

Material Safety Data Sheet

Date Printed: 26/09/2007

Date Updated: 23/10/2006

According to 2001/58/EC

1 - Product and Company Information

Product Name Electrolyte AE 24
Product Number 22.024

Use of the substance/preparation

Electrolytic marking / Application for stainless steels, Chrome plate, alternative AE 1

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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:	%
	7631-99-4	231-554-3	Sodium nitrate	O	8	1<=x%<10
	5949-29-1	201-069-1	Citric acid	Xi	36	1<=x%<10
	126-92-1	204-812-8	Sodium-Isoalkylsulfate	Xi	38-41	1<=x%<10

Chemical characterisation: Agent: Preparation:

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

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

Causes burns (R34).

May release electrolyte vapours during electrochemical process.

4 - First Aid Measures**GENERAL**

Remove contaminated clothing immediately. Launder clothing before reuse. Seek medical attention if irritation develops and persists.

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.

INGESTION

If swallowed, **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.

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 neutralised 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 product.

8 - Exposure Controls / Personal Protection

EXPOSURE LIMITS

Sodium nitrate, TA Luft: 20 mg/m³
Citric acid, TA Luft: 20 mg/m³

ENGINEERING CONTROLS

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

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION

Use in well ventilated area. Avoid inhalation of fumes, mist or vapour produced by product. 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

Use in well ventilated area to maintain exposures below appropriate exposure limits.

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. Skin care recommended.

9 - Physical and Chemical Properties

Appearance Physical State: liquid
Colour: clear
Odour: slight

Property	Value	At Temperature or Pressure
pH	1.2 - 2.0	20°C (68°F)
BP/BP Range	approx. 100°C (212°F)	
MP/MP Range	approx. 0 to -7°C (32 to 19°F)	
Flash Point	N/A	
Flammability	N/A	
Explosive Properties	N/A	
Oxidizing Properties	N/A	
Vapour Pressure	N/A	
SG/Density	1.2 g/cm ³	20°C (68°F)
Solubility in water	completely soluble	20°C (68°F)
Partition Coefficient:		
n-octanol-water	N/A	
Viscosity	N/A	
Vapour Density	N/A	
Evaporation Rate	N/A	

10 - Stability and Reactivity

STABILITY

Stability: Stable
Materials to Avoid: Strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Thermal decomposition generates: Nitrogen oxides. Carbon dioxide. Carbon monoxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur.

11 - Toxicological Information

TOXICITY INFORMATION

Corrosive to eyes. Irritating to respiratory system and skin.

ACUTE TOXICITY

Rat, oral LD50 [mg/kg]: No data available.
Rat, inhalation LC50 [mg/m³]: No data available.
Rat, dermal LD50 [mg/kg]: No data available.

12 - Ecological Information

Ecological effects information: Product in concentrated form not to be enters the sewerage system or free-flowing water.

Biodegradation [%]: Product is biodegradable (self-assessment).

BOD-Value: not tested

COD-Value [mg/l]: not tested

AOX: Does not contain AOX.

WGK class (Germany): 1

13 - Disposal Considerations

GENERAL

Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container at hazardous or special waste collection point.

INDUSTRIAL WASTE NUMBER (Waste Key)

11 01 06 (Other acids)

WASTE DESIGNATION

Electrolyte

14 - Transport Information

RID/ADR, IMDG, IATA

The product is not regulated for transport.

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):

R8: Contact with combustible material may cause fire.

R36: Irritating to eyes.

R38: Irritating to skin.

R41: Risk of serious damage to eyes.

REVISION

Previous release dt. 24.08.2006
Revised: all chapters

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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