

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

In case of inhalation	Provide fresh air. Seek medical treatment in case of troubles.
In case of ingestion	Rinse mouth with water. Never give an unconscious person anything through the mouth. Do not induce vomiting. If you feel unwell, seek medical advice.
In case of skin contact	Change contaminated clothing. After contact with skin, wash immediately with soap and plenty of water. In case of skin reactions, consult a doctor.
In case of eye contact	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult a doctor.

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

No relevant information available

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

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media Use extinguishing material as appropriate for the surrounding area.

5.2. Special hazards arising from the substance or mixture

Fires in the immediate vicinity may cause the development of dangerous vapours. In case of fire may be liberated: Chlorine decomposition products, nitrogen oxides (NO_x).

5.3. Advice for firefighters

Protective equipment for firefighters Wear self-contained breathing apparatus.

Additional information Hazchem-Code: Do not allow fire water to penetrate into surface or ground water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/aerosol. Avoid contact with skin and eyes. Wear suitable protective clothing. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to penetrate into soil, water bodies or drains.

6.3. Methods and material for containment and cleaning up

Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Final cleaning. Do not allow to dry.

6.4. Reference to other sections

Refer additionally to chapter 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Provide adequate ventilation, and local exhaust as needed. Wear suitable protective clothing. Avoid contact with skin and eyes. Do not breathe vapour/aerosol.

7.2. Conditions for safe storage, including any incompatibilities

Storage requirements for storerooms and containers	No special requirements.
Storage class	12 - Non-combustible liquids

7.3. Specific end use(s)

No further relevant information available.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Additional information	Contains no substances with occupational exposure limit values.
------------------------	---

8.2. Exposure controls

Provide good ventilation and/or an exhaust system in the work area.

Respiratory protection	Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A-P3 according to EN 14387.
Hand protection	Protective gloves according to EN 374. Glove material: Butyl caoutchouc (butyl rubber) Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Eye protection	Tightly sealed goggles according to EN 166.
Body protection	Wear suitable protective clothing.
General protection and hygiene measures	Change contaminated clothing. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Wash hands before breaks and after work.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Physical state: Liquid Colour: Colourless
Odour	Odourless
Odour threshold	No information available.
pH value	5.5 – 6.5
Melting point/freezing point	No information available.
Initial boiling point/boiling range	No information available.
Flash point/flash point range	No information available.
Flammability	No information available.
Explosive properties	Product is not explosive.
Explosion limits	No information available.
Vapour pressure	No information available.
Vapour intensity	No information available.
Density	1.03 g/mL
Water solubility	Fully miscible

Partition coefficient (noctnol/water)	No information available.
Auto-ignition temperature	Not self-igniting.
Thermal decomposition	No information available.
Viscosity	Dynamic: No information available.
Oxidising characteristics	No information available.
9.2. Other information	No further relevant information available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	Refer to 10.3.
10.2. Chemical stability	Stable under normal storage conditions.
10.3. Possibility of hazardous reactions	No hazardous reaction when handled and stored according to provisions.
10.4. Conditions to avoid	No information available.
10.5. Incompatible materials	Strong acids and alkalis.
10.6. Hazardous decomposition products	Fires in the immediate vicinity may cause the development of dangerous vapours. In case of fire may be liberated: Chlorine decomposition products, nitrogen oxides (NO _x). Thermal decomposition No information available.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

The mixture has not been tested for toxicological properties, information provided refers to sulphuric acid.

Acute toxicity	Oral: No information available. Dermal: No information available. Inhalative: No information available.
Skin corrosion / irritation	No information available.
Eye damage / irritation	No information available.
Sensitisation to the respiratory tract	No information available.
Sensitisation to skin	No information available.
Germ cell mutagenicity / genotoxicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
Specific Target Organ Toxicity (STOT) – single exposure	No information available.
Specific Target Organ Toxicity (STOT) – repeated exposure	No information available.
Aspiration hazard	No information available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No information available.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

Do not allow to enter into ground-water, surface water or drains.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product	Waste key number: 11 01 99 - Wastes from chemical surface treatment and coating of metals and other materials (eg. galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising). Recommendation: Dispose of waste according to applicable legislation.
Contaminated packaging	Waste key number: 15 01 02 - Plastic packaging. Recommendation: Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number Not applicable.

14.2. UN proper shipping name

ADR/RID, IMDG, IATA Not restricted

14.3. Transport hazard class Not applicable

Not applicable.

14.4 Packing group Not applicable

14.5. Environmental hazards

Marine pollutant No

14.6. Special precautions for user

Not dangerous in the sense of these transport regulations.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No information available.

SECTION 15: REGULATORY INFORMATION

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

National regulations – Great Britain
Hazchem Code

National regulations – USA

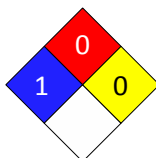
Hazard Rating Systems:

NFPA Hazard Rating:

Health - 1 (Slight)

Fire - 0 (Minimal)

Reactivity - 0 (Minimal)



HMIS Version III Rating:

Health - 1 (Slight)

Flammability - 0 (Minimal)

Physical Hazard - 0 (Minimal)

Personal Protection - X = Consult your supervisor

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
	X

15.2. Chemical Safety Assessment

No information available.

SECTION 16: OTHER INFORMATION

Wording of the H-phrases under paragraph 2 and 3

H272 May intensify fire; oxidiser.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Wording of the R-phrases under paragraph 2 and 3

R 8 Contact with combustible material may cause fire.

R 36/38 Irritating to eyes and skin.

Reason for change

Changes in Section 2: GHS classification, labelling

Changes in Section 3: Change of composition

General revision

Department issuing SDS

See Section 1: Dept. responsible for information.

Abbreviations and acronyms

RID: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAD: International Civil Aviation Organisation

ADR: Accord europeen sur le transport des marchandises dangreuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VbF: Verordnung uber brennbare Flussigkeiten, Osterreich (Ordinance on the storage of combustible liquids, Austria)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

ACGIH: America Conference of Governmental Industrial Hygienists (USA)

OSHA: Occupational Safety and Health Administration (USA)

NTP: National Toxicology Program (USA)



SAFETY DATA SHEET EMBOSSING ELECTROLYTE

According to Regulation (EC) No. 1907/2006

IARC: International Agency for Research on Cancer

EPA: Environmental Protection Agency (USA)

Skin Corr. 18: Skin corrosion/irritation, Hazard Category 18

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.