



SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : OWATROL COPPER SPIRIT

Product code : owspcosp

UFI : X2N0-102U-700Y-YP1Y

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

Oxide activator

1.3. Details of the supplier of the safety data sheet

Registered company name : DURIEU S.A.: Siège Social.

Address : 2 bis, rue Charles de Gaulle.91070.BONDOUFFLE.FRANCE.

Telephone : + 33 (0)1.60.86.48.70. Fax : + 33 (0)1.60.86.84.84.

reglementaire@durieu.com

www.durieu.com

1.4. Emergency telephone number : + 33 (0)1.45.42.59.59.

Association/Organisation : CENTRE ANTIPOISON (CAPTV): www.centres-antipoison.net.

Other emergency numbers

UNITED KINGDOM: UK National poisons emergency number: +44 (0) 870 600 6266 IRELAND, EIRE: Ireland National Poisons Information Centre: +353 (0) 1 809 2166 AUSTRALIA: Poison Information Centre: 131 126 NEW ZEALAND: Poison Information Centre: 0 800 764 766

USA: American Association of Poison Centers: +1 800 222 1222 CANADA: Ontario Poison Centre: +1 800 268 9017 ISRAEL: Israel Poison Information Center : +972 (0)4 854 19 00

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Substance that is corrosive to metals, Category 1 (Met. Corr. 1, H290).

Skin corrosion, Category 1 (Skin Corr. 1, H314).

Serious eye damage, Category 1 (Eye Dam. 1, H318).

Hazardous to the aquatic environment - Acute hazard, Category 1 (Aquatic Acute 1, H400).

Hazardous to the aquatic environment - Chronic hazard, Category 1 (Aquatic Chronic 1, H410).

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :



GHS09



GHS05

Signal Word :

DANGER

Hazard statements :

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements - General :

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

Precautionary statements - Prevention :

P273 Avoid release to the environment.

P280 Wear protective gloves / protective clothing / eye protection / face protection.

Precautionary statements - Response :

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary statements - Storage :

P405 Store locked up.

Precautionary statements - Disposal :

P501 Dispose of contents / container in a waste collection point.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) >= 0.1% published by the European Chemicals Agency (ECHA) under article 59 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances > = 0.1% with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

Identification	Classification (EC) 1272/2008	Note	%
INDEX: 017_014_00_8 CAS: 12125-02-9 EC: 235-186-4 REACH: 01-2119487950-27-XXXX	GHS07 Wng Acute Tox. 4, H302 Eye Irrit. 2, H319	[i]	2.5 <= x % < 10
AMMONIUM CHLORIDE			
INDEX: 354 CAS: 7758-99-8 EC: 231-847-6 REACH: 01-2119520566-40-XXXX	GHS07, GHS09 Wng Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 1, H400 M Acute = 10 Aquatic Chronic 1, H410 M Chronic = 10		2.5 <= x % < 10
SULFATE DE CUIVRE PENTAHYDRATE			

Specific concentration limits:

Identification	Specific concentration limits	ATE
INDEX: 017_014_00_8 CAS: 12125-02-9 EC: 235-186-4 REACH: 01-2119487950-27-XXXX		oral: ATE = 1410 mg/kg BW
AMMONIUM CHLORIDE		

Information on ingredients :

(Full text of H-phrases: see section 16)

[i] Substance for which maximum workplace exposure limits are available.

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. description of first aid measures

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

Regardless of the initial state, refer the patient to an ophthalmologist and show him the label.

In the event of splashes or contact with skin :

Remove any soiled or splashed clothing immediately.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In the event of swallowing :

Do not give the patient anything orally.

Seek medical attention immediately, showing the label.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Ce produit n'est pas classé comme inflammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- water with AFFF (Aqueous Film Forming Foam) additive
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO2)
- dry chemical agents
- halon

Unsuitable methods of extinction

In the event of a fire, do not use :

- jets d'eau directs

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO2)
- ammonia (NH3)
- hydrogen chloride (HCl)

5.3. Advice for firefighters

No data available.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Avoid any contact with the skin and eyes.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

If the product contaminates waterways, rivers or drains, alert the relevant authorities in accordance with statutory procedures

Use drums to dispose of collected waste in compliance with current regulations (see section 13).

6.3. Methods and material for containment and cleaning up

Neutralise with an alkaline decontaminant, such as an aqueous solution of sodium carbonate or similar.

If the ground is contaminated, once the product has been recovered by sponging with an inert and non-combustible absorbent material, wash the contaminated area in plenty of water.

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Remove contaminated clothing and protective equipment before entering eating areas.

Emergency showers and eye wash stations will be required in facilities where the mixture is handled constantly.

Fire prevention :

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

Never open the packages under pressure.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep out of reach of children.

Keep the container tightly closed in a dry place.

Packaging

Always keep in packaging made of an identical material to the original.

Recommended types of packaging :

- Vats

Suitable packaging materials :

- Plastic

Unsuitable packaging materials :

- Metal

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- UK :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
12125-02-9 AMMONIUM CHLORIDE	10 mg/m3	20 mg/m3	-	-	-

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard ISO 16321.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- Natural latex

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVC (polyvinyl chloride)
- Butyl Rubber (Isobutylene-isoprene copolymer)

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.

Wear suitable protective clothing, in particular overalls and boots. These items must be kept in good condition and cleaned after use.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Type of FFP mask :

Wear a disposable half-mask aerosol filter in accordance with standard EN149/A1.

Category :

- FFP2

Type of mask with combined filters :

Wear a half mask in accordance with standard EN140.

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :

- A1 (Brown)

Particle filter according to standard EN143 :

- P2 (White)

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state

Physical state :	Fluid liquid.
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Colour

Unspecified

Odour

Odour threshold :	Not stated.
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Melting point

Melting point/melting range :	0 °C.
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Freezing point

Freezing point / Freezing range :	Not stated.
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Boiling point or initial boiling point and boiling range

Boiling point/boiling range :	Not relevant.
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Flammability

Flammability (solid, gas) :	Not stated.
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Lower and upper explosion limit

Explosive properties, lower explosivity limit (%) :	Not stated.
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Explosive properties, upper explosivity limit (%) :	Not stated.
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Flash point

Flash point interval :	Not relevant.
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Auto-ignition temperature

Self-ignition temperature :	Not relevant.
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Decomposition temperature

Decomposition point/decomposition range :	Not relevant.
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pH

pH (aqueous solution) :	Not stated.
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pH :	3.20 .
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	Slightly acidic.
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Kinematic viscosity

Viscosity :	Not stated.
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Solubility

Water solubility :	Soluble.
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Fat solubility :	Not stated.
Partition coefficient n-octanol/water (log value)	
Partition coefficient: n-octanol/water :	Not stated.
Vapour pressure	
Vapour pressure (50°C) :	Not relevant.
Density and/or relative density	
Density :	> 1
Relative vapour density	
Vapour density :	Not stated.



Particle characteristics

The mixture does not contain nanoforms.

9.2. Other information

No data available.

9.2.1. Information with regard to physical hazard classes

No data available.

9.2.2. Other safety characteristics

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

Mixture which by chemical action can corrode and even destroy metals.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid :
- frost

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO₂)
- ammonia (NH₃)
- hydrogen chloride (HCl)

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1. Substances

a) Acute toxicity :

AMMONIUM CHLORIDE (CAS: 12125-02-9)

Oral route : LD50 = 1410 mg/kg body weight
Species : Rat

Dermal route : LD50 > 2000 mg/kg body weight
Species : Rat

b) Skin corrosion/skin irritation :

No data available.

c) Serious damage to eyes/eye irritation :

No data available.

d) Respiratory or skin sensitisation :

No data available.

e) Germ cell mutagenicity :

No data available.

f) Carcinogenicity :

No data available.

g) Reproductive toxicant :

No data available.

h) Specific target organ systemic toxicity - single exposure :

No data available.

i) Specific target organ systemic toxicity - repeated exposure :

No data available.

j) Aspiration hazard :

No data available.

11.1.2. Mixture

11.1.2.1 Information on hazard classes

a) Acute toxicity :

Oral route : No data available.

Dermal route : No data available.

Inhalation route (Dusts/mist) : No data available.

b) Skin corrosion/skin irritation :

May cause irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis, following exposure for up to three minutes.

Corrosive reactions are typified by ulcers, bleeding, bloody scabs, and, by the end of observation at 14 days, by discolouration due to blanching of the skin, complete areas of alopecia, and scars.

- Classification based on extreme pH and an acid or alkaline reserve

Corrosive classification is based on an extreme pH value.

c) Serious damage to eyes/eye irritation :

No data available.

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Corrosive classification is based on an extreme pH value.

d) Respiratory or skin sensitisation :

No data available.

e) Germ cell mutagenicity :

No data available.

f) Carcinogenicity :

No data available.

g) Reproductive toxicant :

No data available.

h) Specific target organ systemic toxicity - single exposure :

No data available.

i) Specific target organ systemic toxicity - repeated exposure :

No data available.

j) Aspiration hazard :

No data available.

11.1.2.2 Other information

11.2. Information on other hazards

Endocrine disrupting properties

The mixture does not contain any substance evaluated as an endocrine disruptor with effects on human health.

SECTION 12 : ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

12.1.1. Substances

SULFATE DE CUIVRE PENTAHYDRATE (CAS: 7758-99-8)

Fish toxicity : LC50 <= 0.84 mg/l

Species : Oncorhynchus mykiss

Duration of exposure : 96 h

Crustacean toxicity :
EC50 = 0.1 mg/l
M-Factor = 10
Species : Daphnia magna
Duration of exposure : 48 h

Algae toxicity :
ECr50 = 0.1 mg/l
M-Factor = 10
Species : Scenedesmus quadricauda
Duration of exposure : 3 h

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

SULFATE DE CUIVRE PENTAHYDRATE (CAS: 7758-99-8)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Endocrine disrupting properties

The mixture does not contain any substance evaluated as an endocrine disruptor with environmental effects.

12.7. Other adverse effects

No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

Codes of wastes (Decision 2014/955/EC, Directive 2008/98/EEC on hazardous waste) :

06 01 06 * other acids

15 01 10 * packaging containing residues of or contaminated by dangerous substances

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2025 - IMDG 2024 [42-24] - ICAO/IATA 2025 [66]).

14.1. UN number or ID number

3082

14.2. UN proper shipping name

UN3082=ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(ammonium chloride, sulfate de cuivre pentahydrate)

14.3. Transport hazard class(es)

- Classification :



9

14.4. Packing group

III

14.5. Environmental hazards

- Environmentally hazardous material :



14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	9	M6	III	9	90	5 L	274 335 375 601 650	E1	3	-

*Not subject to this regulation if Q <= 5 l / 5 kg (ADR 3.3.1 - DS 375)

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation
	9	-	III	5 L	F-A. S-F	274 335 375 969	E1	Category A	-

*Not subject to this regulation if Q <= 5 l / 5 kg (IMDG 3.3.1 - 2.10.2.7)

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	9	-	III	964	450 L	964	450 L	A97 A158 A197 A215	E1
	9	-	III	Y964	30 kg G	-	-	A97 A158 A197 A215	E1

*Not subject to this regulation if Q <= 5 l / 5 kg (IATA 4.4.4 - DS A197)

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

Marine pollutant (IMDG 3.1.2.9):(sulfate de cuivre pentahydrate)

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15 : REGULATORY INFORMATION

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

Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2023/707.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 2024/2564. (ATP 22)

Container information:

Packaging to be fitted with child-resistant fastenings (see EC Regulation No. 1272/2008, Annex II, Part 3).

Containers to be fitted with a tactile warning of danger (see EC Regulation No. 1272/2008, Annex II, Part 3).

Particular provisions :

No data available.

Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH):

<https://echa.europa.eu/substances-restricted-under-reach>.

Authorisations agreed under Title VII of Regulation (EC) No.1907/2006 (REACH):

The mixture does not contain any substance subject to authorisation according to Annex XIV of REACH Regulation (EC) No 1907/2006:
<https://echa.europa.eu/fr/authorisation-list>.

Substances that deplete the ozone layer (EC Regulation No. 1005/2009, Montreal Protocol) :

The mixture does not contain any substance posing a risk to the ozone layer.

Persistent organic pollutants (POP) (Regulation (EU) 2019/1021):

The mixture does not contain a persistent organic pollutant.

PIC Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (Rotterdam Convention):

The mixture is not subject to the Prior Informed Consent (PIC) procedure.

Explosives precursors :

The mixture does not contain any substance subject to Regulation (EU) 2019/1148 on the marketing and use of explosives precursors.

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Wording of the phrases mentioned in section 3 :

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms :

LD50 : The dose of a test substance resulting in 50% lethality in a given time period.

LC50 : The concentration of a test substance resulting in 50% lethality in a given period.

EC50 : The effective concentration of substance that causes 50% of the maximum response.

ECr50 : The effective concentration of substance that causes 50% reduction in growth rate.

LQ : Limited Quantity

EQ : Excepted Quantity

EmS : Emergency Schedule

E : Packing Instruction

REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.

ATE : Acute Toxicity Estimate

BW : Body Weight

UFI : Unique formulation identifier.

STEL : Short-term exposure limit

TWA : Time-Weighted Average

VLE : Threshold Limit Value (exposure)

VME : Average Exposure Value.

ADR : Agreement concerning the international carriage of dangerous goods by road.

GHS05 : Corrosion

GHS09 : Environment

IATA : International Air Transport Association.

IMDG : International Maritime Dangerous Goods.

ICAO : International Civil Aviation Organisation

PBT: Persistent, bioaccumulable and toxic.

PIC: Prior Informed Consent.

POP: Persistent Organic Pollutant.

RID : Regulations concerning the International carriage of Dangerous goods by rail.

SVHC : Substances of very high concern.

WGK : Water Hazard Class.

The information contained in this safety data sheet is based on our current knowledge at the time of publication and is provided in good faith. It does not constitute any guarantee of specific product properties nor establish any contractual relationship. The user remains solely responsible for safe and compliant use of the product in accordance with current regulations.