Rowmark

Aluoxyd

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Rowmark BVBA
Schaarbeekstraat 44
9120 Beveren - Waas
Belgium

EMERGENCY PHONE NUMBERS:
Medical: 911
Poison Control: 800-589-3897

Telephone Numbers	Phone Number	Available Hours
Rowmark Customer Service International	1-877-ROWMARK	7:00am-5:00pm

Further details: Mixture of inorganic compounds
Use of the substance: Treatment of metal surfaces
Industrial use

2. COMPOSITION / INFORMATION ON INGREDIENTS

Aqueous solution of:
Constituents EC Number Concentration Hazard
Selenous acid 231-974-7 < 4% T, N; R 23/25, 33, 50/53
Phosphoric acid 231-633-2 < 3 % C, R 34
Fluoroboric acid 240-898-3 < 2 % C, R 34
Copper sulfate 231-847-6 < 8 % Xn, N; R22, 36/38, 50/53
Nickel sulfate 232-104-9 < 1 % T, N; R49, 61, 20/22, 38, 42/43, 48/23

3. HAZARDS INDENTIFICATION

May cause cancer if inhaled; May cause harm to the unborn child; Harmful by inhalation and if swallowed; Irritating to skin; May cause sensitation by skin contact; Harmful to health: Danger of serious damage to health by prolonged exposure through inhalation. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Always call a doctor, except when contact is only with a small area of skin for a short time!
Present (or give the patient to present) this data sheet or product label.
Swallowing: Provided the affected person is conscious, wash out their mouth with water and have them drink water. Do not induce vomiting, inform doctor.
Inhalation: Remove the affected person to fresh air, keep at rest, inform doctor. Attention: If liquid product or vomit has entered the lungs, call an ambulance immediately. Danger of severe lung damage.
Skin contact: Wash the skin with plenty of water, remove contaminated clothing. In case of skin irritation or larger affected areas, call a doctor.
If eye contact occurs, wash the eyes with plenty of water and remove contact lenses where applicable. Inform a specialist eye doctor immediately.

General measures: Call a first aider, place unconscious person in recovery position and protect from cold; remove foreign objects from the mouth, under no circumstances give liquids. If not breathing: Give artificial respiration. Ensure self protection!
Advice to medical professionals: In the case of ingestion, vomiting should not be induced under any circumstances and activated carbon should not be administered. The decision on subsequent treatment should be made based on the situation, depending on the concentration of the acid, the quantity, the time elapsed, and the clinical picture. Gastric irrigation will probably only come into question in cases where larger quantities of highly diluted acid have been swallowed (certainly without signs of perforation). In an inpatient setting, in particular liver, kidney and blood parameters should be monitored, as well as heart-circulation parameters and lung function (chest X-ray). Forced diuresis to promote elimination. For Se poisoning, no antidote can currently be recommended. (Information on selenous acid from GESTIS, www.dguv.de/bgia/de)

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Incombustible product, consider surroundings. General: CO2, foam, water spray jet, powder. Avoid full water jet.
Unsuitable extinguishing media for safety reasons: None known
Special risks: Forms irritant vapours / mists on exposure to fire
Protective equipment: Self-contained breathing apparatus, chemical protection suit.

6. ACCIDENTAL RELEASE MEASURES

Personal protective measures: Avoid exposure (skin contact, inhalation): Wear impermeable protective gloves, boots, apron, and tightly sealed goggles; in case of breathing-air contamination: Respiratory protection: Filter type P2 or self-contained breathing apparatus
Environmental protection measures: Avoid discharge into sewage system, soil and water, e.g., by construction of settling pond embankments, blocking of rainwater pipes.
Process for cleaning up spills: Absorb spills with an absorbent material (acid or universal binder, sand; only use wood shavings in case of emergency!) Set aside contaminated binding medium for disposal on impermeable surface protected from rain. Contain escaping vapours with water spray jet.

7. HANDLING AND STORAGE

Handling: Acid-resistant systems. Closed systems wherever possible; otherwise, extract vapours or mists produced immediately. Maintain shower and eye bath facilities.

Storage: Acid-resistant system. Well ventilated, not situated near heat sources. Separate from alkalis. Observe legal provisions relating to water.
Storage class 8B according to VCI concept

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Limits in the workplace: No limits currently published (as of: June 2008, TRGS 900) Recommended protection level: Measures in line with Level 4 (§ 9 of GefStoffV, the German Hazardous Substances Act) are required.
Personal protective equipment:
Avoid all contact with skin and inhalation of vapours. Preventive skin protection required. Change and wash contaminated work clothes.
Respiratory protection: Self-contained or filter class P Eye protection: Tightly sealed goggles or face shield Hand protection: Resistant to acids (seek advice on break-through times from glove manufacturer), e.g., Latex 0.5 mm (break-through time > 480 min) or PVC 0.5 mm (break-through time > 480 min), both literature values Body protection: Liquid-tight protective clothing during open handling. The adherence to Directive 89/686/EEC must be confirmed by the respective manufacturer.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state Colour Odour
Liquid clear, blue odourless
pH value: < 1
Melting point: n.d.
Boiling range ca. 100°C
Density (20ºC): 1.1 g/l
Vapour pressure (20ºC): not determined
Relative vapour density: not applicable
Evaporation rate: not determined
Flash point: not applicable
Ignition temperature: not applicable
Lower explosion limit not applicable
Upper explosion limit not applicable
Solubility in water: miscible
Partition coefficient
Water / n-Octanol: not determined
Solubility in fats: not determined
Viscosity (20ºC) not determined
Odour threshold: not applicable

10. STABILITY AND REACTIVITY

Evolution of heat on contact with alkaline substances.
Substances to be avoided: alkalis, amines, other reactive chemicals
Decomposition products: Irritant / toxic vapours, as well as the usual combustion gases, on exposure to fire.

11. TOXICOLOGY INFORMATION

Acute toxicity: (various literature values) LD50 Rat, oral: 1030 mg/kg (calculated value). The following value is known for the acute, most-hazardous component, selenous acid: From ca. 10 mg / kg, cases of death are known. LD50 Rat, oral: 68 mg/kg selenium dioxide
Subacute to chronic toxicity: Nickel is classified as carcinogenic (cat. 1), toxic to reproduction (cat. 2), and mutagenic (cat. 3).
Other: Severe damage to skin, mucous membranes and eyes by irritant and toxic components.

12. ECOLOGICAL INFORMATION

(various literature values) The preparation was not examined. Heavy metals are not biodegradable and can be deposited in sediments.WGK 3

13. DISPOSAL CONSIDERATIONS

Unusable product and other wastes to be classified as "toxic":
Hazardous waste, dispose according to local regulations.
Waste code: according to European catalogue (industry-specific)

14. TRANSPORT INFORMATION

UN 3264 Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid–fluoroboric acid solution)
Class 8 Packaging group: II Hazard label 8
ADR/RID: Hazard number 80, Tunnel restriction code: E
IATA: Packing instructions 818, 820
IMDG: EmS: F-A, S-B; MP: P

15. REGULATORY INFORMATION

Symbols according to
GefStoffV1:
Xn Harmful N (Dangerous for the environment)
Contains selenous acid and nickel sulfate
Hazard statements (R-phrases):
R 49 May cause cancer by inhalation
R 20/22 Harmful by inhalation and if swallowed
R 38 Irritating to skin
R 42/43 May cause sensitisation by inhalation and skin contact
R 48/20 Harmful: Danger of serious damage to health by prolonged exposure through inhalation
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Safety advice (S-phrases):
S 20/21 When using do not eat, drink or smoke
1 German Hazardous Substances Act, *Gefahrstoffverordnung*
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S 28 After contact with skin, wash immediately with plenty of water
S 53 Avoid exposure - obtain special instructions before use

S 45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)
S 60 This material and its container must be disposed of as hazardous waste
S 61 Avoid release to the environment. Refer to special instructions/safety data sheet.
TA Luft2: 5.2.7.1.1 (carcinogenic substances) Class II

16. OTHER INFORMATION

Train operating personnel according to § 14 Gefahrstoffverordnung3.
Meaning of R-phrases:
R 49 May cause cancer by inhalation
R 61 May cause harm to the unborn child
R 20/22 Harmful by inhalation and if swallowed
R 22 Harmful if swallowed
R 23/25 Toxic by inhalation and if swallowed
R 33 Danger of cumulative effects
R 34 Causes burns
R36/38 Irritating to eyes and skin
R 38 Irritating to skin
R 42/43 May cause sensitisation by inhalation and skin contact
R 48/23 Danger of serious damage to health by prolonged exposure through inhalation / Toxic by inhalation
R 68 Possible risk of irreversible effects
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment