroleum) hydrotreated | Partition coefficient: n-octanol/water | >4            | Expert judgement |
| light                            |  |               |                  |
| n-Hexane                         | Partition coefficient: n-octanol/water | 4             |                  |
| Octamehylcyclotetrasiloxane      | Partition coefficient: n-octanol/water | 6.48 (25.1°C) |                  |

## 12.4 Mobility in soil: No data available

## 12.5 Results of PBT and vPvB assessment

For Octamethylcyclotetrasiloxane:

Octamethylcyclotetrasiloxane (D4) meets the current REACh Annex XIII criteria for PBT and vPvB. In Canada, D4 has been assessed and deemed to meet the PiT criteria. However, D4 does not behave similarly to know PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in the air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisims.

#### 12.5 Other adverse effects:

No adverse effects are expected.

Other ecological information: VOC: Yes

Ecological data:

For the Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (25% wt/wt):



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#### 13 **DISPOSAL CONSIDERATIONS**

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

#### 13. 1 Waste treatment methods:

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

European Waste Code: 08 XX XX

Note: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s).

#### 13.2 Product/Packaging disposal:

Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

#### 14 TRANSPORT INFORMATION

#### 14.1 UN number:

**ADN: UN 1263 ADR: UN 1263** RID: UN 1263 **IMDG: UN 1263** IATA: UN 1263

## 14.2 UN proper shipping name:

**ADN:** PAINT ADR: PAINT **RID: PAINT IMDG: PAINT** IATA: Paint

#### 14.3 Transport hazard class(es):

ADN: 3 ADR: 3 RID: 3 **IMDG**: 3 IATA: 3

## 14.4 Packing group:

#### ADN:

Packing group: II Classification Code: F1 Hazard Identification Number: 33

Labels: 3

#### ADR:

Packing group: II Classification Code: F1 Hazard Identification Number: 33 Labels: 3

Tunnel restriction code: (D/E)

RID:



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Packing group: II Classification Code: F1

Hazard Identification Number: 33

Labels: 3

IMDG:

Packing group: II Labels: 3 EmS Code: F-E, S-D

Packing instruction (cargo aircraft): 364 Packing instruction (passenger aircraft): 353

Packing instruction (LQ): Y341

Packing group: II

Labels: Flammable Liquids

Remarks: VENTED PACKAGES ARE FORBIDDEN FOR AIR TRANSPORT

#### 14.5 Environmental hazards:

ADN:

Environmentally hazardous: no

Environmentally hazardous: no

RID:

Environmentally hazardous: no

IMDG:

Marine pollutant: no

#### 15 REGULATORY INFORMATION

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

## Applicable EU Directives and Regulations:

1907/2006 [... on the Registration, Evaluation, Authorisation and Restriction of Chemicals ... and amendments thereto] 2004/42/CE [on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC.]

96/82/EC as extended by 2003/105/EC [... on the control of major-accident hazards involving dangerous substances]. Product contains a substance that falls within the criteria defined in Annex I. Refer to Directive for details of requirements taking into account the volume of product stored on site.

98/24/EC [... on the protection of workers from the risk related to chemical agents at work ...]. Refer to Directive for details of requirements.

1272/2008 [on classification, labelling and packaging of substances and mixtures.. and amendments thereto] Take note of directives 94/33/EC and 92/85/EEC on the protection of young people at work and the safty and health at work of pregnant workers respectively.

All ingredients are (pre-)registered or exempt from REACH. All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL)

Refer to the relevant EU/national regulation for details of any actions or restrictions required by the above

Invantories: AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

## 15.2 Chemical safety assessment:

Chemical safety assessments for substances in this mixture were not carried out.

#### 16 **OTHER INFORMATION**

#### Full text of R-Phases:

R11: Highly flammable R38: Irritating to skin

R48/20: Harmful; danger of serious damage to health by prolonged exposure through inhalation.

R51/53: Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment R53: May cause long-term adverse effects in the aquatic environment.

R62: Possible risk of impaired fertility

R63: Possible risk of damage to the unborn child R65: Harmful; may cause lung damage if swallowed R67: Vapours may cause drousiness and dizziness



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#### Full text of H-Statements:

H225: Highly flammable liquid and vapour

H226: Flammable liquid and vapour

H304: May be fatal if swallowed and enters airways

H315: Causes skin irritation

H336: May cause drowsiness or dizziness

H361: Suspected of damaging fertility or the unborn child

H361f: Suspected of damaging fertility

H373: May cause damage to organs through prolonged or repeated exposure H411: Toxic to aquatic life with long lasting effects

H413: May cause long lasting harmful effects to aquatic life

#### Full text of other abbreviations:

Aquatic Chronic: Chronic aquatic toxicity

Asp. Tox.: Aspiration hazard Flam. Liq.: Flammable liquids Repr.: Reproductive toxicity

Skin Irrit.: Skin irritation

STOT RE: Specific target organ toxicity – repeated exposure STOT SE: Specific target organ toxicity – single exposure 2006/15/EC: Europe. Indicative occupational exposure limit values

DCC OEL: Dow Corning Guide

GB EH40: UK. EH40 WEL - Workplace exposure limits

2006/15/EC/TWA: Limit value - 8 hours 2006/15/EC/STEL: Short term exposure limit DCC OEL/TWA: Time weighted average

GB EH40/TWA: Long-term exposure limit (8-hour TWA reference period) GB EH40/STEL: Short-term exposure limit (15-minute reference period)

#### **Further information**

Sources of key data used to compile the Safety Data Sheet: Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

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