

Section 1. Identification

CAS number : Not applicable.
UN number : Not regulated.
EC number : Mixture.
GHS product identifier : CERAN MS

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

Identified uses

Formulation additives, lubricants and greases - Industrial
General use of lubricants and greases in vehicles or machinery - Industrial
General use of lubricants and greases in vehicles or machinery - Professional
Use of lubricants and greases in open systems - Industrial
Lubricating grease
Use of lubricants and greases in open systems - Professional

Supplier's details : TOTALENERGIES MARKETING VIETNAM COMPANY LIMITED
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Emergency telephone number (with hours of operation) :

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Section 2. Hazard identification

Classification of the substance or mixture : SKIN IRRITATION - Category 3
EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms :



Signal word : Warning
Hazard statements : Causes mild skin irritation.
Causes serious eye irritation.

Precautionary statements

Prevention : Wear eye or face protection. Wash thoroughly after handling.



- Response** : If skin irritation occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
- Storage** : Not applicable.
- Disposal** : Not applicable.

Additional information : Mineral oil of petroleum origin Product containing mineral oil with less than 3% DMSO extract as measured by IP 346 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	CAS number	% (w/w)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	≤10
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	70024-69-0	≤3
Sulfonic acids, petroleum, calcium salts	61789-86-4	≤3
calcium(2+) 12-hydroxyoctadecanoate	3159-62-4	≤3
Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt	26264-06-2	<2.5
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	≤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. 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** : Wash skin thoroughly with soap and water or use recognized skin cleanser. 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 : Causes serious eye irritation.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes mild skin irritation. Defatting to the skin.
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
dryness
cracking
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 : No specific fire or explosion hazard.



Hazardous thermal decomposition products : carbon monoxide
carbon dioxide
Silicon Dioxide
nitrogen oxides
sulfur oxides
Hydrogen sulfide
Mercaptans

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).

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. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. 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

Ingredient name	Exposure limits
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	ACGIH TLV (United States). TWA: 3 mg/m ³ Form: Respirable dust TWA: 10 mg/m ³ Form: Total dust

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 : Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined)

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.
- Other skin protection** : Appropriate footwear and any additional skin protection measures 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. Respirator with combination filter for vapor/particulate Type A/P1 Warning ! filters have a limited use duration The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses None under normal use conditions

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.
- Color** : Gray.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : >300°C (>572°F) [ISO 3016]
- Boiling point** : Not applicable.
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Yes.
- Lower and upper explosive (flammable) limits** : Not applicable.
- Vapor pressure** : Not applicable.
- Vapor density** : Not applicable.
- Relative density** : 0.9 [ISO EN 3675]
- Density** : 0.9 g/cm³ [20°C] [ISO EN 3675]
- Solubility(ies)** :

Media	Result
water	Not soluble

- Miscible with water** : No.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : >3.5
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : >300°C (>572°F)
- Viscosity** : Kinematic (40°C (104°F)): Not applicable.
- Flow time (ISO 2431)** : Not available.
- Particle characteristics**
- Median particle size** : Not available.

**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	: carbon monoxide carbon dioxide Silicon Dioxide nitrogen oxides sulfur oxides Hydrogen sulfide Mercaptans

Section 11. Toxicological information**Information on toxicological effects****Acute toxicity**

Product/substance	Result	Species	Dose	Exposure	Test
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	LC50 Inhalation Dusts and mists	Rat - Male, Female	>1.9 mg/l	4 hours	EPA OPP 81-3 Acute Inhalation Toxicity
	LD50 Dermal	Rabbit - Male, Female	>4000 mg/kg	-	OECD
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	OECD 401
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	LC50 Inhalation Dusts and mists	Rat - Male, Female	>1.9 mg/l	4 hours	Read across EPA OPP 81-3 Acute Inhalation Toxicity
	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-	Read across OECD 402
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	OECD 401
Sulfonic acids, petroleum, calcium salts	LC50 Inhalation Dusts and mists	Rat - Male	>1.9 mg/l	4 hours	EPA OPP 81-3 Acute Inhalation Toxicity
	LD50 Dermal	Rabbit - Male, Female	>4000 mg/kg	-	-
	LD50 Oral	Rat - Male	>16000 mg/kg	-	Section 772 . 112-21 CFR 40
calcium(2+) 12-hydroxyoctadecanoate	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-	OECD 402



Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt	LD50 Oral LD50 Dermal	Rat - Female Rat - Male, Female	>2000 mg/kg >2000 mg/kg	- -	OECD 420 OECD 402 Read across
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	LD50 Oral LD50 Oral	Rat - Female Rat	4445 mg/kg >5000 mg/kg	- -	- -

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

Irritation/Corrosion

Product/substance	Result	Species	Score	Exposure	Test
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	Eyes - Cornea opacity	Rabbit	0	-	EPA
	Skin - Edema	Rabbit	0.3	4 hours	EPA OPPTS 870.2500 Acute Dermal Irritation OECD
calcium(2+) 12-hydroxyoctadecanoate Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt	Skin - Primary dermal irritation index (PDII)	Rabbit	0.5	4 hours	OECD
	Eyes - Cornea opacity	Rabbit	0	-	OECD 405
	Eyes - Irritant	Rabbit	1	-	OECD 405
	Skin - Erythema/Eschar	Rabbit	2.7	4 hours	OECD 404

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

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

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

Sensitization

Product/substance	Route of exposure	Species	Result
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	skin	Human	Sensitizing
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	skin	Mouse	Sensitizing
Sulfonic acids, petroleum, calcium salts	skin	Guinea pig	Sensitizing
calcium(2+) 12-hydroxyoctadecanoate	skin	Mouse	Not sensitizing
Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt	skin	Guinea pig	Not sensitizing

Skin : Based on available data, the classification criteria are not met. The supplier of one or more of the components contained within this formulation has indicated that he has data on the components and/or similar mixtures, which confirms that at the concentration used, classification is not required Contains Sensitizer. May produce an allergic reaction.

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

Mutagenicity



Product/substance	Test	Experiment	Result
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts calcium(2+) 12-hydroxyoctadecanoate	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 474	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative
	-	Experiment: In vivo Subject: Mammalian-Animal	Negative
	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
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	Negative	Negative	Negative	Rat - Male, Female	Oral	-
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 : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes mild skin irritation. Defatting to the skin.

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
 dryness
 cracking

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
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	Sub-acute NOAEL Dermal	Rat - Male, Female	>1000 mg/kg	-
	Sub-acute NOAEL Oral	Rat - Male, Female	500 mg/kg	-
	Sub-acute NOAEL Inhalation Vapor	Rat - Male, Female	50 mg/m ³	28 days
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)
CERAN MS calcium(2+) 12-hydroxyoctadecanoate	103734.4 2500	N/A N/A	N/A N/A	N/A N/A	N/A N/A



Section 12. Ecological information

Toxicity

Product/substance	Result	Species	Exposure	Test
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	Acute EC50 >1000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
	Acute EC50 >1000 mg/l	Crustaceans - Daphnia magna	48 hours	OECD 202
	Acute LC50 >1000 mg/l	Fish - Cyprinodon variegatus	96 hours	OECD 203
	Chronic EC10 >1000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	Acute EC50 >1000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
	Acute EC50 >1000 mg/l	Crustaceans - Daphnia magna	48 hours	OECD 202
	Acute LC50 >1000 mg/l	Fish - Cyprinodon variegatus	96 hours	OECD 203
	Chronic EC10 >1000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
Sulfonic acids, petroleum, calcium salts	Acute EC50 >1000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
	Acute EC50 >1000 mg/l	Crustaceans - Daphnia magna	48 hours	OECD 202
	Acute LC50 >1000 mg/l	Fish - Cyprinodon variegatus	96 hours	OECD 203
	Chronic EC10 >1000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
calcium(2+) 12-hydroxyoctadecanoate	Acute EC50 161 mg/l	Algae	72 hours	-
	Acute EC50 >100 mg/l	Daphnia - Daphnia magna	48 hours	-
Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt	Acute EC50 29 mg/l	Algae - Pseudokirchneriella subcapitata	96 hours	STDMETH, ASTM and USEPA 201
	Acute EC50 2.9 mg/l	Crustaceans - Daphnia magna	48 hours	OECD 202
	Acute LC50 1.67 mg/l	Fish - Lepomis macrochirus	96 hours	STDMETH, ASTM and USEPA
	Chronic NOEC 0.5 mg/l	Algae - Pseudokirchneriella subcapitata	96 hours	STDMETH, ASTM and USEPA 201
	Chronic NOEC 0.379 mg/l	Daphnia	48 hours	OECD 211

Persistence and degradability



Product/substance	Test	Result	Dose	Inoculum
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	OECD 301D	0 % - Not readily - 28 days	-	Activated sludge
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	OECD 301D	0 % - Not readily - 28 days	-	Activated sludge
Sulfonic acids, petroleum, calcium salts	OECD 301D	0 % - Not readily - 28 days	-	Activated sludge
Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt	OECD 301B	>90 % - Readily - 28 days	-	Activated sludge

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	-	-	Not readily
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	-	-	Not readily
Sulfonic acids, petroleum, calcium salts	-	-	Not readily
Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt	-	-	Readily
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	-	-	Not readily

Bioaccumulative potential

Product/substance	LogK _{ow}	BCF	Potential
CERAN MS	>3.5	-	low
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	22	-	high
Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt	2.89	-	low
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) : 4

[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)	: All components are listed or exempted.
China inventory (IECSC)	: All components are listed or exempted.
Europe inventory (EC)	: All components are listed or exempted.
Japan inventory	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : Not determined.
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 or exempted.
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	/	2
Flammability		0
Physical hazards		0

[History](#)

Date of revision	: 2022/09/09
Date of previous revision	: 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 EYE IRRITATION - Category 2A	Calculation method 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.