

# ***SAFETY DATA SHEET***

## ***PSF-0.65cSt Pure Silicone Fluid***



**Data Prepared: January 22, 2015**

### **SECTION 1: Identification**

Product name : PSF-0.65cSt Pure Silicone Fluid

Product code : PSF-0.65cSt

#### **Manufacturer or supplier details**

Company name of supplier : Clearco Products Co Inc.

Address : 15 York Rd.  
Willow Grove, PA 19090 U.S.A.

Telephone : 215-366-7860

**Emergency Telephone : CHEM TEL: 1-800-255-3924 (DOMESTIC)  
+01-813-248-0585 (INTERNATIONAL)**

#### **Recommended use of the chemical and restrictions on use**

Recommended use : Intermediate  
Cosmetics  
Solvent  
Laboratory chemicals

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### **SECTION 2: Hazards identification**

#### **GHS Classification**

Flammable Liquids : Category 2

#### **GHS Label element**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.

Precautionary Statements : Prevention

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

P233 Keep container tightly closed

P240 Ground/bond container and receiving equipment

P241 Use explosions-proof electrical/ventilating/ighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing spray

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/eye protection/face protection.

Response:

P303+P361\_P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Storage:

P403+P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/container to an approved waste disposal plant.

Other hazards

Static-accumulating flammable liquid.

Vapors may form explosive mixture with air.

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### SECTION 3: Composition/information on ingredients

Substance/ Mixture : Substance  
Substance Name : Hexamethyldisiloxane  
CAS -no. : 107-46-0  
Chemical nature : Silicone

#### Hazardous ingredients

Chemical Name	CAS-No.	Concentration (5)
Hexamethyldisiloxane	107-46-0	>=90- <=100

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### SECTION 4: First aid measures

If inhaled : If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.

In case of skin contact : Wash with water and soap as a precaution.  
Get medical attention if symptoms occur.

In case of eye contact : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention if symptoms occur.  
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed  
None known.

Protection of first-aiders : No special precautions are necessary for first aid responders.

Notes to physician : Treat symptomatically and supportively.

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### SECTION 5: Firefighting measures

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Dry chemical  
Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Fire burns more vigorously than would be expected. Exposure to combustion products may be a hazard to health.
Hazardous combustion products	: Carbon oxides Silicon oxides Formaldehyde
Special protective equipment for fire-fighters	: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment
Specific extinguishing methods	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

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**SECTION 6: Accidental release measures**

Personal precautions, protective equipment and emergency procedures	: Remove all sources of ignition. Ventilate the area. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	: Soak up with inert absorbent material Non-sparking tools. Suppress (knock down) gases/vapors/mists with a water spray jet. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

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**SECTION 7: Handling and storage**

Technical measures	<p>: Ensure all equipment is electrically grounded before beginning transfer operations.</p> <p>This material can accumulate static charge due to its inherent physical properties and therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations.</p> <p>Restrict flow velocity in order to reduce the accumulation of static electricity.</p>
Local/Total ventilation	<p>: Use with local exhaust ventilation.</p> <p>Use only in an area equipped with explosion proof exhaust ventilation.</p>
Advice on safe handling	<p>: Avoid inhalation of vapor or mist</p> <p>Handle in accordance with good industrial hygiene and safety practice.</p> <p>Non-sparking tools should be used.</p> <p>Keep container tightly closed.</p> <p>Keep away from heat and sources of ignition.</p> <p>Take precautionary measures against static discharges.</p> <p>Take care to prevent spills, waste and minimize release to the environment.</p>
Conditions for safe	<p>: Keep in properly labelled containers.</p> <p>Keep tightly closed</p> <p>Keep in a cool, well-ventilated place.</p> <p>Store in accordance with the storage particular national regulations.</p> <p>Keep away from heat and sources of ignition</p>
Materials to avoid	<p>: Do not store with the following product types:</p> <p>Strong oxidizing agents</p> <p>Organic peroxides</p> <p>Flammable solids</p> <p>Pyrophoric liquids</p> <p>Pyrophoric solids</p> <p>Self-heating substances and mixtures</p> <p>Substances and mixtures which in contact with water emit flammable gases</p> <p>Explosives</p> <p>Gases</p>

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**SECTION 8: Exposure controls/personal protection**

**Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters/Permissible concentration	Basis
Hexamethyldisiloxane	107-46-0	TWA	200 ppm	DCC OEL

**Engineering measures**

: Processing may form hazardous compounds (see section 10).  
 Use only in an area equipped with explosion proof exhaust ventilation.  
 Use with local exhaust ventilation  
 Minimize workplace exposure concentrations.

**Personal protective equipment**

Respiratory protection

: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. 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.

Hand protection

Material

: Antistatic gloves  
 Flame retardant gloves

Remarks

: Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Wash hands before breaks and at the end of workday.

Eye protection

: Wear the following personal protective equipment:  
 Safety glasses

Skin and body protection

: Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
 Wear the following personal protective equipment:  
 Flame retardant antistatic protective clothing  
 Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures

: Ensure that eye flushing and safety showers are located close to the working place.

When using do not eat, drink or smoke.  
Wash contaminated clothing before re-use.  
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 documents regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry ([www.SEHSC.com](http://www.SEHSC.com)) or contact the Clearco Products customer service group.

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**SECTION 9: Physical and chemical properties**

Appearance	: liquid
Colour	: colorless
Odour	: characteristic
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: 100 °C
Flash point	: -3.29 °C Method: Pensky-Martens closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Upper explosion limit	: 14.65% (V)
Lower explosion limit	: 1.5% (V)
Vapour pressure	: 42 hPa
Relative vapour density	: No data available
Relative density	: 0.76
Solubility(ies) Water solubility	: No data available
Partition coefficient: noctanol/water	: No data available
Auto-ignition temperature	: 352°C
Thermal decomposition	: No data available

Viscosity	
Viscosity, kinematic	: 0.65 mm <sup>2</sup> /s
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Molecular weight	: No data available

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## SECTION 10: Stability and reactivity

Reactivity	:Not classified as a reactivity hazard.
Chemical stability	:Stable under normal conditions.
Possibility of hazardous reactions	: Highly flammable liquid and vapor. Vapors may form explosive mixture with air. Can react with strong oxidizing agents. When heated to temperatures above 150 °C (300 °F) in the presence of air, trace quantities of formaldehyde may be re- leased. Adequate ventilation is required. See OSHA formaldehyde standard, 29 CFR 1910.1048 Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid	: Handling operations that can promote accumulation of static charges. Heat, flames and sparks.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	
Thermal decomposition	: Formaldehyde

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## SECTION 11: Toxicological information

### Information on likely routes of exposure

Inhalation  
Skin contact  
Ingestion  
Eye contact

### Acute toxicity

Not classified based on available information.

### Product:

Acute oral toxicity	: LD50 (Rat): > 16 ml/kg Assessment: The substance or mixture has no acute oral toxicity. Remarks: Based on data from similar materials
Acute inhalation toxicity	: LC50 (Rat): 15956 ppm Exposure time: 4h Test atmosphere: vapor

Assessment: The substance or mixture has no acute inhalation toxicity

Remarks: Based on test data

Acute dermal toxicity

: LD50 (Rabbit): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal toxicity

Remarks: Based on data from similar materials

### **Skin corrosion/irritation**

Not classified based on available information.

#### **Product:**

Species : Rabbit

Result : No skin irritation

Remarks : Based on data from similar materials

#### **Ingredients:**

##### **Hexamethyldisiloxane:**

Species: Rabbit

Result: No skin irritation

Remarks: Based on test data

### **Serious eye damage/eye irritation**

Not classified based on available information

#### **Product:**

Species : Rabbit

Result : No eye irritation

Remarks : Based on data from similar materials

#### **Ingredients:**

##### **Hexamethyldisiloxane:**

Species: Rabbit

Result: No eye irritation

Remarks: Based on test data

### **Respiratory or skin sensitization**

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

#### **Product:**

Assessment: Does not cause skin sensitization.

Test Type: Human repeat insult patch test (HRIPT)

Species: Humans

Remarks: No known sensitizing effect.

Based on test data

#### **Ingredients:**

##### **Hexamethyldisiloxane:**

Assessment: Does not cause skin sensitization

Test Type: Human repeat insult patch test (HRIPT)

Species: Humans

Remarks: No known sensitizing effect

Based on test data

### **Germ cell mutagenicity**

Not classified based on available information.

#### **Product:**

Genotoxicity in vitro

: Test Type: Bacterial reverse mutation assay (AMES)

Result: negative



	Remarks: Based on test data
	: Test Type: Chromosome aberration test in vitro Result: negative Remarks: Based on test data
	: Test Type: Mutagenicity (in vitro mammalian cytogenetic test) Result: negative Remarks: Based on test data
	: Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro) Result: negative Remarks: Based on test data
Genotoxicity in vivo	: Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Test species: Rat Application Route: Intraperitoneal injection Result: negative Remarks: Based on test data
Germ cell mutagenicity-Assessment	: Animal testing did not show any mutagenic effects.
<b><u>Ingredients:</u></b>	
<b>Hexamethyldisiloxane:</b>	
Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: Based on test data
	: Test Type: Chromosome aberration test in vitro Result: negative Remarks: Based on test data
	: Test Type: Mutagenicity ( in vitro mammalian cytogenetic test) Result: negative Remarks: Based on test data
	: Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro) Result: negative Remarks: Based on test data
Genotoxicity in vivo	: Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Test species: Rat Application Route: Intraperitoneal injection Result: negative Remarks: Based on test data
Germ cell mutagenicity-Assessment	: Animal testing did not show any mutagenic effects.

**Carcinogenicity**

Not classified based on available information.

**Product:**

Species : Rat  
Application Route: Inhalation  
Result: negative  
Remarks: Based on test data

**Ingredients:**

**Hexamethyldisiloxane:**

Species : Rat  
Application Route: Inhalation (Vapor)  
Result: negative  
Remarks: Based on test data

Carcinogenicity – Assessment : Animal testing did not show any carcinogenic effects.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**Product:**

Effects on fertility : Test type: Two-generation reproduction toxicity study  
Species: Rat, male and female  
Application Route: inhalation (vapor)  
Symptoms: No effects on fertility.  
Remarks: Based on test data

Effects on fetal development : Test Type: Two-generation reproduction toxicity study  
Species: Rat, male and female  
Application Route: inhalation (vapor)  
Symptoms: No effects on fetal development.  
Remarks: Based on test data.

Reproductive toxicity – Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

**Ingredients:**

**Hexamethyldisiloxane:**

Effects on fertility : Test type: Two-generation reproduction toxicity study  
Species: Rat, male and female  
Application Route: inhalation (vapor)  
Symptoms: No effects on fertility.

Remarks: Based on test data

Effects on fetal development

: Test Type: Two-generation reproduction toxicity study  
Species: Rat, male and female  
Application Route: inhalation (vapor)  
Symptoms: No effects on fetal development.  
Remarks: Based on test data.

Reproductive toxicity – Assessment

: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Product:**

Routes of exposure routes: Ingestion

Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Routes of exposure routes: Inhalation

Assessment : No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Routes of exposure routes: Skin contact

Assessment : No significant health effects observed in animals at concentrations of 200 mg/kg bw or less.

**Repeated dose toxicity**

**Product:**

Species: Rat

Application Route: Ingestion

Remarks: Based on test data

Species: Rat

Application Route: inhalation (vapor)

Remarks: Based on test data

Species: Rat

Application Route: Skin contact

Remarks: Based on test data

**Ingredients:**

**Hexamethyldisiloxane**

Species: Rat

Application Route: Ingestion

Remarks: Based on test data

Species: Rat

Application Route: inhalation (vapor)

Remarks: Based on test data

Species: Rat  
Application Route: Skin contact  
Remarks: Based on test data

**Aspiration toxicity**

Not classified based on available information.

**Further information**

**Ingredients:**

**Hexamethyldisiloxane:**

Remarks: This material contains hexamethyldisiloxane (HMDS). Repeated inhalation exposure in rats to HMDS resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation in the relevance of this finding humans to unknown.

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**SECTION 12: Ecological information**

**Ecotoxicity**

**Product:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.46mg/l  
Exposure time: 96 h  
Remarks: Based on test data

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): >0.55 mg/l  
Exposure time: 96h  
Remarks: No toxicity at the limit of solubility.  
Based on test data

Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia sp.): 0.08 mg/l  
Exposure time: 21d

Ecotoxicology Assessment  
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

**Ingredients:**

**Hexamethyldisiloxane:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.46mg/l  
Exposure time: 96 h  
Remarks: Based on test data

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): >0.55 mg/l  
Exposure time: 96h  
Remarks: No toxicity at the limit of solubility.  
Based on test data

M-Factor (Acute aquatic toxicity) : 1

Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia sp.): 0.08 mg/l  
Exposure time: 21d

Ecotoxicology Assessment  
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

## Persistence and degradability

### Ingredients:

#### Hexamethyldisiloxane:

Biodegradability : Result: Not readily biodegradable  
Stability in water : Degradation half life: 116 h pH:7

## Bioaccumulative potential

### Ingredients:

#### Hexamethyldisiloxane:

Partition coefficient : log Pow: >=4  
n- octanol/water Remarks: Based on test data

## Mobility in soil

No data available

## Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### Disposal methods

Resource Conservation and Recovery Act (RCRA) : When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste.

Waste Code : D001-Ignitability

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not burn, or use a cutting torch on, the empty drum.

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## SECTION 14: Transport information

### International Regulation

#### UNRTDG

UN Number : UN 1993  
Proper shipping name : FLAMMABLE LIQUID, N.O.S.  
(Hexamethyldisiloxane)  
Class : 3  
Packing Group : II  
Labels : 3

#### IATA-DGR

UN/ID No. : UN 1993  
Proper shipping name : Flammable liquid, n.o.s.  
(Hexamethyldisiloxane)  
Class : 3  
Packing Group : II  
Labels : Flammable Liquids

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

**IMDG Code**

UN number : UN1993  
Proper shipping name : FLAMMABLE LIQUID, N.O.S.  
(Hexamethyldisiloxane)  
Class : 3  
Packing group : II  
Labels : 3  
EmS Code : F-E, S-E  
Marine pollutant : yes

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not applicable for product as supplied.

**Domestic regulation**

**49CFR**

UN/ID/NA number : UN 1993  
Proper shipping name : FLAMMABLE LIQUIDS, N.O.S.  
(Hexamethyldisiloxane)  
Class : 3  
Packing group : II  
Labels : FLAMMABLE LIQUID  
ERG Code : 128  
Marine pollutant : yes (Hexamethyldisiloxane)

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**SECTION 15: Regulatory information**

**EPCRA-Emergency Planning and Community Right-to-Know**

**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

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

**SARA 311/312 Hazards** : Fire Hazard

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

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

**US State Regulations**

**Pennsylvania Right to Know**

Hexamethyldisiloxane	107-46-0	90-100%
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**New Jersey Right To Know**

Hexamethyldisiloxane	107-46-0	90-100%
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**California Prop 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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

KECI : All ingredients listed, exempt or notified.  
REACH : All ingredients (pre)-registered or exempt

TSCA	: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
AICS	: All ingredients listed or exempt.
IECSC	: All ingredients listed or exempt.
ENCS/ISHL	: All components are listed on ENCS/ISHL or exempted from inventory listing.
PICCS	: All ingredients listed or exempt.
DSL	: 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).
NZIoC	: All ingredients listed or exempt.

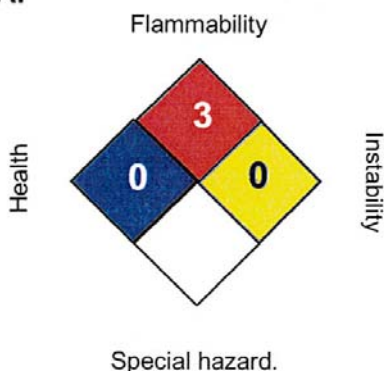
**Inventories**

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

**SECTION 16: Other information**

**Further Information**

**NFPA:**



**HMIS III:**

<b>HEALTH</b>	<b>0</b>
<b>FLAMMABILITY</b>	<b>3</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 =Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Sources of key data used to compile the Material Safety Data Sheet

: Internal technical data, data from raw materials SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.edu/>

Revision Date

:01/23/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.