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

1.1 Product identifier

Trade name : Floranid® Summer

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

Use of the : Fertilizer Substance/Mixture

1.3 Details of the supplier of the safety data sheet

Company	: COMPO EXPERT GmbH Krögerweg 10 D-48155 Münster
Telephone	: +49 (0) 251 29 79 81 - 000
Telefax	: +49 (0) 251 29 79 81 - 111
E-mail address of person responsible for the SDS	: info@compo-expert.com

1.4 Emergency telephone number

GBK GmbH - Global Regulatory Compliance - 24h Telephone: +49 (0) 6132 - 84463

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard statements	:		Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Supplemental Hazard Statements	: E	EUH210	Safety data sheet available on request.
Further information	:		ardous Substances" legislation (rordnung) appendix I, No. 5 (Ammonium C III)



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2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature

: blend NPK-Fertilizer on basis: N,N"-(isobutylidene)diurea, crotonylidenediurea, ammonium nitrate, potassium salt, ammonium salts, phosphates, magnesium salts, calcium salts, other nutrients. potassium nitrate

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
ammonium nitrate	6484-52-2 229-347-8 01-2119490981-27- XXXX	Ox. Sol. 3; H272 Eye Irrit. 2; H319	>= 10 - < 45
potassium nitrate	7757-79-1 231-818-8 01-2119488224-35- XXXX	Ox. Sol. 3; H272	>= 10 - <= 50



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iron sulphate	7720-78-7	Acute Tox. 4; H302 Eye Irrit. 2; H319	>= 0,5 - <= 1,5
	231-753-5	Skin Irrit. 2; H315	
	01-2119513203-57-		
	XXXX	Acute toxicity	
		estimate	
		Acute oral toxicity:	
		500 mg/kg	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	: Wash hands with water as a precaution.
If inhaled	 Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Obtain medical attention. In case of lung irritation, first treatment with dexametason aerosol (spray).
In case of skin contact	: Wash off with plenty of water.
In case of eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	: Clean mouth with water and drink afterwards plenty of water. Call a physician immediately.
4.2 Most important symptoms	and effects, both acute and delayed
Symptoms	 Ingestion may provoke the following symptoms: Methaemoglobinemia Inhalation of decomposition products in high concentration may cause shortness of breath (lung oedema).

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Tr

: Treat symptomatically.

SECTION 5: Firefighting measures



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5.1 Extinguishing media	
Suitable extinguishing media	: Water
Unsuitable extinguishing media	: Foam Dry chemical Carbon dioxide (CO2) Sand
5.2 Special hazards arising from	the substance or mixture
Specific hazards during firefighting	 Can decompose at above 100 °C. Thermal decomposition products: Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, ammonia Isobutyraldehyd
5.3 Advice for firefighters	
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.
Further information	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
SECTION 6: Accidental releas	e measures
6.1 Personal precautions, protec	ive equipment and emergency procedures
Personal precautions	: Keep away from children.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system. Retain and dispose of contaminated wash water.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.

6.4 Reference to other sections

none

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	: Protect from contamination.
	Keep away from direct sunlight.
	Protect against heat.
	Protect from moisture.



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Advice on protection against : The product is not flammable. Keep away from sources of fire and explosion ignition - No smoking. Keep away from combustible materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Risk of explosion if heated under confinement. Hygiene measures : Wash hands before breaks and at the end of workday. 7.2 Conditions for safe storage, including any incompatibilities Requirements for storage : When stored loose do not mix with other fertilizers. Store well areas and containers away from other substances. Keep away from direct sunlight. Protect against heat. Protect from contamination. Protect from moisture. Storage class (TRGS 510) : 5.1C, Ammonium nitrate and ammonium nitrate containing preparations : Keep in a dry place. Dampness

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
iron sulphate	7720-78-7	TWA	1 mg/m3 (Iron)	GB EH40

Contains no substances with occupational exposure limit values.

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

Substance name	End Use	Exposure routes	Potential health effects	Value
ammonium nitrate	Workers	Inhalation	Long-term systemic effects	36 mg/m3
	Workers	Skin contact	Long-term systemic effects	5,12 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	2,56 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	8,9 mg/m3



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	Consumers	Skin contact, Ingestion	Long-term systemic effects	2,56 mg/kg bw/day	
potassium nitrate	Workers	Inhalation	Systemic effects	36,7 mg/m3	
	Workers	Skin contact	Systemic effects	20,8 mg/kg	
Remarks:	Exposure time	Exposure time: 1 d			
	Consumers	Ingestion	Systemic effects	12,5 mg/kg	
Remarks:	Exposure time	:1d			
	Consumers	Skin contact	Systemic effects	12,5 mg/kg	
Remarks:	Exposure time	:1d			
	Consumers	Inhalation	Systemic effects	10,9 mg/m3	
iron sulphate	Workers	Skin contact	Acute effects, systemic effects	2,8 mg/kg	
Remarks:	Exposure time: 24 h				
	Workers	Inhalation	Acute effects, systemic effects	9,9 mg/m3	
	Workers	Skin contact	Chronic effects, systemic effects	2,8 mg/kg	
Remarks:	Exposure time	: 24 h			
	Workers	Inhalation	Chronic effects, systemic effects	9,9 mg/m3	
	Consumers	Ingestion	Acute effects, systemic effects	1,4 mg/kg	
Remarks:	Exposure time	: 24 h			
	Consumers	Skin contact	Acute effects, systemic effects	1,4 mg/kg	
Remarks:	Exposure time	: 24 h			
	Consumers	Inhalation	Acute effects, systemic effects	2,5 mg/m3	
	Consumers	Ingestion	systemic effects, Chronic effects	1,4 mg/kg	



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Remarks:	Exposure time: 24 h					
	ConsumersSkin contactChronic effects, systemic effects1,4 mg/kg					
Remarks:	Exposure time: 24 h					
	Consumers	Inhalation	Chronic effects, systemic effects	2,5 mg/m3		

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

Substance name		Environmental Compartment	Value
ammonium nitrate		Sewage treatment plant	18 mg/l
potassium nitrate		Fresh water	0,45 mg/l
		Marine water	0,045 mg/l
		Ceiling Limit Value	4,5 mg/l
		Sewage treatment plant	18 mg/l
iron sulphate		Water	
Remarks: This produ		ict has no known ecotoxicological effects.	
		Behaviour in waste water treatment plants	2483 mg/l
		Fresh water sediment	246000 mg/kg
		Marine sediment	246000 mg/kg
		Soil	276000 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye protection

: In case of dust formation:

Tightly fitting safety goggles

Hand protection Material

: Gloves



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Skin and body protection :	No special protective equipment required.
Respiratory protection :	respiratory protection only if aerosol or dust is formed.
Environmental exposure contro	s
General advice :	Do not flush into surface water or sanitary sewer system. Retain and dispose of contaminated wash water.
SECTION 9: Physical and chemi	cal properties
9.1 Information on basic physical a	
Physical state	granular
Colour	various
Odour	odourless
Odour Threshold	No data available
рН	ca. 6,2, Concentration: 100 g/l (20 °C)
Melting point/range	No data available
Boiling point/boiling range	Not applicable
Flash point	Not relevant
Evaporation rate	Not applicable
Flammability (solid, gas)	The product is not flammable.
Upper explosion limit	Not applicable
Lower explosion limit	Not applicable
Vapour pressure	Not applicable
Relative vapour density	Not applicable
Bulk density	ca. 860 kg/m³
Solubility(ies) Water solubility	soluble



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Partition coefficient: n- octanol/water	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: > 130 °C To avoid thermal decomposition, do not overheat.
Viscosity Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive
Oxidizing properties	: Not considered an oxidizing substance

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed. Decomposes on heating.

10.3 Possibility of hazardous reactions

Hazardous reactions : Evolution of ammonia under influence of alkalies.

10.4 Conditions to avoid

Conditions to avoid	: Keep away from heat and sources of ignition.
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10.5 Incompatible materials

Materials to avoid : oxidizable substances Strong acids and strong bases

10.6 Hazardous decomposition products

Hazardous decomposition	: Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide,
products	ammonia
	Isobutyraldehyd



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SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 Acute toxicity Product: Acute oral toxicity : Remarks: No data available Health injuries are not known or expected under normal use. Acute dermal toxicity : Remarks: No data available Health injuries are not known or expected under normal use. **Components:** ammonium nitrate: : LD50 (Rat): > 2.950 mg/kg Acute oral toxicity Method: OECD Test Guideline 401 Acute inhalation toxicity : > 88,8 mg/lMethod: No information available. Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg Method: OECD Test Guideline 402 potassium nitrate: Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg Acute inhalation toxicity : LC50 (Rat): 0,527 mg/l Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg iron sulphate: : LD50 (Rat): > 2.000 mg/kg Acute oral toxicity Method: OECD Test Guideline 401 LD50 (Rat): 657 - 4.390 mg/kg Method: Calculation method Acute toxicity estimate: 500 mg/kg Method: Converted acute toxicity point estimate Acute inhalation toxicity : Remarks: This information is not available. Acute dermal toxicity : LD50 (Rat): > 1.992 mg/kg Method: Converted acute toxicity point estimate

Skin corrosion/irritation

Product:

Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006

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> Result: non-irritant Remarks: The product has not been tested. The information is derived from the properties of the individual components.

Components:

ammonium nitrate:

Species: Rabbit Method: OECD Test Guideline 404 Result: non-irritant

potassium nitrate:

Species: Rabbit Result: No skin irritation

iron sulphate:

Method: OECD Test Guideline 404 Result: Skin irritation Remarks: Irritating to skin and mucous membranes

Serious eye damage/eye irritation

Product:

Species: Rabbit Method: OECD Test Guideline 405 Result: non-irritant Remarks: The product was not tested. The statement was derived from products of similar structure and composition.

Components:

ammonium nitrate: Species: Rabbit Method: OECD Test Guideline 405 Result: Irritant

potassium nitrate:

Species: Rabbit Result: No eye irritation

iron sulphate:

Method: OECD Test Guideline 405 Result: Eye irritation

Respiratory or skin sensitisation

Product:

Result: non-sensitizing Remarks: The product has not been tested. The information is derived from the properties of the

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according to Regulation (EC) No. 1907/2006

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individual components.

Components:

ammonium nitrate: Result: Does not cause skin sensitisation.

potassium nitrate:

Result: non-sensitizing

iron sulphate:

Method: OECD TG 429 Result: Did not cause sensitisation on laboratory animals.

germ cell mutagenicity

Product:

Genotoxicity in vitro	: Remarks: No data available
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Components:

ammonium nitrate:		
Genotoxicity in vitro	:	Method: OECD Test Guideline 471
		Result: negative

potassium nitrate:

Genotoxicity in vitro : Remarks: No data available

Carcinogenicity

Product:

Remarks: Contains no ingredient listed as a carcinogen

Components:

ammonium nitrate: Species: Rat Remarks: Animal testing did not show any carcinogenic effects.

potassium nitrate:

Remarks: Did not show carcinogenic effects in animal experiments.

iron sulphate:

Carcinogenicity -	: Did not show carcinogenic, teratogenic or mutagenic effects in
Assessment	animal experiments.



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Reproductive toxicity <u>Product:</u> Effects on fertility	: Remarks: No toxicity to reproduction The product has not been tested. The information is derived from the properties of the individual components.
Components: ammonium nitrate: Effects on fertility	: Species: Rat Remarks: Animal testing did not show any effects on fertility.
Effects on foetal development	: Species: Rat Remarks: Did not show teratogenic effects in animal experiments.
potassium nitrate: Effects on fertility	: Remarks: No toxicity to reproduction
Effects on foetal development	: Remarks: Did not show teratogenic effects in animal experiments.

STOT - single exposure

Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

Remarks: The product has not been tested. The information is derived from the properties of the individual components.

Components:

potassium nitrate:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Remarks: The product has not been tested. The information is derived from the properties of the individual components.

Components:



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potassium nitrate:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

iron sulphate: Remarks: No known effect.

Repeated dose toxicity

Components:

ammonium nitrate: Species: Rat NOAEL: > 1.500 mg/kg Application Route: Oral Exposure time: 28 d

Species: Rat NOAEL: = 256 mg/kg Application Route: Oral Exposure time: 52 w Method: OECD Test Guideline 453

Species: Rat NOAEL: >= 185 mg/kg Application Route: by inhalation Exposure time: 2 w Method: Repeated Dose Inhalation Toxicity: 28-day or 14-day Study.

potassium nitrate:

Species: Rat NOAEL: >= 1.500 mg/kg Exposure time: 1 d

iron sulphate:

Species: Rat NOAEL: 284 - 324 mg/kg Application Route: Oral Exposure time: 90 d Remarks: Information given is based on data obtained from similar substances.

Species: Rat NOAEL: 100 mg/kg Application Route: Oral Exposure time: 49 d

Application Route: by inhalation Remarks: This information is not available.

Application Route: Dermal



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Remarks: This information is not available.

Aspiration hazard

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

11.2 Information on other hazards

Endocrine disrupting properties

No data available

Further information

Product:

Remarks: Danger of methaemoglobin formation. The product was not tested. The statement was derived from products of similar structure and composition.

SECTION 12: Ecological information

12.1 Toxicity

Product:		
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: Directive 84/449/EEC, C.2
Toxicity to algae	:	EC50 (Scenedesmus subspicatus): > 100 mg/l Exposure time: 72 h Method: DIN 38412
Components:		
ammonium nitrate:		
Toxicity to fish	:	LC50 (Fish): > 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other		Exposure time: 96 h EC50 (Daphnia (water flea)): 490 mg/l
Toxicity to daphnia and other	:	Exposure time: 96 h EC50 (Daphnia (water flea)): 490 mg/l Exposure time: 48 h

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potassium nitrate:		
Toxicity to fish	:	LC50 (Fish): > 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 490 mg/l Exposure time: 48 h
Toxicity to algae	:	LC50 : >= 1.700 mg/l Exposure time: 10 d
iron sulphate: Ecotoxicology Assessment Acute aquatic toxicity	:	This product has no known ecotoxicological effects.
12.2 Persistence and degradabili	ty	
Product:		
Biodegradability	:	Remarks: No data available
Physico-chemical removability	:	DOC reduction ca. 85 % Method: OECD 301E/92/69/EWG, C.4-B Remarks: Readily eliminated from water
Components:		
ammonium nitrate:		
Biodegradability	:	Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.
potassium nitrate:		
Biodegradability	:	Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.
iron sulphate:		
Biodegradability	:	Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.
12.3 Bioaccumulative potential		
Product:		
Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.
Components:		
ammonium nitrate: Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.



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Partition coefficient: n- octanol/water	: log Pow: -3,1	
potassium nitrate: Bioaccumulation	: Remarks: Does not bioaccumulate.	
iron sulphate: Bioaccumulation	: Remarks: Accumulation in aquatic organism	ns is unlikely.
12.4 Mobility in soil		
Product:		
Mobility	: Remarks: No data available	
Distribution among environmental compartments	: Remarks: Moderately mobile in soils s	
Components:		
potassium nitrate: Mobility	: Remarks: No data available	
iron sulphate: Distribution among environmental compartments	: Medium:Soil s Remarks: immobile	
12.5 Results of PBT and vPvB a	assessment	
Product:		
Assessment	: Remarks: Not applicable	
<u>Components:</u> potassium nitrate: Assessment	: This substance is not considered to be pers bioaccumulating and toxic (PBT) This subs considered to be very persistent and very bi (vPvB)	stance is not
iron sulphate: Assessment	: This substance is not considered to be very very bioaccumulating (vPvB) This substance considered to be persistent, bioaccumulatin	ce is not

12.6 Endocrine disrupting properties

No data available

according to Regulation (EC) No. 1907/2006

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12.7 Other	adverse	effects
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Product:

Additional ecological information

 Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.
 There is a high probability that the product is acute not harmful to aquatic organisms.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	: Check if agriculture use is possible. Contact manufacturer.
Contaminated packaging	: Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Remarks

: Not relevant

SECTION 15: Regulatory information

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

Water contaminating class : WGK 1 slightly water endangering



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(Germany)

Other regulations

: TRGS 511 'Ammonium nitrate'

This product is subject to Regulation (EU) 2019/1148; suspicious transactions, disappearance or theft of the product must be reported to the relevant authority.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this product.

SECTION 16: Other information

Full text of H-Statements

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Eye Irrit.	:	Eye irritation
Ox. Sol.	:	Oxidizing solids
Skin Irrit.	:	Skin irritation

(Q)SAR - (Quantitative) Structure Activity Relationship; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM -American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardisation; 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; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; 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; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; 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



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Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Further information

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.

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