*

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

· **1.1 Product identifier**
· **Trade name: SIF FLUX ALUMINIUM**

· **Article number:** 1216/3.000
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Product category** PC38 Welding and soldering products, flux products
· **Technical function** Brazing flux
· **Application of the substance / the mixture**
Refer to the appendices on exposure scenarios.
Brazing flux

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Wholesale Welding Supplies Ltd t/a Weldability Sif
The Orbital Centre
Icknield Way, Letchworth Garden City
Hertfordshire, United Kingdom

· **Information department:**
msds@weldability-sif.com

· **1.4 Emergency telephone number:**
01462 482200

UK national poisons emergency number : +44 (0) 870 600 6266 / NPIS : +44 121 507 412
for health professionals : 0344 892 0111
NHS Direct : 0845 46 47 / Telephone : 0845 606 46 47
NHS non emergency number : call 111

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

Acute Tox. 4	H302 Harmful if swallowed.
Acute Tox. 4	H332 Harmful if inhaled.
Skin Corr. 1B	H314 Causes severe skin burns and eye damage.
Eye Dam. 1	H318 Causes serious eye damage.
Lact.	H362 May cause harm to breast-fed children.
STOT SE 3	H335 May cause respiratory irritation.
STOT RE 1	H372 Causes damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.
Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**

GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
lithium chloride
ammonium fluoride

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zinc chloride
potassium hexafluoroaluminate

· **Hazard statements**

H302+H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H362 May cause harm to breast-fed children.
H335 May cause respiratory irritation.
H372 Causes damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.
H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P263 Avoid contact during pregnancy and while nursing.
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.
P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** *Not applicable.*
· **vPvB:** *Not applicable.*

*
SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** *Mixture of the substances listed below :*

· **Dangerous components:**

CAS: 7447-41-8 *EINECS: 231-212-3* *Reg.nr.: 01-2119560574-35-xxxx*	*lithium chloride* *Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319*	*10-25%*
CAS: 60304-36-1 *EINECS: 262-153-1*	*potassium fluoroaluminates* *STOT RE 1, H372; Acute Tox. 4, H332; Eye Irrit. 2, H319; Lact., H362; Aquatic Chronic 3, H412*	*≥10-<25%*
CAS: 7646-85-7 *EINECS: 231-592-0* *Reg.nr.: 01-2119472431-44-xxxx*	*zinc chloride* *Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302* *Specific concentration limit: STOT SE 3; H335: C ≥ 5 %*	*≥10-<25%*
CAS: 12125-01-8 *EINECS: 235-185-9* *Reg.nr.: 01-2119974147-30-xxx*	*ammonium fluoride* *Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Eye Dam. 1, H318*	*≥3-≤10%*

· **Additional information** *For the wording of the listed hazard phrases refer to section 16.*

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information**

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably on their side for transportation.

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· **After skin contact**
Beware of the product that can remain between the skin and clothing, watch, shoes, etc.
Immediately wash with water and soap and rinse thoroughly.
Wash clothes before reusing them. Wash carefully shoes before putting on them.
· **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing**
Call for a doctor immediately.
Do NOT induce vomiting, do NOT drink, seek medical advice
· **Information for doctor** Contains fluoride compounds
· **4.2 Most important symptoms and effects, both acute and delayed**
Product dust may cause respiratory irritation.
Inhalation: Irritating to respiratory system. Intense irritation. Cough and difficult breathing. In case of repeated or prolonged exposure: risk of nosebleeds. Risk of pulmonary edema. Difficulty breathing. Chronic bronchitis.
- Skin contact: Corrosive to the skin. Causes severe burns. Redness. Pain. Tissue swelling.
- Contact with eyes: Corrosive to eyes. Causes severe burns. Risk of serious permanent eye damage if the product is not removed quickly. Irritation, watering and redness.
- Ingestion: Severe burning of the tissues of the mouth, throat and gastrointestinal tract. Risk of perforation of the esophagus and stomach. After swallowing: gastrointestinal irritation, abdominal pain, nausea, vomiting, diarrhea.
In skin and eye contact might cause irritation.
Eye contact: may cause irritation, redness.
For symptoms and effects due to contained substances, see section 11.
This product can compromise the health of the child during breastfeeding.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
Hydrogen fluoride (HF)
During heating or in case of fire poisonous gases are produced.
Hydrogen chloride (HCl)
Possibility of formation of toxic and/or corrosive decomposition products.
Vapor release of hot zinc chloride.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Mount respiratory protective device.
Wear fully protective suit.
· **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
This substance is very toxic to aquatic organisms. Water from the fire extinguishing system that has been contaminated with this product must be kept in a closed environment and must not be discharged into the aquatic environment or into any drains or sewers.
The product itself is not combustible; Define the means of extinction according to a fire in the vicinity. In case of fire and / or explosion, do not breathe fumes. Large quantities of extinguishing water containing dissolved product should be retained. Contaminated extinguishing water should be disposed of in accordance with local official regulations.

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SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Use neutralising agent.
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
Use a basic neutralizer.
The affected area must then be washed and the residues must be collected in order to hand them over to an accredited waste treatment company.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Thorough dedusting.
Ensure good ventilation/extraction at the workplace.
Open and handle receptacle with care.
Handle in accordance with good hygiene and safety at work. Before the break and after work, wash your hands thoroughly. Remove and wash contaminated clothing before reuse. Provide safety showers and eye fountains in workshops where the mix is handled consistently.
Gloves, airtight glasses
· **Information about protection against explosions and fires:**
Keep respiratory protective device available.
Requirements for storage rooms are applicable to the workshops or the mixture is handled. Wash hands after use. Remove and wash contaminated clothing before reuse. Provide safe showers and eye fountains in workshops where the mixture is handled consistently. The workplace must be ventilated and the fumes collected at the source of emission. Wear appropriate safety shoes and gloves. Handle in well-ventilated areas. Prohibiting access to unauthorized persons.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Do not store with bases and oxidizing agents.
· **Further information about storage conditions:**
This product is hygroscopic.
Storage time: refer to the label or product analysis certificate where applicable.
Keep receptacle tightly sealed.
Keep away from food, beverages and animal feed.
· **Storage class** 6.1 D
· **Class according to regulation on flammable liquids:** Void
· **7.3 Specific end use(s)** Refer to exposure scenarios attached to the safety sheet.

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
CAS: 7646-85-7 zinc chloride	
WEL	Short-term value: 2 mg/m³ Long-term value: 1 mg/m³
CAS: 12125-01-8 ammonium fluoride	
WEL	Long-term value: 2.5 mg/m³ as F

· **DNELs**		
CAS: 12125-01-8 ammonium fluoride		
Dermal	DNEL	0.36 mg/kg bw/day (worker long term systemic effect)
		0.36 mg/kg bw/day (worker short term systemic effect)
Inhalative	DNEL	2.5 mg/m3 (worker long term systemic effect)
		2.5 mg/m3 (worker long term local effect)
		2.5 mg/m3 (worker short term systemic effect)
CAS: 7646-85-7 zinc chloride		
Oral	DNEL	0.83 mg/kg bw/day (user long term systemic effect) of Zn
Dermal	DNEL	8.3 mg/kg bw/day (user long term systemic effect) of Zn
		8.3 mg/kg bw/day (worker long term systemic effect) of Zn
Inhalative	DNEL	1.3 mg/m3 (user long term systemic effect) of Zn
		1 mg/m3 (worker long term systemic effect) of Zn

· **PNECs**	
CAS: 12125-01-8 ammonium fluoride	
PNEC	0.89 mg/l (Fresh water)
	51 mg/l (STP microorganismes station d'eaux usées)
PNEC	0.12 mg/kg (soil)
CAS: 7646-85-7 zinc chloride	
PNEC	0.0206 mg/l (Fresh water) AF=1
	0.1 mg/l (STP microorganismes station d'eaux usées) AF=1
	0.0061 mg/l (Sea water) AF=1
PNEC	117.8 mg/kg (sediment (fresh water)) dry weight, AF=1
	35.6 mg/kg (soil) AF=1
	56.5 mg/kg (sediment (sea water)) dry weight, AF=1

· **Additional information:** The lists that were valid during the creation were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see item 7.

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· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
Safety showers and eye wash stations should be strategically located in areas where hazardous products are stored or used. Their location should be close enough for immediate use, but at a distance that would not create additional danger.
· **Breathing equipment:**
Filter P2.
Avoid inhalation of dust. Insulating breathing apparatus. It is recommended to set up a smoke suction system closer to issuance. In case of insufficient ventilation, wear suitable respiratory equipment. In case of formation of vapors and aerosols, wear a respirator with appropriate filter.
As the use of appropriate engineering measures should always take priority over personal protective equipment, ensure adequate ventilation in the workplace, provide local exhaust ventilation, where possible, and effective general air exchange systems, except for closed processes or processes operating outdoors. Workplace concentrations should be kept below the indicated limit values.
· **Hand protection**
Protective gloves.
Use appropriate chemical resistant protective gloves complying with NF EN374. Selection of gloves should be made according to the application and the duration of use at the workplace. Protective gloves must be selected according to the workplace: other chemicals that can be handled, necessary physical protection (cut, puncture, thermal protection), dexterity required.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to a lack of tests, no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Glove material**
Recommended characteristics: Waterproof gloves complying with the NF EN374 standard.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Nitrile rubber, NBR
· **Penetration time of glove material**
break time : >480 min.
thickness of the glove: : >0.7 mm.
The exact penetration time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye/face protection**
Tightly sealed goggles.
Avoid contact with eyes. Use eye protection designed to prevent splashing. Before handling, it is necessary to wear safety glasses in accordance with the NF EN166 standard. In case of increased risk, use a face shield for face protection. Wearing protective glasses does not constitute protection. Contact lens wearers are advised to use corrective lenses during work or may be exposed to irritating vapors. Provide fountains in the workshops or the product is handled consistently.
· **Body protection:**
Protective clothing against chemicals. "CE" marking Category III. Clothing should be worn close to the body. The level of protection should be set according to a test parameter called "breakthrough time" which indicates how long the chemical will take to pass through the equipment. With reference to standards: EN 464, EN 340, EN 943-1, EN 943-2, EN ISO 6529, EN ISO 6530, EN 13034. Follow the washing and storage instructions provided by the manufacturer to ensure constant protection. The design of protective clothing should allow them to be worn easily and closely to the body, without moving, for the duration of the intended use, taking into account environmental factors, movements and positions that the user will adopt during the exercise of its activity. Safety shoes with antistatic properties, protection against chemicals. "CE" marking Category III. Check the list of chemicals that have been tested. EN ISO 13287, EN 1382-1, EN 13832-2, EN

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13832-3, EN ISO 20344, EN ISO 20345. In order to properly maintain this type of safety footwear, it is essential to follow the instructions specified by the manufacturer. The shoes must be replaced as soon as they are damaged. Clean shoes regularly and dry them when wet, do not place them too close to a heat source, to avoid sudden changes in temperature.

· **Environmental exposure controls**

It is important to test emissions from ventilation systems or manufacturing equipment to ensure they comply with the requirements of legislation on protection of the environment. In some cases it will be necessary to equip the material for manufacturing a gas scrubber or filter or change technically to reduce emissions to acceptable levels.

· **Risk management measures**

Employer is obligated to ensure, that applied personal protective measures and cloths and shoes have protective and usable properties, and ensure their proper washing, preserving, fixing and disinfection.

Training on chemical hazards, use and exposure to products must be provided by the employer to prevent any risk. The instructions to be observed must also be brought to the knowledge of employees and users (hygiene rules, operating procedures, procedures, prohibition of access to certain areas, use of collection devices at source, obligation to wear PPE, etc).

Risk management measures (RMM) and operating conditions (OC) were calculated using tools. Users should ensure that exposures are under control. in case of deviation, a step of calibration of the results (scaling) must be used. Expert judgment may be required to validate the approach and results.

ECETOC TRA.

For exposure control related to environmental protection, refer section 12.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Solid.
· **Colour:**	White
· **Odour:**	Odourless
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	undetermined
· **Boiling point or initial boiling point and boiling range**	732 °C (CAS: 7646-85-7 zinc chloride)
· **Flammability**	Not determined.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	Not applicable
· **Decomposition temperature:**	Not determined.
· **pH at 20 °C**	5-7 (10%)
· **Viscosity:**	
· **Kinematic viscosity**	Not applicable.
· **dynamic:**	Not applicable.
· **Solubility**	
· **Water:**	Soluble

· **Partition coefficient n-octanol/water (log value)**

7447-41-8	lithium chloride	-2.7
12125-01-8	ammonium fluoride	-4.37

· **Vapour pressure at 20 °C:**	1 hPa (CAS: 7646-85-7 zinc chloride)
· **Density and/or relative density**	
· **Density:**	Not determined
· **Relative density**	Not determined.
· **Vapour density**	Not applicable.

· **9.2 Other information**

7447-41-8	lithium chloride	hygroscopic
7646-85-7	zinc chloride	hygroscopic

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· **Appearance:**	
· **Form:**	Powder
· **Important information on protection of health and environment, and on safety.**	
· **Self igniting:**	Product is not self igniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Solvent separation test**	
· **Solids content:**	100.0 %
· **Change in condition**	
· **Evaporation rate**	Not applicable.

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known
· **10.4 Conditions to avoid** Avoid humidity.
· **10.5 Incompatible materials:**
Avoid strong bases.
Avoid strong oxidizers
· **10.6 Hazardous decomposition products:**
Hydrogen fluoride
Hydrogen chloride (HCl)
Poisonous gases/vapours
Danger of toxic fluorine based pyrolysis products
Corrosive gases/vapours
The liberation of other products of decomposition presenting risks is possible.

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Harmful if swallowed or if inhaled.

· **LD/LC50 values that are relevant for classification:**		
CAS: 12125-01-8 ammonium fluoride		
Oral	LD50	200-1,999 mg/kg (rat) (OECD guideline 401 - oral acute toxicity)

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CAS: 7646-85-7 zinc chloride		
Oral	LD50	1,100 mg/kg (rat) (528 mg Zn/kg bw)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50	1,260 mg/l (rat) (30min)

CAS: 60304-36-1 potassium fluoroaluminates		
Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,100 mg/kg (rat)
Inhalative	LC50/4 h	4.47 mg/l (rat)

· **Skin corrosion/irritation**
Although animal data do not require classification with regard to skin irritations, based on experiences with lithium chloride in humans at production sites, the substance is classified as skin irritant, category 2
Causes severe skin burns and eye damage.
· **Serious eye damage/irritation**
Causes serious eye damage.

CAS: 12125-01-8 ammonium fluoride		
Irritation of eyes	corrosion/irritation yeux	(rabbit eye) Risk of serious eye injury - REACH read-across approach

· **Reproductive toxicity** May cause harm to breast-fed children.
· **STOT-single exposure** May cause respiratory irritation.
· **STOT-repeated exposure**
Causes damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.
· **Additional toxicological information:**
Lithium chloride is a very soluble salt which dissociates lithium and chloride ions in water.After oral ingestion, lithium chloride is immediately and almost completely absorbed from the gastrointestinal tract. The absorption of lithium through the skin is considered to be very low to negligible. If inhaled, absorption and bioavailability of lithium carbonate are expected to be low. After absorption, lithium is rapidly disseminated and excreted unchanged. After absorption, lithium is rapidly disseminated and excreted unchanged. Chloride is ubiquitous and an essential part of the body. In sum, the toxicological significance of lithium chloride is also considered to be very low.
· **Others datas concerning CMR effects** May cause harm to breast-fed children.
· **11.2 Information on other hazards**

· Endocrine disrupting properties
None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.

· Type of test	Effective concentration	Method	Assessment
CAS: 12125-01-8 ammonium fluoride			
CL50 / 96h	209 mg/l (fish) (OECD guideline 203 - fish acute toxicity) cyprinus carpio - REACH read across approach		
CE50 / 48h	101 mg/l (daphnia) (OECD guideline 202 - daphnia acute toxicity) daphnia magna - REACG read across approach		
L(E)C	364 mg/L (fish) (96h)		
CAS: 7646-85-7 zinc chloride			
CL50 / 96h	0.439 mg/l /of Zn (fish) (LC50(96h) = 0.78 mg Zn/l, pimephales promelas, litterature) (LC50(96h) = 0.169 mg Zn/l, oncorhynchus mykiss, litterature)		

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CE50 / 48h	1.22 mg/l /of Zn (daphnia) daphnia magna (0.147-0.413 mg Zn / liter, ceriodaphnia dubia)
CE50 / 72h	0.136 mg/l /of Zn (algae) selenastrum capricornutum (literature)
CAS: 60304-36-1 potassium fluoroaluminates	
CE50 / 48h	22.9 mg/l (daphnia) (daphnia magna)

· **12.2 Persistence and degradability**
Zinc is naturally present in the environment.
In water, zinc binds to the suspended solids in the water column. This bonding and subsequent sedimentation allow for rapid removal of zinc.
· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil**		
7646-85-7	zinc chloride	2.2

· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Remark:** Toxic for fish
· **Additional ecological information:**
· **General notes:**
Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

The generation of waste should be avoided or minimized wherever possible.

· **Uncleaned packagings:**
· **Recommendation:**
Dispose of packaging according to regulations on the disposal of packagings.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
Neutralize the product before destruction (pH between 5.5 and 8.5) according to local regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN3260

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· **14.2 UN proper shipping name**	
· **ADR**	UN3260 CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (ZINC CHLORIDE), ENVIRONMENTALLY HAZARDOUS
· **IMDG**	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (ZINC CHLORIDE), MARINE POLLUTANT
· **IATA**	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (ZINC CHLORIDE)
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG**	

· **Class**	8 Corrosive substances.
· **Label**	8
· **IATA**	

· **Class**	8 Corrosive substances.
· **Label**	8
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	III
· **14.5 Environmental hazards:**	Product contains environmentally hazardous substances: zinc chloride
· **Marine pollutant:**	Symbol (fish and tree)
· **Special marking (ADR):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Corrosive substances.
· **Hazard identification number (Kemler code):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	(SGG1) Acids
· **Stowage Category**	A
· **Stowage Code**	SW1 Protected from sources of heat. SW2 Clear of living quarters.
· **Segregation Code**	SG35 Stow "separated from" SGG1-acids
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	5 kg
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· **Transport category**	3
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	5 kg

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· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· **UN "Model Regulation":**	UN 3260 CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (ZINC CHLORIDE), 8, III, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** E2 Hazardous to the Aquatic Environment
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
· **National regulations**

· **Classification according to VbF:** Void
· **Technical instructions (air):**

Class	Share in %
III	2.5-10

· **Water hazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.
· **15.2 Chemical safety assessment:**
The information on the exposure scenarios of the substances was compiled in the different parts of the SDS of the mixture on the basis of the Lead Component IDentification (LCID) or "top-bottom approach process".
A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
We can not anticipate all conditions under which this information and our products or the combination of these with others will be used. We disclaim all responsibility for the safety and suitability of our products alone or in combination with others. It is up to the buyers to conduct their own tests to determine the safety and adaptation of each product used alone or with other products for their own use.
Unless prior written our products are sold without warranty and purchasers assume any liability for loss or damages of any kind suffered by themselves or third parties, either from handling or use of our products they are alone or with others. In case of finding of a difference when using the product we ask you to contact our technical service.
The information contained in this Material Safety Data Sheet is based on the knowledge of this product as well as national and European laws knowing that the working conditions of its users are not known and thus escape our control. The product should not be used for purposes other than those for which it was designed and prepared, it can be used without prior written knowledge of instructions for their use. It is up to the user to take all measures necessary to comply with these requirements by law.
Training advice: Training awareness of the dangers of chemicals, integration labeling, safety data sheets, personal protection and good hygienic measures. response training for chemical incidents. First aid for chemical exposure, including the use of safety eye wash and showers. The use of personal protective equipment, including selection, compatibility, maintenance, standards and fit. method of classification for mixtures: Calculation method.
· **Relevant phrases**
.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.

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H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H362 May cause harm to breast-fed children.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

· **Department issuing SDS:** *Technical service*

· **Contact:**

Vincent Francon

· **Abbreviations and acronyms:**
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Lact.: Reproductive toxicity – effects on or via lactation
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **** Data compared to the previous version altered.***