SAFETY DATA SHEET

Surclean Aluma-Flux SDS
Conforms to Regulation (EC) No. 1907/2006 (REACH),
Annex II and Regulation (EC) No. 1272/2008 (CLP)

Version 1.0: Revision date: 05/02/2023

1. Identification of the substance/mixture

Product name **Emergency contact – Tel: +44 (0)1983 290333**
Product Name: Surclean Aluma-Flux SDS **Email: info@surclean.co.uk**

2. Hazards Identification

Classification	Xn; R20/21/22, R48/22 C; R34 N; R50/53
	Effects and symptoms
Inhalation	Inhalation of the spray or mist may produce severe irritation of respiratory tract, characterised by coughing, choking or shortness of breath. Over-exposure by inhalation may cause respiratory irritation.
Ingestion	May cause burns to mouth, throat and stomach.
Skin contact	Hazardous by the following route of exposure: of skin contact (corrosive).
Eye contact	Hazardous by the following route of exposure: of eye contact (corrosive).
Toxicity data	Not available.

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

See section 11 for more detailed information on health effects and symptoms

3. Composition/Information on Ingredients

Substance/preparation **:** Preparation

Ingredient name	CAS number	%	EC number	Classification
Europe				
triethanolamine	102-71-6	40 - 60	203-049-8	Not classified
ammonium tetrafluoroborate	13826-83-0	10 - 15	237-531-4	Xn; R20/21/22 C; R34
2-aminoethanol	141-43-5	10 - 15	205-483-3	Xn; R20/21/22 C; R34
2,2'-iminodiethanol	111-42-2	10 - 15	203-868-0	Xn; R22, R48/22 Xi; R41, R38
zinc oxide	1314-13-2	1 - 5	215-222-5	N; R50/53
See section 16 for the full text of the R-phrases declared above				

Occupational exposure limits, if available, are listed in section 8.
The classifications listed, indicate the potential hazards of the ingredients.
This information is provided on an advisory basis, and it is the sole responsibility of the user to test the product to their satisfaction, and maintain and control the occupational and environmental safety during product use within the workspace.

4. First Aid Measures

First aid measures

Inhalation	Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Ingestion	Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	Get medical attention immediately. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Eye contact	Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
Notes to physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

See section 11 for more detailed information on health effects and symptoms.

5. Fire Fighting Measures

Extinguishing media

Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	Not known.
Special exposure hazards	In a fire or if heated, a pressure increase will occur and the container may burst.Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
Large spill	Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and Storage

Handling	Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Refer to special instructions/safety data sheet. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
Packaging materials	
Recommended	Use original container.

8. Exposure Controls/Personal Protection

Exposure limit values

Ingredient name	Occupational exposure limits
Europe	
triethanolamine	**ACGIH TLV (United States, 1/2007).** TWA: 5 mg/m³ 8 hour(s).
2-aminoethanol	**EU OEL (Europe, 4/2006). Absorbed through skin. Notes: Indicative** Short term limit value: 7.6 mg/m³ 15 minute(s). Short term limit value: 3 ppm 15 minute(s). Limit value: 2.5 mg/m³ 8 hour(s). Limit value: 1 ppm 8 hour(s).
2,2'-iminodiethanol	**ACGIH TLV (United States, 1/2008). Absorbed through skin.** TWA: 2 mg/m³ 8 hour(s). TWA: 0.46 ppm 8 hour(s).

Zinc oxide	**ACGIH TLV (United States, 1/2008).** STEL: 10 mg/m³ 15 minute(s). TWA: 2 mg/m³ 8 hour(s).

Sweden	
triethanolamine	**AFS (Sweden, 6/2005).** STEL: 10 mg/m³ 15 minute(s). TWA: 5 mg/m³ 8 hour(s).
2-aminoethanol	**AFS 2005:17 (Sweden, 6/2007). Absorbed through skin.** STEL: 15 mg/m³ 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 8 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).
2,2'-iminodiethanol	**AFS 2005:17 (Sweden, 6/2007). Absorbed through skin.** STEL: 30 mg/m³ 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 15 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).
Zinc oxide	**AFS 2005:17 (Sweden, 6/2007).** TWA: 5 mg/m³ 8 hour(s). Form: total dust

Denmark	
triethanolamine	**Arbejdstilsynet (Denmark, 4/2005).** TWA: 3.1 mg/m³ 8 hour(s). TWA: 0.5 ppm 8 hour(s).
2-aminoethanol	**Arbejdstilsynet (Denmark, 3/2008). Absorbed through skin.** TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).
2,2'-iminodiethanol	**Arbejdstilsynet (Denmark, 3/2008). Absorbed through skin.** TWA: 2 mg/m³ 8 hour(s). TWA: 0.46 ppm 8 hour(s).
Zinc oxide	**Arbejdstilsynet (Denmark, 3/2008). Notes: calculated as Zn** TWA: 4 mg/m³, (calculated as Zn) 8 hour(s). Form: fume TWA: 4 mg/m³, (calculated as Zn) 8 hour(s).

Norway	
triethanolamine	**Arbeidstilsynet (Norway, 10/2003).** TWA: 5 mg/m³ 8 hour(s).
2-aminoethanol	**Arbeidstilsynet (Norway, 11/2007). Absorbed through skin.** TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).

2,2'-iminodiethanol	**Arbeidstilsynet (Norway, 11/2007).** TWA: 15 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).
Zinc oxide	**Arbeidstilsynet (Norway, 11/2007).** TWA: 5 mg/m³ 8 hour(s).

France	
2-aminoethanol	**INRS (France, 12/2007). Absorbed through skin. Notes: Regulatory binding exposure limits** TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s). STEL: 7.6 mg/m³ 15 minute(s). STEL: 3 ppm 15 minute(s).
2,2'-iminodiethanol	**INRS (France, 12/2007). Notes: indicative exposure limits** TWA: 15 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).
Zinc oxide	**INRS (France, 12/2007). Notes: indicative exposure limits** TWA: 10 mg/m³ 8 hour(s). Form: dust TWA: 5 mg/m³ 8 hour(s). Form: fume

Netherlands	
2-aminoethanol	**MinSZW Wettelijke Grenswaarden (Netherlands, 4/2008). Absorbed through skin. Notes: Administrative** MAC-TGG, 15 min.: 7.6 mg/m³ 15 minute(s). MAC-TGG, 8 uur: 2.5 mg/m³ 8 hour(s).

Germany	
2-aminoethanol	**TRGS900 AGW (Germany, 7/2008). Absorbed through skin.** PEAK: 10.2 mg/m³ 15 minute(s). PEAK: 4 ppm 15 minute(s). TWA: 5.1 mg/m³ 8 hour(s). TWA: 2 ppm 8 hour(s).

Finland	
2-aminoethanol	**Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 8/2007). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minute(s). STEL: 3 ppm 15 minute(s). TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).
2,2'-iminodiethanol	**Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 8/2007). Absorbed through skin.** TWA: 2 mg/m³ 8 hour(s). TWA: 0.46 ppm 8 hour(s).
Zinc oxide	**Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 8/2007).** TWA: 2 mg/m³ 8 hour(s). Form: fume STEL: 10 mg/m³ 15 minute(s). Form: fume

United Kingdom (UK)	
2-aminoethanol	**EH40/2005 WELs (United Kingdom (UK), 8/2007).** STEL: 7.6 mg/m³ 15 minute(s). STEL: 3 ppm 15 minute(s). TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).

Austria	
triethanolamine	**GKV_MAK (Austria, 6/2006).** STEL: 10 mg/m³, 4 times per shift, 15 minute(s). Form: Inhalable fraction STEL: 1.6 ppm, 4 times per shift, 15 minute(s). Form: Inhalable fraction TWA: 5 mg/m³ 8 hour(s). Form: Inhalable fraction TWA: 0.8 ppm 8 hour(s). Form: Inhalable fraction
2-aminoethanol	**GKV_MAK (Austria, 9/2007). Absorbed through skin.** STEL: 7.6 mg/m³, 4 times per shift, 15 minute(s). STEL: 3 ppm, 4 times per shift, 15 minute(s). TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).
2,2'-iminodiethanol	**GKV_MAK (Austria, 9/2007). Absorbed through skin. Skin sensitiser.** STEL: 4 mg/m³, 4 times per shift, 15 minute(s). STEL: 0.92 ppm, 4 times per shift, 15 minute(s). TWA: 2 mg/m³ 8 hour(s). TWA: 0.46 ppm 8 hour(s).
Zinc oxide	**GKV_MAK (Austria, 9/2007).** TWA: 5 mg/m³ 8 hour(s). Form: respirable fume

Switzerland	
2-aminoethanol	**SUVA (Switzerland, 1/2007). Skin sensitiser. Notes: nottemporary** STEL: 10 mg/m³ 15 minute(s). STEL: 4 ppm 15 minute(s). TWA: 5 mg/m³ 8 hour(s). TWA: 2 ppm 8 hour(s).
2,2'-iminodiethanol	**SUVA (Switzerland, 1/2007). Absorbed through skin. Skinsensitiser. Notes: not temporary** TWA: 1 ppm 8 hour(s). Form: inhalable dust STEL: 1 ppm 15 minute(s). Form: inhalable dust
Zinc oxide	**SUVA (Switzerland, 1/2007). Notes: not temporary** STEL: 3 mg/m³ 15 minute(s). Form: respirable dust and fumes TWA: 3 mg/m³ 8 hour(s). Form: respirable dust and fumes

Belgium	
triethanolamine	**Lijst Grenswaarden / Valeurs Limites (Belgium, 3/2006).** TWA: 5 mg/m³ 8 hour(s).
2-aminoethanol	**Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minute(s). STEL: 3 ppm 15 minute(s). TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).
2,2'-iminodiethanol	**Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007). Absorbed through skin.** TWA: 2 mg/m³ 8 hour(s). TWA: 0.46 ppm 8 hour(s).
Zinc oxide	**Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007).** TWA: 10 mg/m³ 8 hour(s). Form: dust STEL: 10 mg/m³ 15 minute(s). Form: fume TWA: 5 mg/m³ 8 hour(s). Form: fume

Spain	
triethanolamine	**INSHT (Spain, 1/2007).** TWA: 5 mg/m³ 8 hour(s).

2-aminoethanol	**INSHT (Spain, 1/2008). Absorbed through skin.** STEL: 7.5 mg/m³ 15 minute(s). STEL: 3 ppm 15 minute(s). TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).
2,2'-iminodiethanol	**INSHT (Spain, 1/2008). Absorbed through skin.** TWA: 2 mg/m³ 8 hour(s). TWA: 0.46 ppm 8 hour(s).
Zinc oxide	**INSHT (Spain, 1/2008).** TWA: 10 mg/m³ 8 hour(s). Form: dust STEL: 10 mg/m³ 15 minute(s). Form: fume TWA: 5 mg/m³ 8 hour(s). Form: fume

Turkev	
2-aminoethanol	**TR ISGGM OEL (Turkey, 3/2008). Absorbed through skin.** TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s). STEL: 7.6 mg/m³ 15 minute(s). STEL: 3 ppm 15 minute(s).
2,2'-iminodiethanol	**NIOSH REL (United States, 6/2008).** TWA: 15 mg/m³ 10 hour(s). TWA: 3 ppm 10 hour(s).
Zinc oxide	**NIOSH REL (United States, 6/2008).** CEIL: 15 mg/m³ Form: Dust TWA: 5 mg/m³ 10 hour(s). Form: Dust and fumes STEL: 10 mg/m³ 15 minute(s). Form: Fume

Czech Republic	
triethanolamine	**178/2001 (Czech Republic, 6/2004).** STEL: 10 mg/m³ 10 minute(s). STEL: 1.64 ppm 10 minute(s). TWA: 5 mg/m³ 8 hour(s). TWA: 0.82 ppm 8 hour(s).

2-aminoethanol	**178/2001 (Czech Republic, 12/2007). Absorbed through skin.** STEL: 7.5 mg/m³ 15 minute(s). STEL: 3.0075 ppm 15 minute(s). TWA: 2.5 mg/m³ 8 hour(s). TWA: 1.0025 ppm 8 hour(s).
2,2'-iminodiethanol	**178/2001 (Czech Republic, 12/2007).** STEL: 10 mg/m³ 15 minute(s). STEL: 2.32 ppm 15 minute(s). TWA: 5 mg/m³ 8 hour(s). TWA: 1.16 ppm 8 hour(s).
Zinc oxide	**178/2001 (Czech Republic, 12/2007). Notes: as Zn** STEL: 5 mg/m³, (as Zn) 15 minute(s). TWA: 2 mg/m³, (as Zn) 8 hour(s).

Ireland	
triethanolamine	**NAOSH (Ireland, 3/2002).** OELV-8hr: 5 mg/m³ 8 hour(s).
2-aminoethanol	**NAOSH (Ireland, 8/2007).** OELV-15min: 15 mg/m³ 15 minute(s). OELV-15min: 6 ppm 15 minute(s). OELV-8hr: 8 mg/m³ 8 hour(s). OELV-8hr: 3 ppm 8 hour(s).
2,2'-iminodiethanol	**NAOSH (Ireland, 8/2007).** OELV-8hr: 15 mg/m³ 8 hour(s). OELV-8hr: 3 ppm 8 hour(s).
Zinc oxide	**NAOSH (Ireland, 8/2007).** OELV-15min: 10 mg/m³ 15 minute(s). Form: fume OELV-8hr: 5 mg/m³ 8 hour(s). Form: fume

Italy	
triethanolamine	**ACGIH TLV (United States, 1/2007).** TWA: 5 mg/m³ 8 hour(s).
2-aminoethanol	**Ministero della Salute (Italy, 4/2008). Absorbed through skin.** TWA: 1 ppm 8 hour(s). TWA: 2.5 mg/m³ 8 hour(s). STEL: 3 ppm 15 minute(s). STEL: 7.6 mg/m³ 15 minute(s).

2,2'-iminodiethanol	**ACGIH TLV (United States, 1/2008). Absorbed through skin.** TWA: 2 mg/m³ 8 hour(s). TWA: 0.46 ppm 8 hour(s).
Zinc oxide	**ACGIH TLV (United States, 1/2008).** STEL: 10 mg/m³ 15 minute(s). TWA: 2 mg/m³ 8 hour(s).

Estonia	
triethanolamine	**Sotsiaalminister (Estonia, 9/2001).** STEL: 10 MG/M3 15 minute(s). TWA: 5 MG/M3 8 hour(s).
2-aminoethanol	**Sotsiaalminister (Estonia, 10/2007). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minute(s). STEL: 3 ppm 15 minute(s). TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).
2,2'-iminodiethanol	**Sotsiaalminister (Estonia, 10/2007). Absorbed through skin.** STEL: 30 mg/m³ 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 15 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).
Zinc oxide	**Sotsiaalminister (Estonia, 10/2007).** TWA: 5 mg/m³ 8 hour(s).

Lithuania	
triethanolamine	**Del Lietuvos Higienos Normos (Lithuania, 12/2001).** STEL: 10 MG/M3 15 minute(s). TWA: 5 MG/M3 8 hour(s).
2-aminoethanol	**Del Lietuvos Higienos Normos (Lithuania, 10/2007). Absorbedthrough skin.** STEL: 15 mg/m³ 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 8 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).
2,2'-iminodiethanol	**Del Lietuvos Higienos Normos (Lithuania, 10/2007). Absorbedthrough skin.** STEL: 30 mg/m³ 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 15 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).

Zinc oxide	**Del Lietuvos Higienos Normos (Lithuania, 10/2007).** TWA: 5 mg/m³ 8 hour(s).

Slovakia	
2-aminoethanol	**EüM-SzCsM (Hungary, 12/2007). Absorbed through skin.** TWA: 2.5 mg/m³ 8 hour(s). PEAK: 7.6 mg/m³ 15 minute(s).
Zinc oxide	**EüM-SzCsM (Hungary, 12/2007). Skin sensitiser.** PEAK: 20 mg/m³ 15 minute(s). Form: respirable dust TWA: 5 mg/m³ 8 hour(s). Form: respirable dust

Hungary	
2-aminoethanol	**Nariadenie Vlády Slovenskej republiky (Slovakia, 6/2007). Absorbed through skin.** CEIL: 7.6 mg/m³ TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).
Zinc oxide	**Nariadenie Vlády Slovenskej republiky (Slovakia, 6/2007).** CEIL: 1 mg/m³ Form: respirable smoke TWA: 1 mg/m³ 8 hour(s). Form: respirable smoke

Poland	
2-aminoethanol	**Ministra Pracy i Polityki Społecznej (Poland, 9/2007).** STEL: 7.5 mg/m³ 15 minute(s). TWA: 2.5 mg/m³ 8 hour(s).
2,2'-iminodiethanol	**Ministra Pracy i Polityki Społecznej (Poland, 9/2007).** TWA: 9 mg/m³ 8 hour(s).
Zinc oxide	**Ministra Pracy i Polityki Społecznej (Poland, 9/2007). Notes: calculated as Zn** STEL: 10 mg/m³, (calculated as Zn) 15 minute(s). Form: smokes TWA: 5 mg/m³, (calculated as Zn) 8 hour(s). Form: smokes

Slovenia	
triethanolamine	**Uradni list Republike Slovenije (Slovenia, 4/2005).** TWA: 5 MG/M3 8 hour(s). Form: Inhalable fraction
2-aminoethanol	**Uradni list Republike Slovenije (Slovenia, 6/2007). Absorbedthrough skin.** TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).
2,2'-iminodiethanol	**Uradni list Republike Slovenije (Slovenia, 6/2007). Absorbedthrough skin.** TWA: 15 mg/m³ 8 hour(s). Form: inhalable fraction
Zinc oxide	**Uradni list Republike Slovenije (Slovenia, 6/2007).** TWA: 5 mg/m³ 8 hour(s). Form: respirable fume

Latvia	
2-aminoethanol	**LV Nat. Standardisation and Meterological Centre (Latvia, 5/2007). Absorbed through skin.** TWA: 0.5 mg/m³ 8 hour(s). TWA: 0.2 ppm 8 hour(s). STEL: 3 ppm 15 minute(s). STEL: 7.6 mg/m³ 15 minute(s).
Zinc oxide	**LV Nat. Standardisation and Meterological Centre (Latvia,5/2007).** TWA: 0.5 mg/m³ 8 hour(s).

Greece	
2-aminoethanol	**PD 90/1999 (Greece, 8/2007). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minute(s). STEL: 3 ppm 15 minute(s). TWA: 2.5 mg/m³ 8 hour(s). TWA: 1 ppm 8 hour(s).
2,2'-iminodiethanol	**PD 90/1999 (Greece, 8/2007).** TWA: 15 mg/m³ 8 hour(s). TWA: 3 ppm 8 hour(s).

Portugal	
triethanolamine	**Instituto Português da Qualidade (Portugal, 7/2004).** TWA: 5 MG/M3 8 hour(s).
2-aminoethanol	**Instituto Português da Qualidade (Portugal, 3/2007).** STEL: 6 ppm 15 minute(s). TWA: 3 ppm 8 hour(s).
2,2'-iminodiethanol	**Instituto Português da Qualidade (Portugal, 3/2007).** **Absorbedthrough skin.** TWA: 2 mg/m³ 8 hour(s).
Zinc oxide	**Instituto Português da Qualidade (Portugal, 3/2007).** STEL: 10 mg/m³ 15 minute(s). Form: respirable fraction TWA: 5 mg/m³ 8 hour(s). Form: respirable fraction

Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.
Exposure controls	
Occupational exposure controls	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: ammonia (Type K) and particulate filter FFA1P2DEN405:2002
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. 4-8 hours (breakthrough time): nitrile rubber
Eye protection	Safety eyewear complying with an approved standard should be used when a riskassessment indicates this is necessary to avoid exposure to liquid splashes, mists ordusts. Recommended: safety glasses with side-shields EN 166 1F
Skin protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: overall
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical Properties

General information

Appearance	
Physical state	Liquid
Colour	Blue. Clear.
Odour	Aromatic. Faint.
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Evaporation rate	No data available
Flammability rate	No data available
Vapour flammability	No data available
Upper Explosive Limit	No data available
Lower Explosive Limit	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Fat solubility	No data available
Partition coefficient	No data available
Auto ignition temperature	No data available
Oxidising	No data available
Solubility	Soluble in water

9.2 Other safety information

Conductivity	No data available
Surface tension	No data available
Gas group	No data available
Benzene content	No data available
Lead content	No data available
VOC (Volatile Organic Compounds)	No data available

10. Stability and Reactivity

10.1 Reactivity
No further relevant information available.

10.2 Chemical stability
Stable under normal storage and transport conditions.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
No data available.

10.5 Incompatible materials
Strong bases, Powdered metals.

10.6 Hazardous decomposition products
In the event of fire: See Section 5.

11. Toxicological Information

11.1 Information on toxicological effects
Corrosive. Causes burns.

11.1.3 Hazard information

No data is available on this product.

11.1.4 Toxicological information

Toxic by inhalation.

11.1.9 Delayed and immediate effects as well as chronic effects from short and long-term exposure

No data is available on this product.

12. Ecological Information

12.1 Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability

No data available.

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 Other adverse effects

No data available.

13. Disposal Considerations

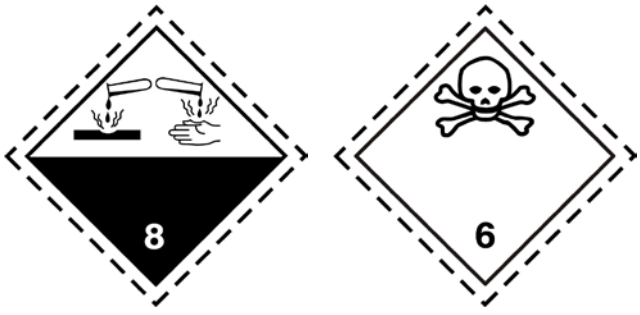
13.1 Waste treatment methods

The generation of waste should be avoided or minimised wherever possible. Avoid

Dispersal of Spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

14. Transport information

14.1 UN number	UN 2922
14.2 UN proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S. (Zinc Chloride and Lead)
14.3 Transport hazard class	
ADR/RID	8
Subsidiary risk	6.1
IMDG	8
Subsidiary risk	6.1
IATA	8
Subsidiary risk	6.1



Hazard Pictogram

14.4 Packing group	III
14.5 Environmental hazards	
Environmental hazards	Yes
Marine pollutant	Yes
ADR/RID	
Hazard ID	86
Tunnel Category	(E)
IMDG	
EmS Code	F-A-S-B
IATA	
Packing Instruction (cargo)	856
Maximum quantity	60L
Packing instruction (passenger)	852
Maximum quantity	5L
14.6 Special precautions for user	No data available

15. Regulatory Information

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

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out.

16. Other Information

Full text of H-Statements referred to under Sections 2 and 3

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H335	May cause respiratory irritation
	H260D
H362	May cause harm to breast-fed children
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

The information in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This 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 other process.