SAFETY DATA SHEET

Keystone®

Version	Revision Date:	SDS Number:	Date of last issue: 10/04/2022
1.1	10/28/2022	800080004621	Date of first issue: 10/04/2022

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. IDENTIFICATION

Product name : Keystone®

Manufacturer or supplier's details

COMPANY IDENTIFICATION

Manufacturer/importer : CORTEVA AGRISCIENCE LLC
9330 ZIONSVILLE RD
INDIANAPOLIS, IN, 46268-1053
UNITED STATES

Customer Information Number : 800-992-5994

E-mail address : customerinformation@corteva.com

Emergency telephone : INFOTRAC (CONTRACT 84224).

+1 800-992-5994 or +1 317-337-6009

Recommended use of the chemical and restrictions on use

Recommended use : End use herbicide product

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Eye irritation : Category 2A

Skin sensitization : Sub-category 1B

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

Specific target organ toxicity - repeated exposure (Oral) : Category 2

GHS label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

Precautionary Statements :

Prevention:

P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 Get medical advice/ attention if you feel unwell.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
acetochlor (ISO)	34256-82-1	32.6
atrazine (ISO)	1912-24-9	24.4
Dichlormid	37764-25-3	>= 3 - < 10
Propylene glycol	57-55-6	>= 1 - < 3
Calcium dodecylbenzene sulfonate	26264-06-2	>= 1 - < 3
Ethylhexanol	104-76-7	>= 1 - < 3
propazine (ISO)	139-40-2	>= 0.1 - < 0.3
Balance	Not Assigned	> 20

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

If inhaled : Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

In case of skin contact : Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

In case of eye contact : Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Suitable emergency eye wash facility should be available in work area.

If swallowed : Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

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

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection).
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to physician : Skin contact may aggravate preexisting dermatitis.

No specific antidote.
Treatment of exposure should be directed at the control of

symptoms and the clinical condition of the patient.
Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Exposure to combustion products may be a hazard to health. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon oxides Nitrogen oxides (NOx) Hydrogen chloride gas
Specific extinguishing methods	:	Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental precautions	:	If the product contaminates rivers and lakes or drains inform respective authorities. Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers).

Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
Prevent from entering into soil, ditches, sewers,underwater.
See Section 12, Ecological Information.

Methods and materials for containment and cleaning up : Clean up remaining materials from spill with suitable absorbant.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped,
Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container.
Keep in suitable, closed containers for disposal.
Wipe up with absorbent material (e.g. cloth, fleece).
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
See Section 13, Disposal Considerations, for additional information.

SECTION 7. HANDLING AND STORAGE

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Avoid formation of aerosol.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapors/dust.
Do not smoke.
Handle in accordance with good industrial hygiene and safety practice.
Avoid exposure - obtain special instructions before use.
Smoking, eating and drinking should be prohibited in the application area.
Do not get on skin or clothing.
Do not breathe vapors or spray mist.
Do not swallow.
Do not get in eyes.
Avoid contact with skin and eyes.
Keep container tightly closed.
Take care to prevent spills, waste and minimize release to the environment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Conditions for safe storage : Store in a closed container.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in properly labeled containers.
Store in accordance with the particular national regulations.

Materials to avoid : Strong oxidizing agents

Packaging material : Unsuitable material: None known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
atrazine (ISO)	1912-24-9	TWA (Inhalable particulate matter)	2 mg/m3	ACGIH
		TWA	5 mg/m3	OSHA P0
Propylene glycol	57-55-6	TWA	10 mg/m3	US WEEL
Ethylhexanol	104-76-7	TWA	2 ppm	Corteva OEL
		TWA	5 ppm	ACGIH
propazine (ISO)	139-40-2	TWA (Inhalable particulate matter)	2 mg/m3	ACGIH

Engineering measures : Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.
Local exhaust ventilation may be necessary for some operations.

Personal protective equipment

Respiratory protection : Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator.

Hand protection

Remarks : Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace

should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Eye protection : Use chemical goggles.

Skin and body protection : Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid.
Color	:	Tan
Odor	:	Aromatic
Odor Threshold	:	No data available
pH	:	6.0 - 6.5 Concentration: 100 % Method: pH Electrode (neat)
Melting point/range	:	Not applicable
Freezing point		No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 212 °F / > 100 °C Method: closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available

Relative vapor density	:	No data available
Relative density	:	1.116
Density	:	1.116 g/cm3
Solubility(ies)		
Water solubility	:	emulsifiable
Autoignition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	No decomposition if stored and applied as directed. Stable under normal conditions.
Possibility of hazardous reactions	:	Stable under recommended storage conditions. No hazards to be specially mentioned. None known.
Conditions to avoid	:	None known.
Incompatible materials	:	None.
Hazardous decomposition products	:	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon oxides Nitrogen oxides (NOx) Hydrogen chloride gas

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	LD50 (Rat, male): > 5,000 mg/kg Remarks: For similar material(s): LD50 (Rat, female): 2,242 mg/kg Remarks: For similar material(s):

Acute inhalation toxicity : LC50 (Rat): > 6.23 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: For similar material(s):

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: For similar material(s):

Components:

acetochlor (ISO):

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg
Remarks: Signs and symptoms of excessive exposure may include:
Tremors.
Convulsions.

Acute inhalation toxicity : Remarks: Prolonged excessive exposure to mist may cause serious adverse effects, even death.
Mist may cause irritation of upper respiratory tract (nose and throat).

LC50 (Rat): 3.99 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

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

atrazine (ISO):

Acute oral toxicity : LD50 (Rat, male): 3,125 mg/kg
Remarks: In animals, effects have been reported on the following organs:
Liver.

Acute inhalation toxicity : Remarks: No adverse effects are anticipated from single exposure to dust.
Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

LC50 (Rat): > 5.8 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Dichlormid:

Acute oral toxicity : LD50 (Rat, female): 2,146 mg/kg

LD50 (Rat, male): 2,816 mg/kg

Acute inhalation toxicity : Remarks: Prolonged excessive exposure to mist may cause adverse effects.
Vapor may cause irritation of the upper respiratory tract (nose and throat).
Mist may cause irritation of upper respiratory tract (nose and throat).

LC50 (Rat, male and female): > 5.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 4,640 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Propylene glycol:

Acute oral toxicity : LD50 (Rat): > 20,000 mg/kg

Acute inhalation toxicity : LC50 (Rabbit): 317.042 mg/l
Exposure time: 2 h
Test atmosphere: dust/mist
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Mist may cause irritation of upper respiratory tract (nose and throat).

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Calcium dodecylbenzene sulfonate:

Acute oral toxicity : LD50 (Rat): > 1,000 mg/kg
Method: Estimated.

Acute inhalation toxicity : LC50 (Rat): > 2 mg/l
Test atmosphere: dust/mist
Method: Estimated.

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

Ethylhexanol:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Target Organs: Central nervous system

Acute inhalation toxicity : LC50 (Rat): 2.17 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 3,000 mg/kg
Method: OECD Test Guideline 402

propazine (ISO):

Acute oral toxicity : Remarks: Very low toxicity if swallowed.
Harmful effects not anticipated from swallowing small amounts.

LD50 (Rat, male and female): > 7,700 mg/kg

Skin corrosion/irritation

Product:

Result : No skin irritation

Components:

acetochlor (ISO):

Result : Skin irritation

Dichlormid:

Result : Skin irritation

Propylene glycol:

Species : Rabbit
Result : No skin irritation

Calcium dodecylbenzene sulfonate:

Species : Rabbit
Result : Skin irritation

Ethylhexanol:

Species : Rabbit
Result : Skin irritation

Serious eye damage/eye irritation

Product:

Result : Eye irritation

Components:

Propylene glycol:

Species : Rabbit
Result : No eye irritation

Calcium dodecylbenzene sulfonate:

Species : Rabbit
Result : Corrosive

Ethylhexanol:

Species : Rabbit
Result : Eye irritation

Respiratory or skin sensitization

Product:

Assessment : The product is a skin sensitizer, sub-category 1B.
Remarks : For similar material(s):

Components:

acetochlor (ISO):

Assessment : May cause sensitization by skin contact.
Remarks : Has caused allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

atrazine (ISO):

Assessment : Does not cause skin sensitization.
Remarks : Skin contact may cause an allergic skin reaction in a small proportion of individuals.

Remarks : For respiratory sensitization:
No relevant data found.

Dichlormid:

Remarks : Skin contact may cause an allergic skin reaction in a small proportion of individuals.

Remarks : For respiratory sensitization:
No relevant data found.

Propylene glycol:

Species : human
Assessment : Does not cause skin sensitization.

Calcium dodecylbenzene sulfonate:

Species	:	Guinea pig
Assessment	:	Does not cause skin sensitization.

Ethylhexanol:

Test Type	:	HRIPT (human repeat insult patch test)
Species	:	human
Assessment	:	Does not cause skin sensitization.

propazine (ISO):

Remarks	:	Did not cause allergic skin reactions when tested in guinea pigs.
Remarks	:	For respiratory sensitization: No relevant data found.

Germ cell mutagenicity

Components:

acetochlor (ISO):

Germ cell mutagenicity - Assessment	:	In vitro genetic toxicity studies were negative in some cases and positive in other cases., Animal genetic toxicity studies were predominantly negative.

atrazine (ISO):

Germ cell mutagenicity - Assessment	:	In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative in some cases and positive in other cases.

Dichlormid:

Germ cell mutagenicity - Assessment	:	In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

Propylene glycol:

Germ cell mutagenicity - Assessment	:	In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

Calcium dodecylbenzene sulfonate:

Germ cell mutagenicity - Assessment	:	For similar material(s):, In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

Ethylhexanol:

Germ cell mutagenicity - Assessment	:	In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

propazine (ISO):

Germ cell mutagenicity -	:	This material was not mutagenic in an Ames bacterial assay.

Assessment

Carcinogenicity

Product:

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

Components:

acetochlor (ISO):

Carcinogenicity - Assessment : Has caused cancer in laboratory animals., Tumors were observed only at levels which produced significant toxicity, thus exceeding the maximum tolerated dose.

atrazine (ISO):

Carcinogenicity - Assessment : Has caused cancer in some laboratory animals., However, the effects are species specific and are not relevant to humans.

Dichlormid:

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

Propylene glycol:

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

Calcium dodecylbenzene sulfonate:

Carcinogenicity - Assessment : For similar material(s):, Did not cause cancer in laboratory animals.

Ethylhexanol:

Carcinogenicity - Assessment : In laboratory animals, evidence of carcinogenic activity was observed., These is no evidence that these findings are relevant to humans.

propazine (ISO):

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Limited evidence of a carcinogenic effect.

Reproductive toxicity

Components:

acetochlor (ISO):

Reproductive toxicity - Assessment : In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to

the parent animals.
Has been toxic to the fetus in laboratory animals at doses toxic to the mother., Did not cause birth defects in laboratory animals.

atrazine (ISO):

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction.
Has been toxic to the fetus in laboratory animals at doses toxic to the mother., Did not cause birth defects in laboratory animals.

Dichlormid:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction.
Has been toxic to the fetus in laboratory animals at doses toxic to the mother., Did not cause birth defects in laboratory animals.

Propylene glycol:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction., In animal studies, did not interfere with fertility.
Did not cause birth defects or any other fetal effects in laboratory animals.

Calcium dodecylbenzene sulfonate:

Reproductive toxicity - Assessment : For similar material(s):, In animal studies, did not interfere with reproduction.
For this family of materials:, Has been toxic to the fetus in laboratory animals at doses toxic to the mother., Did not cause birth defects in laboratory animals.

Ethylhexanol:

Reproductive toxicity - Assessment : Has caused birth defects in laboratory animals only at doses toxic to the mother., Has been toxic to the fetus in laboratory animals at doses toxic to the mother., These concentrations exceed relevant human dose levels.

STOT-single exposure

Product:

Assessment : May cause respiratory irritation.

Components:

acetochlor (ISO):

Assessment : May cause respiratory irritation.

atrazine (ISO):

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Dichlormid:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Propylene glycol:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Calcium dodecylbenzene sulfonate:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Ethylhexanol:

Routes of exposure : Inhalation
Target Organs : Respiratory Tract
Assessment : May cause respiratory irritation.

propazine (ISO):

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

STOT-repeated exposure

Components:

atrazine (ISO):

Routes of exposure : Oral
Assessment : May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

acetochlor (ISO):

Remarks : In animals, effects have been reported on the following organs:
Kidney.
Liver.
Blood.
Testes.
Central nervous system.

atrazine (ISO):

Remarks : In animals, effects have been reported on the following organs:

Heart.
Central nervous system.
Kidney.
Liver.
Mammary gland.

Dichlormid:

Remarks : In animals, effects have been reported on the following organs:
Liver.
Muscles.
Nasal tissue.
Central nervous system.

Propylene glycol:

Remarks : In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Calcium dodecylbenzene sulfonate:

Remarks : Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Ethylhexanol:

Remarks : In animals, effects have been reported on the following organs:
Blood.
Kidney.
Liver.
Spleen.

propazine (ISO):

Remarks : No relevant data found.

Aspiration toxicity

Product:

Based on physical properties, not likely to be an aspiration hazard.

Components:

acetochlor (ISO):

Based on available information, aspiration hazard could not be determined.

atrazine (ISO):

Based on physical properties, not likely to be an aspiration hazard.

Dichlormid:

Based on available information, aspiration hazard could not be determined.

Propylene glycol:
Based on physical properties, not likely to be an aspiration hazard.

Ethylhexanol:
May be harmful if swallowed and enters airways.

propazine (ISO):
Based on physical properties, not likely to be an aspiration hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

acetochlor (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.36 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 or Equivalent
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 8.6 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 or Equivalent EC50 (eastern oyster (Crassostrea virginica)): 4.2 mg/l Exposure time: 96 h Test Type: flow-through test Method: OECD Test Guideline 202 or Equivalent
Toxicity to algae/aquatic plants	:	EyC50 (Pseudokirchneriella subcapitata (green algae)): 0.00027 mg/l End point: Growth inhibition (cell density reduction) Exposure time: 96 h Method: OECD Test Guideline 201 or Equivalent EyC50 (Lemna minor (duckweed)): 0.0027 mg/l End point: Growth inhibition (cell density reduction) Exposure time: 7 d Method: OECD 221.
M-Factor (Acute aquatic toxicity)	:	1,000
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): 0.13 mg/l
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.0221 mg/l Exposure time: 21 d
M-Factor (Chronic aquatic toxicity)	:	100

Toxicity to microorganisms	:	EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h
Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): 105.5 mg/kg Exposure time: 14 d
Toxicity to terrestrial organisms	:	Remarks: Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg)., Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm). oral LD50 (Colinus virginianus (Bobwhite quail)): 928 mg/kg bodyweight. dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5620 mg/kg diet. Exposure time: 5 d dietary LC50 (Anas platyrhynchos (Mallard duck)): > 5620 mg/kg diet. Exposure time: 5 d oral LD50 (Apis mellifera (bees)): > 100 micrograms/bee Exposure time: 48 h contact LD50 (Apis mellifera (bees)): > 200 micrograms/bee Exposure time: 48 h

atrazine (ISO):

Toxicity to fish	:	Remarks: Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested). LC50 (Poecilia reticulata (guppy)): 46 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 or Equivalent
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia pulex (Water flea)): 5.29 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 or Equivalent
Toxicity to algae/aquatic plants	:	EyC50 (Pseudokirchneriella subcapitata (green algae)): 0.235 mg/l End point: Biomass Exposure time: 96 h Method: OECD Test Guideline 201 or Equivalent EbC50 (Lemna minor (duckweed)): 0.153 mg/l End point: Biomass Exposure time: 96 h Method: OECD Test Guideline 201 or Equivalent

Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): 78 mg/kg Exposure time: 14 d
Toxicity to terrestrial organisms	:	Remarks: Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg)., Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm). (Colinus virginianus (Bobwhite quail)): 940 mg/kg bodyweight. (Coturnix japonica (Japanese quail)): > 1000 mg/kg diet. Exposure time: 8 d oral LD50 (Apis mellifera (bees)): > 97 µg/bee contact LD50 (Apis mellifera (bees)): > 100 µg/bee

Dichlormid:

Toxicity to fish	:	Remarks: Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested). LC50 (Oncorhynchus mykiss (rainbow trout)): 141 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 161 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 80 mg/l Exposure time: 72 h
Toxicity to microorganisms	:	EC50 (Bacteria): 1,180 mg/l Exposure time: 6 h
Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): 391 mg/kg Exposure time: 14 d GLP: yes
Toxicity to terrestrial organisms	:	Remarks: Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg)., Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm). oral LD50 (Colinus virginianus (Bobwhite quail)): 1545 mg/kg bodyweight. GLP: yes dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5200 mg/kg diet. Exposure time: 5 d oral LD50 (Apis mellifera (bees)): > 22.7 µg/bee

Exposure time: 48 d

contact LD50 (Apis mellifera (bees)): > 33.3 µg/bee
Exposure time: 48 h

Ecotoxicology Assessment

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Propylene glycol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 19,000 mg/l
End point: Growth rate inhibition
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l
End point: number of offspring
Exposure time: 7 d
Test Type: semi-static test

Toxicity to microorganisms : NOEC (Pseudomonas putida): > 20,000 mg/l
Exposure time: 18 h

Calcium dodecylbenzene sulfonate:

Toxicity to fish : LC50 (Rainbow trout (Salmo gairdneri)): 3.2 - 5.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on information for a similar material:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.5 mg/l
Exposure time: 48 h
Test Type: Static
Method: OECD Test Guideline 202
Remarks: For similar material(s):

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapita): 65.4 mg/l
Exposure time: 72 h
Test Type: Static
Method: OECD Test Guideline 201
Remarks: For similar material(s):

NOEC (Pseudokirchneriella subcapita): 7.9 mg/l
Exposure time: 72 h

Test Type: Static
Method: OECD Test Guideline 201
Remarks: For similar material(s):

Ethylhexanol:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 32 - 37 mg/l Exposure time: 96 h LC50 (Fathead minnow (Pimephales promelas)): 28.2 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 35.2 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 EC50 (Daphnia magna (Water flea)): 39 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 or Equivalent
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 11.5 mg/l End point: Growth rate inhibition Exposure time: 72 h Method: OECD Test Guideline 201 or Equivalent
Toxicity to microorganisms	:	EC50 (Bacteria): 256 - 320 mg/l Exposure time: 16 h

propazine (ISO):

Toxicity to fish	:	Remarks: Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna): 17.7 mg/l Exposure time: 48 h Test Type: Static Method: Other guidelines
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0.362 mg/l End point: Growth rate Exposure time: 72 h Test Type: Static Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	1

Persistence and degradability

Components:

acetochlor (ISO):

Stability in water	:	Test Type: Hydrolysis Method: Stable Test Type: Hydrolysis Method: Stable Test Type: Hydrolysis Method: Stable
Photodegradation	:	Rate constant: 5.51826E-11 cm3/s Method: Estimated.

atrazine (ISO):

Biodegradability	:	Result: Not readily biodegradable. Remarks: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Dichlormid:

Stability in water	:	Test Type: Hydrolysis Method: Stable Test Type: Hydrolysis Method: Stable Test Type: Hydrolysis Method: Stable
Photodegradation	:	Test Type: Half-life (direct photolysis) Method: Measured Test Type: Half-life (indirect photolysis) Sensitizer: OH radicals Concentration: 1,500,000 1/cm3 Rate constant: 7.55E-11 cm3/s Method: Estimated.

Propylene glycol:

Biodegradability	:	aerobic Result: Readily biodegradable. Biodegradation: 81 % Exposure time: 28 d Method: OECD Test Guideline 301F or Equivalent Remarks: 10-day Window: Pass Biodegradation: 96 % Exposure time: 64 d Method: OECD Test Guideline 306 or Equivalent Remarks: 10-day Window: Not applicable
Biochemical Oxygen Demand (BOD)	:	69.000 % Incubation time: 5 d

70.000 %
Incubation time: 10 d

86.000 %
Incubation time: 20 d

Chemical Oxygen Demand (COD) : 1.53 kg/kg

ThOD : 1.68 kg/kg

Photodegradation : Rate constant: 1.28E-11 cm3/s
Method: Estimated.

Calcium dodecylbenzene sulfonate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 95 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
Remarks: 10-day Window: Pass

Ethylhexanol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 95 %
Exposure time: 5 d
Method: OECD Test Guideline 302B or Equivalent
Remarks: 10-day Window: Not applicable

Biodegradation: 68 %
Exposure time: 17 d
Method: OECD Test Guideline 301B or Equivalent
Remarks: 10-day Window: Pass

Biochemical Oxygen Demand (BOD) : 26 - 70 %
Incubation time: 5 d

75 - 81 %
Incubation time: 10 d

86 - 87 %
Incubation time: 20 d

Chemical Oxygen Demand (COD) : 2.70 kg/kg

ThOD : 2.95 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Rate constant: 1.32E-11 cm3/s
Method: Estimated.

propazine (ISO):

Biodegradability : Result: Not biodegradable
Remarks: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

aerobic
Inoculum: activated sludge, domestic, adapted
Concentration: 31.9 mg/l
Biodegradation: 6 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
Remarks: 10-day Window: Fail

Bioaccumulative potential

Components:

acetochlor (ISO):

Bioaccumulation : Bioconcentration factor (BCF): 20

Partition coefficient: n-octanol/water :

log Pow: 4.14
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

atrazine (ISO):

Partition coefficient: n-octanol/water : log Pow: 2.61
Method: Measured

log Pow: 2.75
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Dichlormid:

Partition coefficient: n-octanol/water : log Pow: 1.839
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Propylene glycol:

Bioaccumulation : Bioconcentration factor (BCF): 0.09
Method: Estimated.

Partition coefficient: n-octanol/water : log Pow: -1.07
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Calcium dodecylbenzene sulfonate:

Bioaccumulation	:	Species: Fish Bioconcentration factor (BCF): 71 Method: Estimated.
Partition coefficient: n-octanol/water	:	log Pow: 4.77 (77 °F / 25 °C) Method: estimated Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Ethylhexanol:

Partition coefficient: n-octanol/water	:	log Pow: 3.1 Method: Measured Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

propazine (ISO):

Partition coefficient: n-octanol/water	:	log Pow: 3.01 Method: OECD Test Guideline 107 Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Balance:

Partition coefficient: n-octanol/water	:	Remarks: No relevant data found.

Mobility in soil

Components:

acetochlor (ISO):

Distribution among environmental compartments	:	Koc: 156 Method: Estimated. Remarks: Potential for mobility in soil is medium (Koc between 150 and 500).

atrazine (ISO):

Distribution among environmental compartments	:	Koc: 150 - 210 Method: Measured Remarks: Potential for mobility in soil is medium (Koc between 150 and 500).

Dichlormid:

Distribution among environmental compartments	:	Koc: 36 - 49 Remarks: Potential for mobility in soil is very high (Koc between 0 and 50). Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Propylene glycol:

Distribution among environmental compartments : Koc: < 1
Method: Estimated.
Remarks: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Potential for mobility in soil is very high (Koc between 0 and 50).

Ethylhexanol:

Distribution among environmental compartments : Koc: 800
Method: Estimated.
Remarks: Potential for mobility in soil is low (Koc between 500 and 2000).

propazine (ISO):

Distribution among environmental compartments : Remarks: No relevant data found.

Balance:

Distribution among environmental compartments : Remarks: No relevant data found.

Other adverse effects

Components:

acetochlor (ISO):

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

atrazine (ISO):

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Dichlormid:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Propylene glycol:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Calcium dodecylbenzene sulfonate:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Ethylhexanol:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

propazine (ISO):

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Balance:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regu-

lations.
If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetochlor)
Class	:	9
Packing group	:	III
Labels	:	9

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Acetochlor)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetochlor)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes
Remarks	:	Stowage category A

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Calcium dodecylbenzene sulfonate)
Class	:	9
Packing group	:	III
Labels	:	CLASS 9
ERG Code	:	171
Marine pollutant	:	no
Reportable Quantity	:	Calcium dodecylbenzene sulfonate only regulated in pack

sizes > 18,181 kg

Further information

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.
THE ABOVE INFORMATION ONLY APPLIES TO PACKAGE SIZES WHERE THE HAZARDOUS SUBSTANCE MEETS THE REPORTABLE QUANTITY.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)
Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

atrazine (ISO)	1912-24-9	>= 20 - < 30 %

US State Regulations

Pennsylvania Right To Know

atrazine (ISO)	1912-24-9
Propylene glycol	57-55-6
Calcium dodecylbenzene sulfonate	26264-06-2
Ethylhexanol	104-76-7

California Prop. 65

WARNING: This product can expose you to chemicals including acetochlor (ISO), hexachlorobenzene, which is/are known to the State of California to cause cancer, and
atrazine (ISO), simazine (ISO), propazine (ISO), toluene, hexachlorobenzene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

The following substance(s) is/are subject to a Significant New Use Rule:

Dichlormid	37764-25-3
pentachlorobenzene	608-93-5

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:

Dichlormid 37764-25-3

Federal Insecticide, Fungicide and Rodenticide Act
EPA Registration Number : 62719-368

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

WARNING

Causes substantial but temporary eye injury
Harmful if swallowed
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SECTION 16. OTHER INFORMATION

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
Corteva OEL	:	Corteva Occupational Exposure Limit
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA	:	8-hour, time-weighted average
Corteva OEL / TWA	:	Time weighted average
OSHA P0 / TWA	:	8-hour time weighted average
US WEEL / TWA	:	8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International

Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 10/28/2022

Product code: GF-1321

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN