

Material Safety Data Sheet

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According to 2001/58/EC

1 - Product and Company Information

Product Name Electrolyte AE 8
Product Number 22.008

Use of the substance/preparation

Electrolytic marking / Application for black oxide steels, Nickel plate (Steel & Alu), Steels low carbon, High alloy & hardenable tool steels, Stainless steels, Iron, Discaloy, Hastelloy, Inconnel, Nitraloy, Tungsten Carbide

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2 - Composition/Information on Ingredients

Full text of risk phrases appearing in section 2: see section 16.

INDEX	CAS	EC	Name	Symb.	R:	%
	68-04-2	200-675-3	Sodium citrate	-	-	~13.0

Chemical characterisation: Agent: Preparation:

Description Water-/mineral salt-complex former-mixture.

All other components of this product are not considered hazardous as defined by the OSHA Hazard Communication Standard (29 CFR 1910.1200). Therefore identity of the components, are being withheld as trade secrets.

See section 3 for Hazard Identification and Section 8 for exposure limits and controls/personal protection.

3 - Hazards Identification**SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT**

Causes burns (R34).

EMERGENCY OVERVIEW

Electrolyte solution AE 8 is an acidic solution with the pH of 1.5-3.0. It may cause skin and eye irritation and possibly damage upon contact. This product is not flammable. However, thermal decomposition may release acrid fumes.

POTENTIAL HEALTH EFFECTS**EYE CONTACT**

It may cause irritation and/or damage in case of eye contact.

SKIN CONTACT

It may cause irritation.

SKIN ABSORPTION

A single exposure is not likely to result in the material being absorbed through skin.

INGESTION

Ingestion of large quantities of this product may produce gastrointestinal tract irritation and burning sensation, vomiting, cramping, diarrhoea and acidosis.

INHALATION

Inhalation of product mist or aerosol may cause irritation of nose and throat, running nose, coughing and chest pain.

CHRONIC EFFECTS/CARCINOGENICITY/SPECIAL TOXIC EFFECTS

None expected from normal use of product. However, repeated skin contact may cause irritation and dermatitis.

This product (or its components) is not listed by NTP, OSHA, and IARC.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Pre-existing medical conditions that may be aggravated by exposure include disorders of the skin and respiratory tract including asthma.

4 - First Aid Measures**EYE CONTACT**

Immediately flush eyes with plenty of water for at least 15 minutes occasionally lifting the eyelids to ensure thorough rinsing. Seek medical attention.

SKIN CONTACT

Clean exposed skin with warm soapy water. Remove contaminated clothing. Launder clothing before reuse. Seek medical attention if irritation develops and persists.

INGESTION

DO NOT induce vomiting. Drink a large volume of cold water or milk and get immediate medical attention. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration.

INHALATION

Remove person to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. If irritation develops and persists, seek medical attention.

Notes to Physician

Institute basic life support measures. Systemic symptoms from acute overexposure to this product are unlikely.

5 - Fire Fighting Measures

Product is a non-flammable liquid. Follow fire-fighting measures appropriate for surrounding materials. Closed containers exposed to extreme heat may rupture due to pressure build up.

Flash Point (Method):	Not flammable
Flammable Limits:	Not flammable
Autoignition Temperature:	Not flammable
Extinguishing Media:	Appropriate for surrounding materials
Special Fire Fighting Procedures:	None
Unusual Fire or Explosion Hazards:	Excessive heat may cause container rupture due to pressure build up.

6 - Accidental Release Measures**PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED**

Stop leak and contain spilled material with absorbent material (Vermiculite, and sand fuller's earth). Collect adsorbed product and clean up materials in appropriate container for proper disposal. Move containers from spill area. Larger spills may be neutralized with dilute alkaline solutions of soda ash (Sodium Carbonate) or lime (Calcium Oxide). Prevent materials from entering drains, sewers or waterways.

WASTE DISPOSAL METHODS

Dispose in accordance with applicable Federal, State and Local regulations.

7 - Handling and Storage

STORAGE TEMPERATURE

Store at room temperature. Avoid freezing and overheating conditions. Freezing and overheating of product may cause container rupture and product spills.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid contact with eyes, skin and clothing. Wear eye and skin protection when handling the product.

8 - Exposure Controls / Personal Protection

EXPOSURE LIMITS

Sodium citrate
TA Luft: 20mg/m³
OSHA/TWA: 15mg/m³, STEL: Not established
ACGIH/TWA: 10mg/m³, STEL: Not established

ENGINEERING CONTROLS

A fresh water supply, including eyewash for emergency first aid, and washing facilities should be readily available.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION

Normally not needed in well-ventilated areas. If applicable standards are exceeded or are likely to be exceeded, use a **CEN (EC)** or **NIOSH/MSHA (US)** approved, contaminant-specific, air-purifying respirator. If such concentrations are sufficiently high that this respirator is inadequate, or high enough to cause oxygen deficiency, use a positive pressure self-contained breathing apparatus **B-P2 (EC)** or **SCBA (US)**. Follow all applicable respirator use, fitting, and training standards and regulations.

EYE PROTECTION

Chemical safety goggles or face shield are required when handling this product.

SKIN

Gloves, apron, or other protective clothing needed to prevent skin contact.

VENTILATION

Local exhaust ventilation and/or enclosure of the process may be required.

GENERAL HYGIENE MEASURES

Remove contaminated clothing; launder or dry-clean before reuse. Workers should wash their hands before breaks, meals, smoking and using toilet facilities. Product is readily removed from skin by soap and water.

9 - Physical and Chemical Properties

Appearance Physical State: liquid
 Colour: clear
 Odour: slight

Property	Value	At Temperature or pressure
pH	1.5 - 3.0	
BP/BP Range	100°C (212°F)	
MP/MP Range	0°C (32°F)	
SG/Density	1.12 g/cm ³	
Vapour Pressure	Not determined	
Vapour density (AIR = 1)	Heavier than air	
% Volatile, by volume	non-volatile	
Solubility in water	completely soluble	
Evaporation Rate	Not determined	

10 - Stability and Reactivity

STABILITY

Stability: Stable

Conditions to Avoid: High temperature and strong oxidizer

Materials to Avoid: Strong bases, alkalis, reducing agents, combustibles and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Although this product is non-flammable, thermal decomposition may release acrid fumes and noxious gases such as oxides of nitrogen and carbon.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur.

11 - Toxicological Information

ACUTE TOXICITY

N/A

Toxicological effects that may be produced by this product are associated with the acidic (pH = 1.5-3.0) nature of this product. Direct contact with product can cause damage to living tissue. The severity of the damage is directly related to the route of exposure as well as the amount and duration of exposure.

12 - Ecological Information

GENERAL INFORMATION

Direct contact of product with ecological receptors may cause tissue damage at the point of contact. Product does not bioaccumulate.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Dispose in accordance with Federal, State, and Local regulations. Prevent materials from entering drains, sewers, or waterways. Do not dump on the ground.

INDUSTRIAL WASTE NUMBER (Waste Key)

11 01 06 (Other acids)

WASTE DESIGNATION

Electrolyte

14 - Transport Information

RID/ADR/DOT Ground Transportation

IMDG Ocean/River Transportation

IATA Air Transportation

UN#: Not applicable

Class: Not applicable

PG: Not applicable

Proper Shipping Name: Not regulated by RID/ADR/DOT/IATA

Labels: Not required

Placards: Not applicable

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: C

Corrosive

R-PHRASES: 34

Causes burns.

S-PHRASES: 23-24/25-26-37/39-45

Do not inhale vapour. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

NATIONAL REGULATIONS

Employment Restriction: not approved

Statutory order on hazardous incidents: not approved

Classification accord. to VbF: N/A

Technical Instructions on

Air Quality: not approved

German Water Pollution Class: WGK 1 - low hazardous to water (Self assessment according to VwVwS)

16 - Other Information

List of relevant R phrases (heading 2):

None

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Schilling Marking Systems GmbH, shall not be held liable for any damage resulting from handling or from contact with the above product. Naturally we assure efficient quality of our products on the requirements of our General sales- and delivery conditions. Copyright (2006): Schilling Marking Systems GmbH. License granted to make unlimited paper copies for internal use only.

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