



SAFETY DATA SHEET

Circular no. 32/2017/TT-BCT

MULTIS COMPLEX SHD 460

SDS # : 37765

Section 1. Identification

CAS number : Not applicable.
UN number : Not regulated.
EC number : Mixture.
GHS product identifier : MULTIS COMPLEX SHD 460

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Lubricating grease

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Section 2. Hazard identification

Classification of the substance or mixture : SKIN IRRITATION - Category 3
AQUATIC TOXICITY (ACUTE) - Category 3

GHS label elements

Signal word : Warning

Hazard statements : Causes mild skin irritation.
Harmful to aquatic life.

Precautionary statements

Prevention : Avoid release to the environment.

Response : If skin irritation occurs: Get medical advice or attention.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Additional information : The product is made from synthetic base oils

**Section 3. Composition/information on ingredients**

Substance/mixture : Mixture
Other means of identification : Not available.

Ingredient name	Identifiers	% (w/w)
1-Octene, homopolymer, hydrogenated	CAS: 70693-43-5	≥25 - ≤50
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	CAS: 68457-79-4 EC: 270-608-0	<3
calcium(2+) 12-hydroxyoctadecanoate	CAS: 3159-62-4 EC: 221-605-8	≤3
dilithium azelate	CAS: 38900-29-7 EC: 254-184-4	≤3
Molybdenum, bis(dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized	CAS: 68412-26-0 EC: 270-180-5	≤3
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	CAS: 68411-46-1 EC: 270-128-1	<1

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

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

Section 4. First aid measures**Description of necessary first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.



Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes mild skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical : This material is harmful to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : carbon monoxide
carbon dioxide
nitrogen oxides
phosphorus oxides
sulfur oxides
Hydrogen sulfide
Mercaptans
Zinc oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.



Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

- Small spill** : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Pregnant women should strictly avoid inhalation or skin contact. Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.



Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Advisory OEL** : Not available.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Hydrocarbon-proof gloves

Fluorinated rubber

nitrile rubber

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.



Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

Appearance

Physical state	: Solid. [grease]
Color	: Yellow.
Odor	: Characteristic.
Odor threshold	: Not available.
pH	: Not applicable.
Melting point/freezing point	: >250°C (>482°F) [ISO 3016]
Boiling point	: Not applicable.
Flash point	: Not applicable.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not applicable.
Lower and upper explosive (flammable) limits	: Not applicable.
Vapor pressure	: Not applicable.
Vapor density	: Not applicable.
Relative density	: 0.85 [ISO 12185]
Density	: 0.85 g/cm ³ [20°C] [ISO 12185]
Solubility(ies)	:

Media	Result
water	Not soluble

Miscible with water	: No.
Solubility in water	: 0.8673 g/l
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: >250°C (>482°F)
Viscosity	: Dynamic (room temperature): Not applicable. Kinematic (room temperature): Not applicable. Kinematic (40°C (104°F)): Not applicable.
Flow time (ISO 2431)	: Not available.

Particle characteristics

Median particle size	: Not available.
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Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: Stable under recommended storage and handling conditions (see Section 7).
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.



Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/substance	Result	Species	Dose	Exposure	Test
1-Octene, homopolymer, hydrogenated	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours	Read across
	LD50 Dermal	Rabbit	>2000 mg/kg	-	Read across
	LD50 Oral	Rat	>5000 mg/kg	-	Read across
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	LD50 Dermal	Rabbit	>20 g/kg	-	OECD 402
	LD50 Oral	Rat	3.6 g/kg	-	-
calcium(2+) 12-hydroxyoctadecanoate	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat - Female	>2000 mg/kg	-	OECD 420
dilithium azelate	LD50 Dermal	Rat - Female	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat - Female	>300 mg/kg	-	OECD 420
Molybdenum, bis (dibutylcarbomodithioato)di- μ -oxodioxodi-, sulfurized	LC50 Inhalation Dusts and mists	Rat	34.5 mg/l	4 hours	-
	LD50 Dermal	Rabbit	10001 mg/kg	-	-
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	LD50 Oral	Rat	>2000 mg/kg	-	OECD 420
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	OECD 401

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Product/substance	Result	Species	Score	Exposure	Test
calcium(2+) 12-hydroxyoctadecanoate	Eyes - Cornea opacity	Rabbit	0	-	OECD 405

Conclusion/Summary

Skin : Based on available data, the classification criteria are met.

Eyes : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

Sensitization

Product/substance	Route of exposure	Species	Result
calcium(2+) 12-hydroxyoctadecanoate	skin	Mouse	Not sensitizing

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.



Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

Product/substance	Test	Experiment	Result
calcium(2+) 12-hydroxyoctadecanoate	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative
	OECD 473	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product/substance	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
calcium(2+) 12-hydroxyoctadecanoate	-	Negative	Negative	Rat - Male, Female	Dermal	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Conclusion/Summary : Based on available data, the classification criteria are not met.

Aspiration hazard

Conclusion/Summary : Based on available data, the classification criteria are not met.

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes mild skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure****Short term exposure**

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/substance	Result	Species	Dose	Exposure
calcium(2+) 12-hydroxyoctadecanoate	Sub-chronic NOAEL Dermal	Rat - Male, Female	1000 mg/kg	-

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity**Acute toxicity estimates**

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
MULTIS COMPLEX SHD 460	16200.9	N/A	N/A	N/A	N/A
1-Octene, homopolymer, hydrogenated	N/A	2500	N/A	N/A	N/A
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	3600	N/A	N/A	N/A	N/A
calcium(2+) 12-hydroxyoctadecanoate	2500	N/A	N/A	N/A	N/A
dilithium azelate	500	N/A	N/A	N/A	N/A
Molybdenum, bis(dibutylcarbamodithioato)di- μ -oxodioxodi-, sulfurized	N/A	10001	N/A	N/A	34.5
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	N/A	2500	N/A	N/A	N/A

Other information :
Not available.

Section 12. Ecological information

Harmful to aquatic life.

Toxicity



Product/substance	Result	Species	Exposure	Test
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	Acute EL50 23 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours	OECD 202
	Acute LC50 21 mg/l Fresh water	Algae - <i>Scenedesmus subspicatus</i>	72 hours	OECD 201
	Acute LC50 46 mg/l Marine water	Fish - <i>Cyprinodon variegatus</i>	96 hours	OECD 203
	Acute LL50 4.5 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours	OECD 203
	Acute NOEC 0.8 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days	OECD 211
calcium(2+) 12-hydroxyoctadecanoate	Acute EC50 161 mg/l	Algae	72 hours	-
dilithium azelate	Acute EC50 >100 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours	-
	Acute LC50 3.2 mg/l Fresh water	Algae	72 hours	OECD 201
Molybdenum, bis (dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized	Acute LC50 >100 mg/l	Daphnia	48 hours	Read across
	Acute LC50 >100 mg/l	Fish	96 hours	Read across
	Acute EC50 >100 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours	OECD 201
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Acute EC50 >100 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours	OECD 202
	Acute EC50 >100 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours	OECD 201
	Acute LC50 >100 mg/l Fresh water	Fish - <i>Danio rerio</i>	96 hours	OECD 203

Persistence and degradability

Product/substance	Test	Result	Dose	Inoculum
dilithium azelate Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	-	94 % - 28 days	-	-
	OECD 301B	1 % - 28 days	-	-

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	-	-	Not readily
dilithium azelate	-	-	Readily
Molybdenum, bis (dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized	-	-	Readily
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	-	-	Not readily

Bioaccumulative potential



Product/substance	LogK _{ow}	BCF	Potential
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	0.69	-	Low
dilithium azelate	-3.4	-	Low
Molybdenum, bis (dibutylcarbamodithioato)di-	6.24 to 7.28	-	High
μ-oxodioxodi-, sulfurized Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	5.1	1730	High

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility in soil : Given its physical and chemical characteristics, the product has no soil mobility. The product is insoluble and floats on water. Loss by evaporation is limited.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	ICAO/IATA
UN/ID No	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

[Circular no. 05/1999/TT-BYT](#)

Ingredient name	Category	Notes
diphenylamine	Category 2	

Toxic classification (TCVN 3164-79) : 3

International regulations

[Chemical Weapon Convention List Schedules I, II & III Chemicals](#)

Not listed.

[Montreal Protocol](#)

Not listed.

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

Inventory list

Australia inventory (AIC)	: All components are listed or exempted.
Canada inventory (DSL/NDSL)	: At least one component is not listed in DSL but all such components are listed in NDSL.
China inventory (IECSC)	: All components are listed, exempted, or notified.
Europe inventory (EC)	: All components are listed or exempted.
Japan inventory	: Japan inventory (CSCL) : At least one component is not listed. Japan inventory (ISHL) : All components are listed, exempted, or notified.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: All components are listed or exempted.
Korea inventory (KECI)	: All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	: All components are listed, exempted, or notified.
Thailand inventory	: Not determined.
Turkey inventory	: Not determined.
United States inventory (TSCA 8b)	: All components are listed or exempted.
Vietnam inventory	: Not determined.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

**Section 16. Other information**Ratings of danger according to

NFPA



HMIS

Health	/	1
Flammability		0
Physical hazards		0

History

Date of revision : 2024/10/23
previous revision date : No previous validation
Version : 1

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 HMIS = Hazardous Material Information System (U.S.A.)
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 NFPA = National Fire Protection Association (U.S.A.)
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
SKIN IRRITATION - Category 3 AQUATIC TOXICITY (ACUTE) - Category 3	Expert judgment Calculation method

References : Not available.

☑ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.