SAFETY DATA SHEET

Belkar Flex, EC

Version	Revision Date:	SDS Number:	Date of last issue: -
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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 Ukraine and may not meet the regulatory requirements in other countries.

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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Belkar Flex, EC

Manufacturer or supplier's details

COMPANY IDENTIFICATION

Manufacturer/importer : “DUPONT UKRAINE” LLC
1 Petra Sahaidachnoho Street
Kyiv 04070 (KIEV)
UKRAINE

E-mail address : SDS@corteva.com

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

Local Emergency Contact : +38 048 778 6030

Recommended use of the chemical and restrictions on use

Recommended use : End use herbicide product

2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation : Category 2

Serious eye damage : Category 1

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

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS-Labelling

Hazard pictograms :

Signal word : Danger

Hazard statements : H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P261 Avoid breathing mist/vapours/spray.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.

Disposal:

P501 Dispose of contents/container in accordance with applicable regulations.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components

Chemical name	CAS-No.	Classification	MAC value mg/m3 / TSEL value	Concentration (% w/w)
Picloram	1918-02-1	Acute Tox.5; H303 Aquatic Acute1; H400 Aquatic Chronic1; H410	MAC: 2 mg/m3 Danger class 3 Data Source: UA OEL MPC-STEL: 2 mg/m3 Class 3 - Moderately dangerous Data Source: RU OEL	5,14
Aminopyralid	150114-71-9	Eye Dam.1; H318 Aquatic	No data available	3,38

		Acute1; H400 Aquatic Chronic1; H410		
Halauxifen-methyl	943831-98-9	Aquatic Acute1; H400 Aquatic Chronic1; H410	No data available	1,05
N,N-Dimethyldecan-1-amide	14433-76-2	Acute Tox.5; H303 Acute Tox.5; H313 Skin Irrit.2; H315 Eye Irrit.2A; H319 STOT SE3; H335 (Respiratory system) Aquatic Acute2; H401 Aquatic Chronic2; H411	No data available	>= 40 - < 50
Amides, coco, N-[3-(dimethylamino)propyl]	68140-01-2	Acute Tox.4; H302 Skin Corr.1B; H314 Eye Dam.1; H318 Aquatic Acute1; H400 Aquatic Chronic2; H411	No data available	>= 10 - < 20
Dipropylene glycol monomethyl ether	34590-94-8	Flam. Liq.4; H227	No data available	>= 3 - < 10
Propylene glycol	57-55-6		MAC: 7 mg/m3 Danger class 3 Data Source: UA OEL MPC-STEL: 7 mg/m3 Class 3 - Moderately dangerous Data Source: RU OEL	>= 1 - < 3

For explanation of abbreviations see section 16.

4. FIRST AID MEASURES

If inhaled	:	Move person to fresh air; if effects occur, consult a physician.
In case of skin contact	:	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical attention if symptoms occur or irritation persists. Wash clothing before reuse. Suitable emergency safety shower facility should be immediately available.
In case of eye contact	:	Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.
If swallowed	:	No emergency medical treatment necessary.
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	:	Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Flammable properties

Flash point	:	> 100 °C Method: Pensky-Martens Closed Cup ASTM D 93
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Suitable extinguishing media	:	Water spray Alcohol-resistant foam
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Exposure to combustion products may be a hazard to health.
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	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment	:	Wear self-contained breathing apparatus for firefighting if nec-

for firefighters	essary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental precautions	:	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.
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). See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Advice on safe handling	:	Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice. Smoking, eating and drinking should be prohibited in the application area. 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. Keep in properly labelled containers. Store in accordance with the particular national regulations.
Materials to avoid	:	Strong oxidizing agents
Packaging material	:	Unsuitable material: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Dipropylene glycol monomethyl ether	34590-94-8	TWA	10 ppm	Dow IHG
		STEL	30 ppm	Dow IHG
		TWA	50 ppm 308 mg/m3	2000/39/EC
Picloram	1918-02-1	MPC-STEL (aerosol)	2 mg/m3	RU OEL
	Further information: Class 3 - Moderately dangerous			
		MAC (aerosol)	2 mg/m3	UA OEL
	Further information: Danger class 3			
Aminopyralid	150114-71-9	TWA	10 mg/m3	Dow IHG
Propylene glycol	57-55-6	MPC-STEL (mixture of vapour and aerosol)	7 mg/m3	RU OEL
	Further information: Class 3 - Moderately dangerous			
		MAC (aerosol and vapour)	7 mg/m3	UA OEL
	Further information: Danger class 3			

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. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Hand protection

Remarks : 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"). Poly-

vinyl chloride ("PVC" or "vinyl"). Viton. When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, 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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	brown
Odour	:	mild
Odour Threshold	:	No data available
pH	:	3,36 (22,2 °C) Concentration: 1,04 % No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 100 °C Method: Pensky-Martens Closed Cup ASTM D 93
Self-ignition	:	239 °C Method: EC Method A15

Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Density	:	0,946 g/mL (20 °C) Method: OECD Test Guideline 109
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Viscosity		
Viscosity, dynamic	:	28,8 mPa,s (20 °C) Method: OECD Test Guideline 114 13,7 mPa,s (40 °C) Method: OECD Test Guideline 114
Explosive properties	:	Method: EC Method A.14 Not explosive
Oxidizing properties	:	Method: EC Method A.21 no oxidising properties
Surface tension	:	23,5 mN/m, EC Method A5

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	:	Strong acids Strong bases
Hazardous decomposition products	:	Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	LD50 (Rat, female): > 2.000 mg/kg Method: OECD Test Guideline 423

Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): 5,91 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, female): > 2.000 mg/kg
Method: OECD Test Guideline 402
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Components:

Picloram:

Acute oral toxicity : LD50 (Rat, male): > 5.000 mg/kg
Remarks: Signs and symptoms of excessive exposure may include:
Convulsions.

LD50 (Rat, female): 4.012 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 0,035 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Symptoms: No deaths occurred at this concentration.
Remarks: Maximum attainable concentration.

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

Aminopyralid:

Acute oral toxicity : LD50 (Rat, male and female): > 5.000 mg/kg

Acute inhalation toxicity : Remarks: No adverse effects are anticipated from single exposure to dust.
Based on the available data, narcotic effects were not observed.
Based on the available data, respiratory irritation was not observed.

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 inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg

Halauxifen-methyl:

Acute oral toxicity : LD50 (Rat, female): > 5.000 mg/kg

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg

N,N-Dimethyldecan-1-amide:

Acute oral toxicity : LD50 (Rat, male and female): > 2.000 - 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 3,551 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Maximum attainable concentration.

Acute dermal toxicity : LD50 (Rat): > 2.000 - 5.000 mg/kg

Amides, coco, N-[3-(dimethylamino)propyl]:

Acute oral toxicity : LD50 (Rat): > 1.000 mg/kg
Remarks: Based on information for a similar material:

Dipropylene glycol monomethyl ether:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 3,35 mg/l
Exposure time: 7 h
Test atmosphere: vapour
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): 9.510 mg/kg

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

Skin corrosion/irritation

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation

Components:

Aminopyralid:

Result : No skin irritation

N,N-Dimethyldecan-1-amide:

Result : Skin irritation

Amides, coco, N-[3-(dimethylamino)propyl]:

Result : Causes burns.

Dipropylene glycol monomethyl ether:

Species : Rabbit
Result : No skin irritation

Propylene glycol:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Product:

Result : Corrosive
Method : OECD Test Guideline 492

Components:

Aminopyralid:

Result : Corrosive

N,N-Dimethyldecan-1-amide:

Result : Eye irritation

Amides, coco, N-[3-(dimethylamino)propyl]:

Result : Corrosive

Dipropylene glycol monomethyl ether:

Species : Rabbit
Result : No eye irritation

Propylene glycol:

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitisation

Product:

Test Type : Local lymph node assay
Species : Mouse
Method : OECD Test Guideline 429

Components:

Picloram:

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

Aminopyralid:

Assessment : Does not cause skin sensitisation.
Remarks : Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

Halauxifen-methyl:

Remarks : Did not demonstrate the potential for contact allergy in mice.

Remarks : For respiratory sensitization:
No relevant data found.

N,N-Dimethyldecan-1-amide:

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

Remarks : For respiratory sensitization:
No relevant data found.

Amides, coco, N-[3-(dimethylamino)propyl]:

Remarks : Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

Dipropylene glycol monomethyl ether:

Species : human
Result : Does not cause skin sensitisation.

Propylene glycol:

Species : human
Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Components:

Picloram:

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

Aminopyralid:

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

Halauxifen-methyl:

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

N,N-Dimethyldecan-1-amide:

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

Amides, coco, N-[3-(dimethylamino)propyl]:

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

Dipropylene glycol monomethyl ether:

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

Propylene glycol:

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

Carcinogenicity

Components:

Picloram:

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

Aminopyralid:

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

Halauxifen-methyl:

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

Dipropylene glycol monomethyl ether:

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

Propylene glycol:

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

Reproductive toxicity

Components:

Picloram:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction.
Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Aminopyralid:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction.
Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Halauxifen-methyl:

Reproductive toxicity - Assessment : For similar active ingredient(s)., Halauxifen., 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.

N,N-Dimethyldecan-1-amide:

Reproductive toxicity - Assessment : For similar material(s):, Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Did not cause birth defects in laboratory animals.

Dipropylene glycol monomethyl ether:

Reproductive toxicity - Assessment : For similar material(s):, In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
Did not cause birth defects or any other fetal effects 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 labora-

tory animals.

STOT - single exposure

Product:

Exposure routes	:	Inhalation
Target Organs	:	Respiratory system
Assessment	:	May cause respiratory irritation.

Components:

Aminopyralid:

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

Halauxifen-methyl:

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

N,N-Dimethyldecan-1-amide:

Assessment	:	May cause respiratory irritation.

Amides, coco, N-[3-(dimethylamino)propyl]:

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

Dipropylene glycol monomethyl ether:

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.

STOT - repeated exposure

Product:

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

Repeated dose toxicity

Components:

Picloram:

Remarks	:	In animals, effects have been reported on the following organs: Liver. Gastrointestinal tract.

Aminopyralid:

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

Halauxifen-methyl:

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

N,N-Dimethyldecan-1-amide:

Remarks : For similar material(s):
In animals, effects have been reported on the following organs:
Eye.
Liver.
Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

Amides, coco, N-[3-(dimethylamino)propyl]:

Remarks : No relevant data found.

Dipropylene glycol monomethyl ether:

Remarks : Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

Propylene glycol:

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

Aspiration toxicity

Components:

Picloram:

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

Aminopyralid:

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

Halauxifen-methyl:

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

N,N-Dimethyldecan-1-amide:
Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

Amides, coco, N-[3-(dimethylamino)propyl]:
Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

Dipropylene glycol monomethyl ether:
Based on physical properties, not likely to be an aspiration hazard.

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0,015 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 ErC50 (Myriophyllum spicatum): 0,00817 mg/l Exposure time: 14 d NOEC (Myriophyllum spicatum): 0,00141 mg/l Exposure time: 14 d

Components:

Picloram:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 8,8 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 44,2 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 78,7 mg/l End point: Growth rate inhibition Exposure time: 72 h EC50 (Lemna gibba): 102 mg/l Exposure time: 14 d Test Type: Growth inhibition ErC50 (Myriophyllum spicatum): 0,558 mg/l Exposure time: 14 d

NOEC (Myriophyllum spicatum): 0,0095 mg/l
Exposure time: 14 d

M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	(Rainbow trout (Oncorhynchus mykiss)): 0,55 mg/l Exposure time: 70 d Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 6,79 mg/l End point: number of offspring Exposure time: 21 d Test Type: static test LOEC (Daphnia magna (Water flea)): 13,5 mg/l End point: number of offspring Exposure time: 21 d Test Type: static test MATC (Maximum Acceptable Toxicant Level) (Daphnia magna (Water flea)): 9,57 mg/l End point: number of offspring Exposure time: 21 d Test Type: static test
M-Factor (Chronic aquatic toxicity)	:	10
Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h
Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): > 5.000 mg/kg Exposure time: 14 d End point: survival
Toxicity to terrestrial organisms	:	oral LD50 (Anas platyrhynchos (Mallard duck)): > 2510 mg/kg bodyweight. Exposure time: 14 d dietary LC50 (Anas platyrhynchos (Mallard duck)): > 5000 mg/kg diet. contact LD50 (Apis mellifera (bees)): > 100 micrograms/bee Exposure time: 48 h oral LD50 (Apis mellifera (bees)): > 74 micrograms/bee Exposure time: 48 d

Ecotoxicology Assessment

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

Aminopyralid:

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 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 or Equivalent EC50 (eastern oyster (Crassostrea virginica)): > 89 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	:	ErC50 (diatom Navicula sp.): 18 mg/l Exposure time: 72 h EC50 (Lemna gibba): > 88 mg/l Exposure time: 14 d ErC50 (Myriophyllum spicatum): 0,363 mg/l Exposure time: 14 d NOEC (Myriophyllum spicatum): 0,0639 mg/l Exposure time: 14 d
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 1,36 mg/l End point: growth Exposure time: 36 d Test Type: flow-through test NOEC (Cyprinodon variegatus (sheepshead minnow)): 0,1 mg/l
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (water flea Daphnia magna): 100 mg/l
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to microorganisms	:	(Bacteria): > 1.000 mg/l
Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): > 1.000 mg/kg Exposure time: 14 d
Toxicity to terrestrial organisms	:	Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg)., Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm). dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5620 mg/kg diet. oral LD50 (Colinus virginianus (Bobwhite quail)): > 2250 mg/kg bodyweight. oral LD50 (Apis mellifera (bees)): > 120 micrograms/bee

Exposure time: 48 h

contact LD50 (Apis mellifera (bees)): > 100 micrograms/bee
Exposure time: 48 h

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Halauxifen-methyl:

Toxicity to fish : Remarks: Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

LC50 (Rainbow trout (Oncorhynchus mykiss)): 2,01 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Pimephales promelas (fathead minnow)): > 3,22 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,12 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)): > 3,0 mg/l
Exposure time: 96 h

ErC50 (Myriophyllum spicatum): 0,000393 mg/l
End point: Growth rate inhibition
Exposure time: 14 d

M-Factor (Acute aquatic toxicity) : 1.000

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0,259 mg/l
End point: Other
Test Type: flow-through test

NOEC (Cyprinodon variegatus (sheepshead minnow)): 0,00272 mg/l
Exposure time: 36 d
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0,484 mg/l
End point: number of offspring
Exposure time: 21 d
Test Type: semi-static test

M-Factor (Chronic aquatic toxicity) : 1.000

Toxicity to microorganisms : EC50 (activated sludge): > 981 mg/l
Exposure time: 1 d

Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): > 1.000 mg/kg Exposure time: 14 d End point: mortality
Toxicity to terrestrial organisms	:	Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg)., Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm). dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5.620 ppm Exposure time: 5 d Method: Other guidelines dietary LC50 (Anas platyrhynchos (Mallard duck)): > 5.620 ppm Exposure time: 5 d Method: Other guidelines oral LD50 (Colinus virginianus (Bobwhite quail)): > 2250 mg/kg bodyweight. End point: mortality contact LD50 (Apis mellifera (bees)): > 98,1 µg/bee Exposure time: 48 h End point: mortality oral LD50 (Apis mellifera (bees)): > 108 µg/bee Exposure time: 48 h End point: mortality

Ecotoxicology Assessment

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

N,N-Dimethyldecan-1-amide:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 14,8 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 7,7 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 16,06 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0,079 mg/l Exposure time: 21 d

Ecotoxicology Assessment

Acute aquatic toxicity	:	Toxic to aquatic life.

Amides, coco, N-[3-(dimethylamino)propyl]:

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	:	EC50 (Daphnia magna (Water flea)): < 1 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): 0,36 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: For similar material(s): EC10 (Desmodesmus subspicatus (green algae)): 0,1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: For similar material(s):
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): 570 mg/l Exposure time: 16 h

Dipropylene glycol monomethyl ether:

Toxicity to fish	:	LC50 (Poecilia reticulata (guppy)): > 1.000 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 or Equivalent
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 1.919 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 or Equivalent LC50 (Crangon crangon (shrimp)): > 1.000 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 202 or Equivalent LC50 (copepod Acartia tonsa): 2.070 mg/l Exposure time: 48 h Test Type: static test Method: ISO TC147/SC5/WG2
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 969 mg/l End point: Biomass Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 201 or Equivalent
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): > 0,5 mg/l Exposure time: 22 d Test Type: flow-through test

Method: OECD Test Guideline 211 or Equivalent

LOEC (Daphnia magna (Water flea)): > 0,5 mg/l
Exposure time: 22 d
Test Type: flow-through test
Method: OECD Test Guideline 211 or Equivalent

MATC (Maximum Acceptable Toxicant Level) (Daphnia magna (Water flea)): > 0,5 mg/l
Exposure time: 22 d
Test Type: flow-through test
Method: OECD Test Guideline 211 or Equivalent

Toxicity to microorganisms : EC10 (Pseudomonas putida): 4.168 mg/l
Exposure time: 18 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

Persistence and degradability

Components:

Picloram:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1,95 %
Exposure time: 28 d
Method: OECD Test Guideline 301

Remarks: 10-day Window: Fail

Stability in water : Test Type: Hydrolysis
Degradation half life (half-life): > 1,8 yr (45 °C) pH: 5 - 9
Method: Measured

Photodegradation : Test Type: Half-life (direct photolysis)

Test Type: Half-life (indirect photolysis)
Sensitiser: OH radicals
Concentration: 1.500.000 1/cm3
Rate constant: 8,5E-13 cm3/s

Aminopyralid:

Biodegradability : 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.

Result: Not readily biodegradable.
Biodegradation: 19,5 %
Exposure time: 28 d
Method: OECD Test Guideline 301
Remarks: 10-day Window: Fail

Stability in water : Test Type: Hydrolysis
Method: Stable

Test Type: Hydrolysis
Method: Stable

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitiser: OH radicals
Concentration: 1.500.000 1/cm3
Rate constant: 1,6646E-12 cm3/s
Method: Estimated.

Halauxifen-methyl:

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

Biodegradation: 7,7 %
Exposure time: 28 d
Method: OECD Test Guideline 310 or Equivalent
Remarks: 10-day Window: Not applicable

N,N-Dimethyldecan-1-amide:

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

Result: Readily biodegradable.
Biodegradation: 66,12 %
Exposure time: 11 d
Method: OECD Test Guideline 301B or Equivalent
Remarks: 10-day Window: Pass

Amides, coco, N-[3-(dimethylamino)propyl]:

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

Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
Remarks: 10-day Window: Pass

Biochemical Oxygen Demand (BOD) : > 60 %
Incubation time: 28 d

Dipropylene glycol monomethyl ether:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 75 %
Exposure time: 28 d
Remarks: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

aerobic
Method: OECD Test Guideline 301F or Equivalent
Remarks: 10-day Window: Pass

Biochemical Oxygen Demand (BOD) : 0 %
Incubation time: 5 d

0 %
Incubation time: 10 d

31.6 %
Incubation time: 20 d

Chemical Oxygen Demand (COD) : 2,02 kg/kg
Method: Dichromate

ThOD : 2,06 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitiser: OH radicals
Rate constant: 5,00E-05 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.

Bioaccumulative potential

Components:

Picloram:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 0,54

Partition coefficient: n-octanol/water : log Pow: -1,92
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Aminopyralid:

Partition coefficient: n-octanol/water :

log Pow: -2,87
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Halauxifen-methyl:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 233
Exposure time: 42 d
Temperature: 21,8 °C
Concentration: 0,00194 mg/l

Partition coefficient: n-octanol/water	:	log Pow: 3,76 Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

N,N-Dimethyldecan-1-amide:

Partition coefficient: n-octanol/water	:	log Pow: 3,44 Method: Estimated. Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Amides, coco, N-[3-(dimethylamino)propyl]:

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

Dipropylene glycol monomethyl ether:

Partition coefficient: n-octanol/water	:	log Pow: 1,01 Method: Measured 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).

Mobility in soil

Components:

Picloram:

Distribution among environmental compartments	:	Koc: 35 Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).
Stability in soil	:	Test Type: aerobic degradation Dissipation time: 167 - 513 h Method: Measured Test Type: anaerobic degradation Dissipation time: > 300 h Method: Measured

Aminopyralid:

Distribution among environmental compartments	:	Koc: 14 Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

Halauxifen-methyl:

Distribution among environmental compartments : Koc: 5684
Remarks: Expected to be relatively immobile in soil (Koc > 5000).

N,N-Dimethyldecan-1-amide:

Distribution among environmental compartments : Koc: 351 - 630
Remarks: Potential for mobility in soil is medium (Koc between 150 and 500).

Amides, coco, N-[3-(dimethylamino)propyl]:

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

Dipropylene glycol monomethyl ether:

Distribution among environmental compartments : Koc: 0,28
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).

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).

Other adverse effects

Components:

Picloram:

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.

Aminopyralid:

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.

Halauxifen-methyl:

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.

N,N-Dimethyldecan-1-amide:

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.

Amides, coco, N-[3-(dimethylamino)propyl]:

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.

Dipropylene glycol monomethyl ether:

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 : Regulation: (Update: 11/22/2010 KS 11/25/2010 LMK)
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.

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 other-

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

14. TRANSPORT INFORMATION

ADR

UN number	:	UN 1760
Proper shipping name	:	CORROSIVE LIQUID, N.O.S. (Amides, coco, N-[3-(dimethylamino)propyl])
Class	:	8
Packing group	:	II
Labels	:	8
Hazard Identification Number	:	80
Tunnel restriction code	:	(E)

IATA-DGR

UN/ID No.	:	UN 1760
Proper shipping name	:	Corrosive liquid, n.o.s. (Amides, coco, N-[3-(dimethylamino)propyl])
Class	:	8
Packing group	:	II
Labels	:	Corrosive
Packing instruction (cargo aircraft)	:	855
Packing instruction (passenger aircraft)	:	851

IMDG-Code

UN number	:	UN 1760
Proper shipping name	:	CORROSIVE LIQUID, N.O.S. (Amides, coco, N-[3-(dimethylamino)propyl], Halauxifen-methyl, Picloram)
Class	:	8
Packing group	:	II
Labels	:	8
EmS Code	:	F-A, S-B
Marine pollutant	:	no
Remarks	:	Stowage category B

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

Not applicable for product as supplied.

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.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

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 H-Statements

H227	Combustible liquid.
H302	Harmful if swallowed.
H303	May be harmful if swallowed.
H313	May be harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic 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
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
Dow IHG	:	Dow Industrial Hygiene Guideline
RU OEL	:	SanPiN 1.2.3685-21 Table 2.1, Table 2.8, Table 2.16 & Table 2.17 Maximum permissible concentrations (MPC) in the air of the working area
UA OEL	:	Ukraine OEL - Order on Approval of the Hygienic Regulations of Chemicals in the Air of the Working Zone
2000/39/EC / TWA	:	Limit Value - eight hours
Dow IHG / TWA	:	Time Weighted Average (TWA):
Dow IHG / STEL	:	Short term exposure limit
Dow IHG / TWA	:	Time weighted average
RU OEL / MPC-STEL	:	Maximum Permissible Concentration - Short Term Exposure
UA OEL / MAC	:	Maximum allowable concentration

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; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; 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; 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

Product code: GF-4021

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.

UA / 6N