

**STINGER™ HDD-ALL SEASON**

Version	Revision Date:	SDS Number:	Date of last issue: 05.01.2017
4.2	11.04.2017	190936-00007	Date of first issue: 22.06.2015

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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : STINGER™ HDD-ALL SEASON

Product code : 000000000000655950

SDS-Identcode : 328G

**Manufacturer or supplier's details**

Company : Bestolife Corporation

Address : 2777 N. Stemmons Frwy Ste 1800  
Dallas TX 75207,

Telephone : 855-243-9164/972-865-8961

Emergency telephone number : CHEMTREC: 800-101-2201, International: +1-703-527-3887

E-mail address : [www.bestolife.com](http://www.bestolife.com)

Telefax : 214-631-3047

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

Recommended use : Industrial use  
Thread Compound (Pipe Dope) and Jacking grease for use in  
Offshore industries  
Mining, (without offshore industries)

Restrictions on use : Do not use on oxygen lines or in oxygen enriched atmospheres.

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**2. HAZARDS IDENTIFICATION****GHS Classification**

Serious eye damage/eye irritation : Category 2

**GHS label elements**

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Hazard pictograms :



Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.

Precautionary statements :

**Prevention:**

P264 Wash skin thoroughly after handling.  
P280 Wear eye protection/ face protection.

**Response:**

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.

**Other hazards which do not result in classification**

None known.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous components**

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	>= 30 -< 50
Graphite	7782-42-5	>= 10 -< 20
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	>= 10 -< 20
Talc	14807-96-6	>= 10 -< 20
Copper metal powder	7440-50-8	>= 1 -< 10
Calcium oxide	1305-78-8	>= 1 -< 10
Quartz	14808-60-7	>= 1 -< 10
Antimony, dialkyl dithiocarbamate	15890-25-2	>= 0.1 -< 1

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### 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.

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

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- In case of skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.
- 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 : Causes serious eye irritation.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- Notes to physician : Treat symptomatically and supportively.
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**5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides  
Metal oxides  
Silicon oxides
- 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.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

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**6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. 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 : Sweep up or vacuum up spillage and collect in suitable container for disposal. 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.

**7. HANDLING AND STORAGE**

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Advice on safe handling : Do not get on skin or clothing. Do not swallow. Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labelled containers. Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	PEL (long term) (Mist)	5 mg/m <sup>3</sup>	SG OEL

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		PEL (short term) (Mist)	10 mg/m <sup>3</sup>	SG OEL
		TWA (Inhalable fraction)	5 mg/m <sup>3</sup>	ACGIH
Graphite	7782-42-5	PEL (long term) (Respirable dust)	2 mg/m <sup>3</sup>	SG OEL
		TWA (Respirable fraction)	2 mg/m <sup>3</sup>	ACGIH
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	PEL (long term) (Mist)	5 mg/m <sup>3</sup>	SG OEL
		PEL (short term) (Mist)	10 mg/m <sup>3</sup>	SG OEL
		TWA (Inhalable fraction)	5 mg/m <sup>3</sup>	ACGIH
Talc	14807-96-6	PEL (long term)	2 mg/m <sup>3</sup>	SG OEL
		TWA (Respirable fraction)	2 mg/m <sup>3</sup>	ACGIH
Copper metal powder	7440-50-8	PEL (long term) (Fumes)	0.2 mg/m <sup>3</sup>	SG OEL
		PEL (long term) (Dusts and mists)	1 mg/m <sup>3</sup> (Copper)	SG OEL
		TWA (Dust and mist)	1 mg/m <sup>3</sup> (Copper)	ACGIH
		TWA (Fumes)	0.2 mg/m <sup>3</sup> (Copper)	ACGIH
Calcium oxide	1305-78-8	PEL (long term)	2 mg/m <sup>3</sup>	SG OEL
		TWA	2 mg/m <sup>3</sup>	ACGIH
Quartz	14808-60-7	PEL (long term) (Respirable dust)	0.1 mg/m <sup>3</sup>	SG OEL
		TWA (Respirable fraction)	0.025 mg/m <sup>3</sup> (Silica)	ACGIH
Antimony, dialkyl dithiocarbamate	15890-25-2	PEL (long term)	0.5 mg/m <sup>3</sup> (antimony)	SG OEL
		TWA	0.5 mg/m <sup>3</sup> (antimony)	ACGIH

**Engineering measures** : Minimize workplace exposure concentrations.

**Personal protective equipment**

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates

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- that exposures are within recommended exposure guidelines.
- Filter type : Combined particulates and organic vapour type
- Hand protection  
Material : Chemical-resistant gloves
- Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
- Eye protection : Wear the following personal protective equipment:  
Safety goggles
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
- 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.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance : Viscous semi-solid
- Colour : copper
- Odour : Petroleum
- Odour Threshold : No data available
- pH : Not applicable (not an aqueous solution)
- Melting point/freezing point : No data available
- Initial boiling point and boiling range : No data available
- Flash point :  $\geq 162.8$  °C  
Method: ASTM D 92, Cleveland open cup  
Distillates (petroleum), hydrotreated heavy naphthenic

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Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not classified as a flammability hazard
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	1.2
Density	:	No data available
Solubility(ies) Water solubility	:	negligible
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	Not applicable
Flow time	:	No data available
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

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### 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents.

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Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

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**11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : Skin contact  
Ingestion  
Eye contact

**Acute toxicity**

Not classified based on available information.

**Components:****Distillates (petroleum), hydrotreated light naphthenic:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
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  
Assessment: The substance or mixture has no acute oral toxicity

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 inhalation toxicity

**Distillates (petroleum), hydrotreated heavy naphthenic:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401  
Remarks: Based on data from similar materials



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Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: Based on data from similar materials

**Talc:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Remarks: Based on data from similar materials

**Copper metal powder:**

Acute oral toxicity : LD50 (Rat): > 2,500 mg/kg  
Method: OECD Test Guideline 423  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5.11 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 436  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

**Calcium oxide:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 425  
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,500 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Based on data from similar materials

**Quartz:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

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**Antimony, dialkyl dithiocarbamate:**

Acute oral toxicity : LD50 (Rat): &gt; 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): &gt; 5,000 mg/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Components:****Distillates (petroleum), hydrotreated light naphthenic:**

Species: Rabbit

Result: No skin irritation

**Graphite:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

**Distillates (petroleum), hydrotreated heavy naphthenic:**

Species: Rabbit

Result: No skin irritation

Remarks: Based on data from similar materials

**Talc:**

Species: Rabbit

Result: No skin irritation

**Copper metal powder:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

**Calcium oxide:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: Skin irritation

Remarks: Based on data from similar materials

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Components:****Distillates (petroleum), hydrotreated light naphthenic:**

Species: Rabbit

Result: No eye irritation

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**Graphite:**

Species: Rabbit  
Result: No eye irritation

**Distillates (petroleum), hydrotreated heavy naphthenic:**

Species: Rabbit  
Result: No eye irritation  
Remarks: Based on data from similar materials

**Talc:**

Species: Rabbit  
Result: No eye irritation

**Copper metal powder:**

Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405

**Calcium oxide:**

Species: Rabbit  
Result: Irreversible effects on the eye  
Method: OECD Test Guideline 405

**Respiratory or skin sensitisation****Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:****Distillates (petroleum), hydrotreated light naphthenic:**

Test Type: Buehler Test  
Exposure routes: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: negative

**Graphite:**

Test Type: Local lymph node assay (LLNA)  
Exposure routes: Skin contact  
Species: Mouse  
Result: negative

**Distillates (petroleum), hydrotreated heavy naphthenic:**

Test Type: Buehler Test

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Exposure routes: Skin contact  
Species: Guinea pig  
Result: negative  
Remarks: Based on data from similar materials

**Talc:**

Exposure routes: Skin contact  
Species: Humans  
Result: negative

**Copper metal powder:**

Test Type: Maximisation Test  
Exposure routes: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: negative

**Germ cell mutagenicity**

Not classified based on available information.

**Components:****Distillates (petroleum), hydrotreated light naphthenic:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: negative

**Graphite:**

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

**Distillates (petroleum), hydrotreated heavy naphthenic:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: negative

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Remarks: Based on data from similar materials

**Talc:**

Genotoxicity in vitro : Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)  
Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration test in vitro  
Species: Rat  
Application Route: Ingestion  
Result: negative

**Copper metal powder:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Method: Directive 67/548/EEC, Annex V, B.12.  
Result: negative  
Remarks: Based on data from similar materials

**Calcium oxide:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

**Antimony, dialkyl dithiocarbamate:**

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

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: equivocal

**Carcinogenicity**

Not classified based on available information.

**Product:**

Carcinogenicity - Assessment : Petroleum distillates have been classified as not carcinogenic based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).



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ment  
 Species: Rat  
 Application Route: Skin contact  
 Result: negative

**Graphite:**

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 foetal 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

**Talc:**

Effects on foetal development : Test Type: Embryo-foetal development  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative

**Copper metal powder:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative  
 Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development  
 Species: Rabbit  
 Application Route: Ingestion  
 Result: negative

**Calcium oxide:**

Effects on foetal development : Test Type: Embryo-foetal development  
 Species: Mouse  
 Application Route: Ingestion  
 Method: OECD Test Guideline 414  
 Result: negative

**Antimony, dialkyl dithiocarbamate:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
 Species: Rat  
 Application Route: Ingestion

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Result: negative

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Result: negative

**STOT - single exposure**

Not classified based on available information.

**Components:****Calcium oxide:**

Assessment: May cause respiratory irritation.

**STOT - repeated exposure**

Not classified based on available information.

**Repeated dose toxicity****Components:****Distillates (petroleum), hydrotreated light naphthenic:**

Species: Rabbit  
NOAEL: 1,000 mg/kg  
Application Route: Skin contact  
Exposure time: 4 Weeks  
Method: OECD Test Guideline 410

**Graphite:**

Species: Rat  
NOAEL: 12 mg/m<sup>3</sup>  
Application Route: inhalation (dust/mist/fume)  
Exposure time: 28 Days  
Method: OECD Test Guideline 412

**Distillates (petroleum), hydrotreated heavy naphthenic:**

Species: Rat  
NOAEL: > 0.98 mg/l  
Application Route: inhalation (dust/mist/fume)  
Exposure time: 28 Days  
Remarks: Based on data from similar materials

**Copper metal powder:**

Species: Rat  
NOAEL:  $\geq 2$  mg/m<sup>3</sup>  
Application Route: inhalation (dust/mist/fume)  
Exposure time: 28 Days



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**Quartz:**

Species: Humans

LOAEL: 0.053 mg/m<sup>3</sup>

Application Route: inhalation (dust/mist/fume)

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

**Antimony, dialkyl dithiocarbamate:**

Species: Rat

NOAEL: &gt;= 1,000 mg/kg

Application Route: Ingestion

Exposure time: 54 Days

**Aspiration toxicity**

Not classified based on available information.

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Product:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1,064,120 mg/l  
 Exposure time: 96 h  
 Method: OECD Test Guideline 203  
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 16,410 mg/l  
 Exposure time: 96 h  
 Method: OECD Test Guideline 202  
 Remarks: Based on data from similar materials

EC50 (Daphnia magna (Water flea)): 32,820 mg/l  
 Exposure time: 48 h  
 Method: OECD Test Guideline 202  
 Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 110,268 mg/l  
 Exposure time: 96 h  
 Method: OECD Test Guideline 201  
 Remarks: Based on data from similar materials

NOEC (Selenastrum capricornutum (green algae)): 100 mg/l  
 Exposure time: 96 h  
 Method: OECD Test Guideline 201  
 Remarks: Based on data from similar materials

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**Components:****Distillates (petroleum), hydrotreated light naphthenic:**

Toxicity to fish                      : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction

Toxicity to daphnia and other      : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l  
aquatic invertebrates              Exposure time: 48 h  
Test substance: Water Accommodated Fraction

Toxicity to algae                     : NOELR (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction

Toxicity to daphnia and other      : NOEC (Daphnia magna (Water flea)): 10 mg/l  
aquatic invertebrates (Chronic toxicity)      Exposure time: 21 d

Toxicity to microorganisms        : NOEC (Photobacterium phosphoreum): > 2.17 mg/l  
Exposure time: 4 d

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

**Distillates (petroleum), hydrotreated heavy naphthenic:**

Toxicity to fish                      : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: Based on data from similar materials

Toxicity to daphnia and other      : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
aquatic invertebrates              Exposure time: 48 h  
Remarks: Based on data from similar materials

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Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l  
Exposure time: 21 d  
Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 1.93 mg/l  
Exposure time: 10 min  
Remarks: Based on data from similar materials

### Talc:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 100,000 mg/l  
Exposure time: 24 h

### Copper metal powder:

Toxicity to fish : LC50: > 10 - 100 µg/l  
Exposure time: 96 h

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC: > 1 - 10 µg/l

M-Factor (Chronic aquatic toxicity) : 10

### Calcium oxide:

Toxicity to fish : LC50 (Gasterosteus aculeatus (threespine stickleback)): 457 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : LC50: 158 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 184.57 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): 48 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

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Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 32 mg/l  
Exposure time: 12 d  
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50: 300.4 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

**Quartz:****Ecotoxicology Assessment**

Acute aquatic toxicity : No toxicity at the limit of solubility

Chronic aquatic toxicity : No toxicity at the limit of solubility

**Antimony, dialkyl dithiocarbamate:**

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.02 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

**Ecotoxicology Assessment**

Chronic aquatic toxicity : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Persistence and degradability****Product:**

Biodegradability : Result: Readily biodegradable.  
Remarks: Based on data from similar materials

**Components:****Distillates (petroleum), hydrotreated light naphthenic:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 2 - 8 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

**Distillates (petroleum), hydrotreated heavy naphthenic:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 2 - 4 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

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**Antimony, dialkyl dithiocarbamate:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 20 %  
Exposure time: 28 d

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATIONS****Disposal methods**

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

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Empty containers retain residue and can be dangerous.  
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.  
If not otherwise specified: Dispose of as unused product.

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**14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Copper metal powder, Antimony, dialkyl dithiocarbamate)  
Class : 9  
Packing group : III  
Labels : 9

**IATA-DGR**

UN/ID No. : UN 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
(Copper metal powder, Antimony, dialkyl dithiocarbamate)  
Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 956

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Packing instruction (passenger aircraft) : 956

**IMDG-Code**

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Copper metal powder, Antimony, dialkyl dithiocarbamate)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : no

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

Not applicable for product as supplied.

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**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.**

Environmental Protection and Management Act and : Not applicable  
Environmental Protection and Management (Hazardous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) Regulations : Not applicable

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

DSL : All components of this product are on the Canadian DSL

TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

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**16. OTHER INFORMATION****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/>

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

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Date format : dd.mm.yyyy

**Full text of other abbreviations**

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
SG OEL	:	Singapore. Workplace Safety and Health Act - First Schedule Permissible Exposure Limits of Toxic Substances
ACGIH / TWA	:	8-hour, time-weighted average
SG OEL / PEL (long term)	:	Permissible Exposure Level (PEL) Long Term
SG OEL / PEL (short term)	:	Permissible Exposure Level (PEL) Short Term

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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.

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