

INSTINCT™

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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 South Africa and may not meet the regulatory requirements in other countries.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : INSTINCT™

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

Use of the Substance/Mixture : Fertilizer additive, Nitrogen Stabilizer

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION

Manufacturer/importer

Corteva Agriscience RSA Proprietary Limited
Block A, 2nd Floor, Lakefield Office Park, 272 West Avenue
Centurion, Gauteng, 1063
SOUTH AFRICA

Customer Information : +27 (0) 12 683 5700

Number

E-mail address : SDS@corteva.com

1.4 Emergency telephone number

24-Hour Local Emergency Contact: +27 82 895 0621

24-Hour Emergency Contact: +32 3 575 55 55

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Serious eye damage, Category 1 H318: Causes serious eye damage.

Long-term (chronic) aquatic hazard, Category 2 H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

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Hazard pictograms :



Signal word : Danger

Hazard statements :
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements :
Prevention:
P261 Avoid breathing mist or vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P391 Collect spillage.

Hazardous components which must be listed on the label:

nitrapyrin (ISO)
Decyl alcohol, ethoxylated, phosphated, potassium salt
2,3,4,5,6-Pentachloropyridine
3-Chloro-6-(trichloromethyl)pyridine
1,2-benzisothiazol-3(2H)-one

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
nitrapyrin (ISO)	1929-82-4 217-682-2	Acute Tox. 4; H302 Eye Irrit. 2; H319	26,01

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	006-057-00-8 01-2120763198-45-0001, 01-2120763198-45-0002	Skin Sens. 1; H317 Aquatic Chronic 2; H411	
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	Not Assigned 01-2119451097-39, 01-2119451097-39-0008, 01-2119451097-39-0009, 01-2119451097-39-0010	Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 3 - < 10
Polybutene	9003-29-6 500-004-7	Asp. Tox. 1; H304	>= 1 - < 3
Decyl alcohol, ethoxylated, phosphated, potassium salt	68070-99-5	Skin Irrit. 2; H315 Eye Dam. 1; H318	>= 1 - < 3
4,6-dichloro-2-trichloromethyl pyridine	1129-19-7	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 1 - < 3
Polyoxyethylene octyl ether phosphate potassium salt	73018-34-5	Skin Irrit. 2; H315 Eye Dam. 1; H318	>= 1 - < 3
2,3,4,5,6-Pentachloropyridine	2176-62-7 218-535-5	Acute Tox. 4; H302 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0,3 - < 1
3-Chloro-6-(trichloromethyl)pyridine	1197-03-1	Acute Tox. 4; H302 Acute Tox. 3; H331 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411	>= 0,1 - < 0,25
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 3; H412 M-Factor (Acute aquatic toxicity): 1	>= 0,0025 - < 0,025

For explanation of abbreviations see section 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

- 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.
- If inhaled : Move person to fresh air; if effects occur, consult a physician.
- In case of skin contact : Wash off with plenty of water.
- In case of eye contact : Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
- If swallowed : No emergency medical treatment necessary.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : No specific antidote.
Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
-

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
- Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

- 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:
Nitrogen oxides (NO_x)
Carbon oxides

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5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
- 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.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- Personal precautions : Use personal protective equipment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

6.2 Environmental precautions

- 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.

6.3 Methods and material for containment and cleaning up

- Methods for cleaning up : Clean up remaining materials from spill with suitable absorbent.
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 over-pressurization of the container.
Keep in suitable, closed containers for disposal.
Wipe up with absorbent material (e.g. cloth, fleece).

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Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
See Section 13, Disposal Considerations, for additional information.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : To avoid spills during handling keep bottle on a metal tray. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Do not breathe vapours/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.
Avoid inhalation of vapour or 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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Store in accordance with the particular national regulations.

Advice on common storage : Strong oxidizing agents

Packaging material : Unsuitable material: Do not store in or use containers except the original product package.

7.3 Specific end use(s)

Specific use(s) : Plant protection products subject to Regulation (EC) No 1107/2009.

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SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
nitrapyrin (ISO)	1929-82-4	OEL- RL STEL/C	20 mg/m ³	ZA OEL
	Further information: Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
		OEL-RL (inhalable fraction and vapour)	10 mg/m ³	ZA OEL
	Further information: Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value	
Sodium chloride	Consumers	Ingestion	Long-term systemic effects	126,65 mg/kg bw/day	
	Consumers	Inhalation	Long-term systemic effects	443,28 mg/m ³	
	Consumers	Skin contact	Long-term systemic effects	126,65 mg/kg bw/day	
	Consumers	Ingestion	Acute systemic effects	126,65 mg/kg bw/day	
	Consumers	Inhalation	Acute systemic effects	443,28 mg/m ³	
	Consumers	Skin contact	Acute systemic effects	126,65 mg/kg bw/day	
	Workers	Inhalation	Long-term systemic effects	2068,62 mg/m ³	
	Workers	Skin contact	Long-term systemic effects	295,52 mg/kg bw/day	
	Workers	Inhalation	Acute systemic effects	2068,62 mg/m ³	
	Workers	Skin contact	Acute systemic effects	295,52 mg/kg bw/day	
	Propylene glycol	Workers	Skin contact	Acute systemic effects	
		Remarks:No data available			
Workers		Inhalation	Acute systemic effects		
Remarks:No data available					
Workers		Skin contact	Acute local effects		
Remarks:No data available					
Workers	Inhalation	Acute local effects			
Remarks:No data available					
Workers	Skin contact	Long-term systemic effects			
Remarks:No data available					

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	Workers	Inhalation	Long-term systemic effects	168 mg/m ³
	Workers	Skin contact	Long-term local effects	
Remarks:No data available				
	Workers	Inhalation	Long-term local effects	10 mg/m ³
	Consumers	Skin contact	Acute systemic effects	
Remarks:No data available				
	Consumers	Inhalation	Acute systemic effects	
Remarks:No data available				
	Consumers	Skin contact	Acute local effects	
Remarks:No data available				
	Consumers	Inhalation	Acute local effects	
Remarks:No data available				
	Consumers	Skin contact	Long-term systemic effects	
Remarks:No data available				
	Consumers	Inhalation	Long-term systemic effects	50 mg/m ³
	Consumers	Skin contact	Long-term local effects	
Remarks:No data available				
	Consumers	Inhalation	Long-term local effects	10 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Sodium chloride	Fresh water	5 mg/l
	Intermittent use/release	19 mg/l
	Sewage treatment plant	500 mg/l
	Soil	4,86 mg/kg
Propylene glycol	Fresh water	260 mg/l
	Marine water	26 mg/l
	Intermittent use/release	183 mg/l
	Sewage treatment plant	20000 mg/l
	Fresh water sediment	572 mg/kg dry weight (d.w.)
	Marine sediment	57,2 mg/kg dry weight (d.w.)
	Soil	50 mg/kg dry weight (d.w.)

8.2 Exposure controls

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

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Eye/face protection : Use chemical goggles.
Chemical goggles should be consistent with EN 166 or equivalent.

Hand protection

Remarks : Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. When prolonged or frequently repeated contact may occur, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. 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.

Skin and body protection : Wear clean, body-covering clothing.

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. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

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SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance	:	Liquid.
Colour	:	off-white
Odour	:	Gasoline-like
Odour Threshold	:	No data available
pH	:	8,54 (21,7 °C)
Melting point/range	:	Not applicable
Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 100 °C Method: closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1,196 g/cm ³ (20 °C)
Solubility(ies)	:	
Water solubility	:	No data available
Auto-ignition temperature	:	No data available
Viscosity	:	
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No
Oxidizing properties	:	No significant increase (>5C) in temperature.

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9.2 Other information

No data available

SECTION 10: Stability and reactivity**10.1 Reactivity**

Not classified as a reactivity hazard.

10.2 Chemical stabilityNo decomposition if stored and applied as directed.
Stable under normal conditions.**10.3 Possibility of hazardous reactions**Hazardous reactions : Stable under recommended storage conditions.
No hazards to be specially mentioned.**10.4 Conditions to avoid**

Conditions to avoid : None known.

10.5 Incompatible materialsMaterials to avoid : Strong acids
Strong bases**10.6 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 (NO_x)

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity****Components:****nitrapyrin (ISO):**Acute oral toxicity : LD50 (Rat, male): 1.072 mg/kg
LD50 (Rat, female): 1.231 mg/kgAcute inhalation toxicity : LC50 (Rat): > 3,51 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Symptoms: No deaths occurred at this concentration., The LC50 value is greater than the Maximum Attainable Concentration.
Assessment: The substance or mixture has no acute inhalation toxicity

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Acute dermal toxicity : LD50 (Rabbit, male and female): 2.830 mg/kg

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Remarks: For similar material(s):

Acute inhalation toxicity : LD50 (Rat): > 4,778 mg/l
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: For similar material(s):

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: For similar material(s):

Polybutene:

Acute oral toxicity : LD50 (Rat): > 10.000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : Remarks: Prolonged exposure is not expected to cause adverse effects.
For respiratory irritation and narcotic effects:
No relevant data found.

LC50 (Rat): 4,82 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 10.250 mg/kg

4,6-dichloro-2-trichloromethyl pyridine:

Acute oral toxicity : LD50 (Rat): 1.000 - 2.000 mg/kg
Method: Estimated.

2,3,4,5,6-Pentachloropyridine:

Acute oral toxicity : LD50 (Rat, male): 435 mg/kg

3-Chloro-6-(trichloromethyl)pyridine:

Acute oral toxicity : LD50 (Rat, male): 1.072 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 3,51 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit, male and female): 2.830 mg/kg

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1,2-benzisothiazol-3(2H)-one:

Acute oral toxicity : LD50 (Rat): 675,3 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0,25 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): > 5.000 mg/kg

Skin corrosion/irritation**Components:****nitrapyrin (ISO):**

Species : Rabbit
Result : No skin irritation

Polybutene:

Result : No skin irritation

Decyl alcohol, ethoxylated, phosphated, potassium salt:

Result : Skin irritation

4,6-dichloro-2-trichloromethyl pyridine:

Result : Skin irritation

Polyoxyethylene octyl ether phosphate potassium salt:

Result : Skin irritation

2,3,4,5,6-Pentachloropyridine:

Species : Rabbit
Result : No skin irritation

1,2-benzisothiazol-3(2H)-one:

Species : Rabbit
Result : Skin irritation

Serious eye damage/eye irritation**Components:****nitrapyrin (ISO):**

Species : Rabbit
Result : Eye irritation

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Polybutene:

Result : No eye irritation

Decyl alcohol, ethoxylated, phosphated, potassium salt:

Result : Corrosive

4,6-dichloro-2-trichloromethyl pyridine:

Result : Eye irritation

Polyoxyethylene octyl ether phosphate potassium salt:

Result : Corrosive

2,3,4,5,6-Pentachloropyridine:

Species : Rabbit
Result : No eye irritation

3-Chloro-6-(trichloromethyl)pyridine:

Result : Eye irritation

1,2-benzisothiazol-3(2H)-one:

Species : Rabbit
Result : Corrosive

Respiratory or skin sensitisation**Components:****nitrapyrin (ISO):**

Species : Guinea pig
Result : May cause sensitisation by skin contact.

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Remarks : For similar material(s):
Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

4,6-dichloro-2-trichloromethyl pyridine:

Remarks : Not expected to be a skin sensitizer based on Structure-Activity Relationship (SAR).

Remarks : For respiratory sensitization:
No relevant data found.

2,3,4,5,6-Pentachloropyridine:

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Assessment : May cause sensitisation by skin contact.

3-Chloro-6-(trichloromethyl)pyridine:

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

Remarks : For respiratory sensitization:
 No relevant data found.

1,2-benzisothiazol-3(2H)-one:

Species : Mouse
 Assessment : The product is a skin sensitiser, sub-category 1B.

Germ cell mutagenicity**Components:****nitrapyrin (ISO):**

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

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

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

Polybutene:

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

2,3,4,5,6-Pentachloropyridine:

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

3-Chloro-6-(trichloromethyl)pyridine:

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

1,2-benzisothiazol-3(2H)-one:

Germ cell mutagenicity- Assessment : Not mutagenic when tested in bacterial or mammalian systems.

Carcinogenicity**Components:****nitrapyrin (ISO):**

Carcinogenicity - Assessment : Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and

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unlikely to occur in humans.

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Carcinogenicity - Assessment : Contains naphthalene which has caused cancer in some laboratory animals., However, the relevance of this to humans is unknown.

Polybutene:

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

3-Chloro-6-(trichloromethyl)pyridine:

Carcinogenicity - Assessment : Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

Reproductive toxicity**Components:****nitrapyrin (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., Exposures having no effect on the mother should have no effect on the fetus., Did not cause birth defects in laboratory animals.

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Reproductive toxicity - Assessment : For similar material(s);, Did not cause birth defects or any other fetal effects in laboratory animals.

Polybutene:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction. For similar material(s);, Did not cause birth defects or any other fetal effects in laboratory animals.

2,3,4,5,6-Pentachloropyridine:

Reproductive toxicity - Assessment : Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

3-Chloro-6-(trichloromethyl)pyridine:

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., Exposures having no effect on the mother should have no effect on the fetus.

1,2-benzisothiazol-3(2H)-one:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction., In ani-

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essment mal studies, did not interfere with fertility.
Did not cause birth defects in laboratory animals.

STOT - single exposure**Product:**

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

Components:**Hydrocarbons, C10-C13, aromatics, <1% naphthalene:**

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

Polybutene:

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

Decyl alcohol, ethoxylated, phosphated, potassium salt:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

4,6-dichloro-2-trichloromethyl pyridine:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

Polyoxyethylene octyl ether phosphate potassium salt:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

2,3,4,5,6-Pentachloropyridine:

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

3-Chloro-6-(trichloromethyl)pyridine:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

1,2-benzisothiazol-3(2H)-one:

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

STOT - repeated exposure**Product:**

Assessment : Evaluation of available data suggests that this material is not

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an STOT-RE toxicant.

Repeated dose toxicity**Components:****nitrapyrin (ISO):**

Remarks : In animals, effects have been reported on the following organs:
Kidney.
Liver.
Blood.
Female reproductive organs.
Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

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

Polybutene:

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

Decyl alcohol, ethoxylated, phosphated, potassium salt:

Remarks : No relevant data found.

4,6-dichloro-2-trichloromethyl pyridine:

Remarks : No relevant data found.

Polyoxyethylene octyl ether phosphate potassium salt:

Remarks : No relevant data found.

2,3,4,5,6-Pentachloropyridine:

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

3-Chloro-6-(trichloromethyl)pyridine:

Remarks : In animals, effects have been reported on the following organs:
Kidney.
Liver.
Blood.
Female reproductive organs.
Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

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1,2-benzisothiazol-3(2H)-one:

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

Aspiration toxicity**Product:**

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

Components:**nitrapyrin (ISO):**

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

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

May be fatal if swallowed and enters airways.

Polybutene:

May be fatal if swallowed and enters airways.

Decyl alcohol, ethoxylated, phosphated, potassium salt:

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

4,6-dichloro-2-trichloromethyl pyridine:

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

Polyoxyethylene octyl ether phosphate potassium salt:

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

2,3,4,5,6-Pentachloropyridine:

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

SECTION 12: Ecological information**12.1 Toxicity****Components:****nitrapyrin (ISO):**

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 3,4 - 7,9 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203 or Equivalent

LC50 (Rainbow trout (Oncorhynchus mykiss)): 4 mg/l
Exposure time: 96 h
Test Type: static test

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- Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 2,2 mg/l
Exposure time: 48 h
Test Type: flow-through test
- Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 1,7 mg/l
End point: Growth rate inhibition
Exposure time: 72 h
- Toxicity to fish (Chronic toxicity) : NOEC: 2,87 mg/l
Exposure time: 34 d
Species: Fathead minnow (Pimephales promelas)
- Toxicity to soil dwelling organisms : LC50: 209 mg/kg
Exposure time: 15 d
End point: survival
Species: Eisenia fetida (earthworms)
- Toxicity to terrestrial organisms : Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).
Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm).
- oral LD50: 2708 mg/kg bodyweight.
Species: Anas platyrhynchos (Mallard duck)
- dietary LC50: 1466 mg/kg diet.
Species: Anas platyrhynchos (Mallard duck)
- dietary LC50: 820 mg/kg diet.
Species: Coturnix japonica (Japanese quail)
- oral LD50: > 100 µg/bee
Exposure time: 48 h
Species: Apis mellifera (bees)
- contact LD50: > 100 µg/bee
Exposure time: 48 h
Species: Apis mellifera (bees)

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Toxicity to fish : Remarks: For similar material(s):
Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

EC50 (Oncorhynchus mykiss (rainbow trout)): 3,6 mg/l
Exposure time: 96 h
Remarks: For similar material(s):

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Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,1 mg/l
Exposure time: 48 h
Remarks: For similar material(s):

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 7,9 mg/l
Exposure time: 72 h
Remarks: For similar material(s):

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Polybutene:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 1.000 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Oncorhynchus mykiss (rainbow trout)): > 10.000 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1.000 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202 or Equivalent

2,3,4,5,6-Pentachloropyridine:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0,47 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 4 mg/l
End point: Growth rate inhibition
Exposure time: 96 h
Test Type: static test

Ecotoxicology Assessment

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

3-Chloro-6-(trichloromethyl)pyridine:

Toxicity to fish : Remarks: Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

(Bluegill sunfish (Lepomis macrochirus)): 3,4 - 7,9 mg/l
Exposure time: 96 h
Test Type: Static
Method: OECD Test Guideline 203

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- Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 2,2 mg/l
Exposure time: 48 h
Test Type: flow-through test
- Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 1,7 mg/l
End point: Growth rate inhibition
Exposure time: 72 h
- Toxicity to fish (Chronic toxicity) : 2,87 mg/l
Exposure time: 34 d
Species: Fathead minnow (Pimephales promelas)
- Toxicity to soil dwelling organisms : LC50: 209 mg/kg
Exposure time: 15 d
End point: survival
Species: Eisenia fetida (earthworms)
- Toxicity to terrestrial organisms : oral LD50: 2.708 mg/kg
Species: Anas platyrhynchos (Mallard duck)
Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).
- dietary LC50: 1466 mg/kg diet.
Species: Anas platyrhynchos (Mallard duck)
Remarks: Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm).
- dietary LC50: 820 ppm
Species: Coturnix japonica (Japanese quail)
- 1,2-benzisothiazol-3(2H)-one:**
- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1,9 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203 or Equivalent
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3,7 mg/l
Exposure time: 48 h
Test Type: flow-through test
Method: OECD Test Guideline 202 or Equivalent
- LC50 (Mysid shrimp (Mysidopsis bahia)): 1,9 mg/l
Exposure time: 96 h
- Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0,8 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201 or Equivalent
- NOEC (Pseudokirchneriella subcapitata (green algae)): 0,21 mg/l

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End point: Growth rate
 Exposure time: 72 h
 Test Type: static test
 Method: OECD Test Guideline 201 or Equivalent

ErC50 (diatom Skeletonema costatum): 0,36 mg/l
 Exposure time: 72 h
 Test Type: static test
 Method: OECD Test Guideline 201 or Equivalent

NOEC (diatom Skeletonema costatum): 0,15 mg/l
 End point: Growth rate
 Exposure time: 72 h
 Test Type: static test
 Method: OECD Test Guideline 201 or Equivalent

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (Bacteria (active sludge)): 28,52 mg/l
 Exposure time: 3 h
 Test Type: Respiration inhibition of activated sludge

12.2 Persistence and degradability**Components:****nitrapyrin (ISO):**

Biodegradability : Remarks: Chemical degradation (hydrolysis) is expected in the environment within days to weeks.
 Degradation is expected in the soil environment within days to weeks.

ThOD : 0,97 kg/kg

Stability in water : Test Type: Hydrolysis
 Degradation half life (half-life): 186 h (25 °C)
 pH: 5

Test Type: Hydrolysis
 Degradation half life (half-life): 173 - 233 h (25 °C)
 pH: 7

Test Type: Hydrolysis
 Degradation half life (half-life): 129 h (25 °C)
 pH: 9

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Biodegradability : Remarks: For similar material(s):
 Biodegradation may occur under aerobic conditions (in the presence of oxygen).
 Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these re-

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sults do not necessarily mean that the material is not biodegradable under environmental conditions.

Polybutene:

Biodegradability : Result: Readily biodegradable.
Remarks: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Biodegradation: 93,9 %
Exposure time: 28 d
Method: OECD Test Guideline 310
Remarks: 10-day Window: Pass

2,3,4,5,6-Pentachloropyridine:

ThOD : 0,64 kg/kg

3-Chloro-6-(trichloromethyl)pyridine:

Biodegradability : Remarks: Chemical degradation (hydrolysis) is expected in the environment within days to weeks.
Degradation is expected in the soil environment within days to weeks.

ThOD : 0,97 mg/g

Stability in water : Degradation half life (half-life): 186 h (25 °C)
pH: 5
Method: Hydrolysis

Degradation half life (half-life): 173 - 233 h (25 °C)
pH: 7
Method: Hydrolysis

Degradation half life (half-life): 129 h (25 °C)
pH: 9
Method: Hydrolysis

1,2-benzisothiazol-3(2H)-one:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 24 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent
Remarks: Abiotic degradation: The material is rapidly degradable by abiotic means.

12.3 Bioaccumulative potential**Components:****nitrapyrin (ISO):**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Exposure time: 30 d

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Bioconcentration factor (BCF): < 85
Method: Measured

Partition coefficient: n-octanol/water : log Pow: 3,324
Method: Measured
Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Partition coefficient: n-octanol/water : Remarks: No data available for this product.
For similar material(s):
Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

Polybutene:

Partition coefficient: n-octanol/water : log Pow: 2,89
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

4,6-dichloro-2-trichloromethyl pyridine:

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

2,3,4,5,6-Pentachloropyridine:

Partition coefficient: n-octanol/water :

log Pow: 3,53
Method: Measured
Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

3-Chloro-6-(trichloromethyl)pyridine:

Bioaccumulation : Species: Bluegill sunfish (*Lepomis macrochirus*)
Exposure time: 30 d
Bioconcentration factor (BCF): < 85
Method: Measured

1,2-benzisothiazol-3(2H)-one:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 3,2
Method: Calculated.

Partition coefficient: n-octanol/water : log Pow: 1,19
Method: OECD Test Guideline 117 or Equivalent
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

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12.4 Mobility in soil**Components:****nitrapyrin (ISO):**

Distribution among environmental compartments : Koc: 321
Method: Measured
Remarks: Potential for mobility in soil is medium (Koc between 150 and 500).

Stability in soil : Dissipation time: 3 - 35 d

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

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

Polybutene:

Distribution among environmental compartments : Koc: 43,79
Method: Estimated.
Remarks: For similar material(s):
Potential for mobility in soil is very high (Koc between 0 and 50).

4,6-dichloro-2-trichloromethyl pyridine:

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

1,2-benzisothiazol-3(2H)-one:

Distribution among environmental compartments : Koc: 104
Method: Estimated.
Remarks: Potential for mobility in soil is high (Koc between 50 and 150).
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.

12.5 Results of PBT and vPvB assessment**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:**nitrapyrin (ISO):**

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).

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Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

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).

Polybutene:

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Decyl alcohol, ethoxylated, phosphated, potassium salt:

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

4,6-dichloro-2-trichloromethyl pyridine:

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Polyoxyethylene octyl ether phosphate potassium salt:

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

2,3,4,5,6-Pentachloropyridine:

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).

3-Chloro-6-(trichloromethyl)pyridine:

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).

1,2-benzisothiazol-3(2H)-one:

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

12.6 Other adverse effects**Product:**

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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Components:**nitrapyrin (ISO):**

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

Hydrocarbons, C10-C13, aromatics, <1% naphthalene:

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

Polybutene:

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

Decyl alcohol, ethoxylated, phosphated, potassium salt:

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

4,6-dichloro-2-trichloromethyl pyridine:

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

Polyoxyethylene octyl ether phosphate potassium salt:

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

2,3,4,5,6-Pentachloropyridine:

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

1,2-benzisothiazol-3(2H)-one:

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

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Product : 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 identifica-

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tion and disposal methods in compliance with applicable regulations.

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

SECTION 14: Transport information
14.1 UN number

UNRTDG : UN 3082

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

UNRTDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Nitrapyrin)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Nitrapyrin)

IATA : Environmentally hazardous substance, liquid, n.o.s.
(Nitrapyrin)

14.3 Transport hazard class(es)

UNRTDG : 9

IMDG : 9

IATA : 9

14.4 Packing group

UNRTDG
Packing group : III
Labels : 9

IMDG
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Remarks : Stowage category A

IATA (Cargo)
Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA (Passenger)
Packing instruction (passenger aircraft) : 964

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Packing instruction (LQ) : Y964
 Packing group : III
 Labels : Miscellaneous

14.5 Environmental hazards**IMDG**

Marine pollutant : yes(Nitrapyrin)

14.6 Special precautions for user

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L 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 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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	E2	ENVIRONMENTAL HAZARDS
	34	Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

The mixture is evaluated within the frame of the provisions of Regulation (EC) No. 1107/2009.

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Refer to the label for exposure assessment information.

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. Classification was done in accordance with UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Purple Book and complies with the Regulations for Hazardous Chemical Agents, 2021.

Full text of H-Statements

H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H331	:	Toxic if inhaled.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
ZA OEL	:	South Africa. The Regulations for Hazardous Chemical Agents, Occupational Exposure Limits
ZA OEL / OEL-RL	:	Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)
ZA OEL / OEL- RL STEL/C	:	Occupational Exposure Limit Restricted limit - Short term occupational exposure limits / ceiling limits

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships car-

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rying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECL - 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

Further information**Classification of the mixture:**

Skin Sens. 1	H317
Eye Dam. 1	H318
Aquatic Chronic 2	H411

Classification procedure:

Calculation method
Calculation method
Calculation method

Product code: GF-4364

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