# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version Revision Date: SDS Number: Date of last issue: 03/14/2017 3.0 10/17/2018 975354-00008 Date of first issue: 12/19/2014

### **SECTION 1. IDENTIFICATION**

Product name : MOLYKOTE® 1122 Chain And Open Gear Grease

Product code : 02810140

Manufacturer or supplier's details

Company Identification : DDP SPECIALTY ELECTRONIC MATERIALS

US 9, LLC 974 Centre Road Wilmington DE 19805 UNITED STATES

Telephone : 833-338-7668 24-Hour Emergency Contact : 1-800-424-9300

Local Emergency Number : 800-424-9300

E-mail address : SDSQuestion-NA@dupont.com

Recommended use of the chemical and restrictions on use

Recommended use : Lubricants and lubricant additives

#### **SECTION 2. HAZARDS IDENTIFICATION**

## GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

### GHS label elements

Not a hazardous substance or mixture.

### Other hazards

None known.

#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Chemical nature : Inorganic and organic compounds

Mixture

# **Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
Talc	14807-96-6	>= 5 - <= 8
Molybdenum sulfide	1317-33-5	>= 1.4 - <= 2
Graphite	7782-42-5	>= 1.4 - <= 2

## **SECTION 4. FIRST AID MEASURES**

If swallowed

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. Flush eyes with water as a precaution.

n case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

: If swallowed, DO NOT induce vomiting.

# MOLYKOTE® 1122 Chain And Open Gear Grease



Version Revision Date: SDS Number: Date of last issue: 03/14/2017 3.0 10/17/2018 975354-00008 Date of first issue: 12/19/2014

Get medical attention if symptoms occur.

Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and

None known.

delayed

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

Notes to physician : Treat symptomatically and supportively.

## **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical None known.

Unsuitable extinguishing

media

: Exposure to combustion products may be a hazard to health.

Specific hazards during fire

fighting

Hazardous combustion prod-

ucts

Silicon oxides Chlorine compounds Formaldehyde

Carbon oxides

Metal oxides Sulfur oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances 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.

Special protective equipment :

for fire-fighters

Wear self-contained breathing apparatus for firefighting if

necessarv.

Use personal protective equipment.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emer-

gency procedures

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. 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.

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.

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version Revision Date: SDS Number: Date of last issue: 03/14/2017 3.0 10/17/2018 975354-00008 Date of first issue: 12/19/2014

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.

# **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Handle in accordance with good industrial hygiene and safety

practice, based on the results of the workplace exposure

assessment

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

# **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

# Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Talc	14807-96-6	TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (Respirable)	2 mg/m³	NIOSH REL
		TWA (Respirable fraction)	2 mg/m³	ACGIH
Molybdenum sulfide	1317-33-5	TWA (total dust)	15 mg/m³ (Molybdenum)	OSHA Z-1
		TWA (Inhalable fraction)	10 mg/m³ (Molybdenum)	ACGIH
		TWA (Respirable fraction)	3 mg/m³ (Molybdenum)	ACGIH
Graphite	7782-42-5	TWA (Respirable)	2.5 mg/m <sup>3</sup>	NIOSH REL
		TWA (Respirable fraction)	2 mg/m³	ACGIH
		TWA (Dust)	15 Million particles per cubic foot	OSHA Z-3

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version 3.0

Revision Date: 10/17/2018

SDS Number: 975354-00008

Date of last issue: 03/14/2017 Date of first issue: 12/19/2014

These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Talc

**Engineering measures** : Processing may form hazardous compounds (see section

10).

Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m3 - total dust, 5 mg/m3 - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m3 - respirable particles, 10 mg/m3 - inhalable particles.

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

Remarks : Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:

Safety glasses

Skin and body protection : Skin should be washed after contact.

Hygiene measures : Ensure that eye flushing systems 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.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : paste Color : black Odor : slight

Odor Threshold : No data available

# **MOLYKOTE® 1122 Chain And Open Gear** Grease



Version Revision Date: SDS Number: Date of last issue: 03/14/2017 3.0 10/17/2018 975354-00008 Date of first issue: 12/19/2014

pΗ Not applicable

Melting point/freezing point No data available

Initial boiling point and boiling

range

Flash point > 200 °C

Method: Pensky-Martens closed cup

Evaporation rate Not applicable

Flammability (solid, gas) Not classified as a flammability hazard

Self-ignition The substance or mixture is not classified as pyrophoric. The

substance or mixture is not classified as self heating.

Upper explosion limit / Upper

flammability limit

No data available

Not applicable

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure Not applicable

Relative vapor density No data available

Relative density 1.0

Solubility(ies)

Water solubility No data available

Partition coefficient: n-

octanol/water

No data available

Autoignition temperature No data available

Decomposition temperature No data available

Viscosity

Viscosity, dynamic Not applicable

Explosive properties Not explosive

Oxidizing properties The substance or mixture is not classified as oxidizing.

Molecular weight No data available Particle size No data available

## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity Not classified as a reactivity hazard. Chemical stability Stable under normal conditions.

Possibility of hazardous reac-Use at elevated temperatures may form highly hazardous

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version Revision Date: SDS Number: Date of last issue: 03/14/2017 3.0 10/17/2018 975354-00008 Date of first issue: 12/19/2014

tions compounds.

Can react with strong oxidizing agents.

Hazardous decomposition products will be formed at elevated

temperatures.

Conditions to avoid : None known.
Incompatible materials : Oxidizing agents

**Hazardous decomposition products** 

Thermal decomposition : Formaldehyde

## **SECTION 11. TOXICOLOGICAL INFORMATION**

## Information on likely routes of exposure

Skin contact Ingestion Eye contact

## **Acute toxicity**

Not classified based on available information.

## Ingredients:

### Talc:

Acute oral toxicity : Assessment: The substance or mixture has no acute oral tox-

icity

Remarks: Information taken from reference works and the

literature.

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: Information taken from reference works and the

literature.

Molybdenum sulfide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 401

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : LC50 (Rat): > 2.82 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

**Graphite:** 

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 401

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version Revision Date: SDS Number: Date of last issue: 03/14/2017 3.0 10/17/2018 975354-00008 Date of first issue: 12/19/2014

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : LC50 (Rat): > 2 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhala-

tion toxicity

### Skin corrosion/irritation

Not classified based on available information.

## **Ingredients:**

### Molybdenum sulfide:

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

### **Graphite:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

### Serious eye damage/eye irritation

Not classified based on available information.

# Ingredients:

## Molybdenum sulfide:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

### **Graphite:**

Species: Rabbit

Result: No eye irritation

## Respiratory or skin sensitization

#### Skin sensitization

Not classified based on available information.

## Respiratory sensitization

Not classified based on available information.

## Ingredients:

# Molybdenum sulfide:

Test Type: Maximization Test Routes of exposure: Skin contact

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version 3.0

Revision Date: 10/17/2018

SDS Number: 975354-00008

Date of last issue: 03/14/2017 Date of first issue: 12/19/2014

Species: Guinea pig Result: negative

## **Graphite:**

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse Result: negative

## Germ cell mutagenicity

Not classified based on available information.

### **Ingredients:**

# Molybdenum sulfide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

## **Graphite:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

## Carcinogenicity

Not classified based on available information.

# **Ingredients:**

# Molybdenum sulfide:

Species: Rat

Application Route: Ingestion Exposure time: 232 days

Result: negative

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 component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

## Reproductive toxicity

Not classified based on available information.

# **Ingredients:**

## **Graphite:**

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version Revision Date: SDS Number: Date of last issue: 03/14/2017 3.0 10/17/2018 975354-00008 Date of first issue: 12/19/2014

Effects on fertility : Test Type: Combined repeated dose toxicity study with the

reproduction/developmental toxicity screening test

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 422

Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the

reproduction/developmental toxicity screening test

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 422

Result: negative

## STOT-single exposure

Not classified based on available information.

# STOT-repeated exposure

Not classified based on available information.

## Repeated dose toxicity

### **Ingredients:**

# **Graphite:**

Species: Rat NOAEL: 12 mg/m3

Application Route: inhalation (dust/mist/fume)

Exposure time: 28 Days

Method: OECD Test Guideline 412

## **Aspiration toxicity**

Not classified based on available information.

## **SECTION 12. ECOLOGICAL INFORMATION**

# **Ecotoxicity**

# Ingredients:

## Molybdenum sulfide:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 644.2 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 130.9 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 289.2

mg/l

Exposure time: 72 h

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version 3.0

Revision Date: 10/17/2018

SDS Number: 975354-00008

Date of last issue: 03/14/2017 Date of first issue: 12/19/2014

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to fish (Chronic tox-

city)

NOEC (Oncorhynchus mykiss (rainbow trout)): > 17 mg/l

Exposure time: 12 Months

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Ceriodaphnia dubia (water flea)): 156.5 mg/l

Exposure time: 21 d

Remarks: Based on data from similar materials

Toxicity to microorganisms

NOEC: > 950 mg/l Exposure time: 17 d

Remarks: Based on data from similar materials

**Graphite:** 

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50: > 1,012.5 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

## Persistence and degradability

No data available

## **Bioaccumulative potential**

No data available

#### Mobility in soil

No data available

## Other adverse effects

No data available

# **SECTION 13. DISPOSAL CONSIDERATIONS**

## **Disposal methods**

Resource Conservation and Recovery Act (RCRA)

This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded

in its purchased form.

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

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version Revision Date: SDS Number: Date of last issue: 03/14/2017 3.0 10/17/2018 975354-00008 Date of first issue: 12/19/2014

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

#### **SECTION 14. TRANSPORT INFORMATION**

# International Regulations

#### UNRTDG

Not regulated as a dangerous good

#### **IATA-DGR**

Not regulated as a dangerous good

#### **IMDG-Code**

Not regulated as a dangerous good

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

Not applicable for product as supplied.

## **Domestic regulation**

#### **49 CFR**

Not regulated as a dangerous good

## **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 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

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

9003-29-6
68611-44-9
14807-96-6
7782-42-5
1314-98-3

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



 Version
 Revision Date:
 SDS Number:
 Date of last issue: 03/14/2017

 3.0
 10/17/2018
 975354-00008
 Date of first issue: 12/19/2014

### 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.

## **California List of Hazardous Substances**

Talc14807-96-6Molybdenum sulfide1317-33-5Graphite7782-42-5Molybdenum oxide sulfide dibutyldithiocarbamate68412-26-0

**California Permissible Exposure Limits for Chemical Contaminants** 

 Talc
 14807-96-6

 Molybdenum sulfide
 1317-33-5

 Graphite
 7782-42-5

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

KECI : All ingredients listed, exempt or notified.

TCSI : All ingredients listed or exempt.

REACH : For purchases from Dow Chemical EU legal entities, all ingredients are currently pre/registered or exempt under REACH. Please refer to section 1 for recommended uses. For purchases from non-EU Dow Chemical legal entities with the

intention to export into EEA please contact your DC

representative/local office.

TSCA : All chemical substances in this product are either listed on the

TSCA Inventory or are in compliance with a TSCA Inventory

exemption.

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.

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).

PICCS : All ingredients listed or exempt.

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version 3.0

Revision Date: 10/17/2018

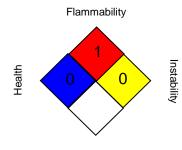
SDS Number: 975354-00008

Date of last issue: 03/14/2017 Date of first issue: 12/19/2014

## **SECTION 16. OTHER INFORMATION**

#### **Further information**

#### NFPA:



Special hazard.

## HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

#### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Min-

eral Dusts

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA Z-1 / TWA : 8-hour time weighted average OSHA Z-3 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials: bw - Body weight: CERCLA - Comprehensive Environmental Response. Compensation. and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC -International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Oth-

# **MOLYKOTE® 1122 Chain And Open Gear Grease**



Version 3.0

Revision Date: 10/17/2018

SDS Number: 975354-00008

Date of last issue: 03/14/2017 Date of first issue: 12/19/2014

erwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety

**Data Sheet** 

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

Revision Date : 10/17/2018

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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.

US / Z8