

Health & Safety data sheet
According to EC Directive 91/155/EC and following amendments

Date of issue: 03 January 2008.

SECTION 1 - IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

Product name:

- Diphenylcarbazone Indicator

Application:

- Determination of chloride/salinity in water samples.

Manufacturer identification: Hanna Instruments Italia s.r.l.
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CENTRO ANTIVELENI
OSPEDALE NIGUARDA (MI) - ITALY

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ethanol solution.

SECTION 3 - HAZARD IDENTIFICATION

Highly flammable.

SECTION 4 - FIRST AID MEASURES

Remove contaminated, soaked clothing immediately and dispose of safely.

- **After inhalation** : fresh air.
- **After skin contact** : wash off with plenty of water. Remove contaminated clothing.
- **After eye contact** : rinse out with plenty of water for at least 10 minutes. Obtain medical attention.
- **After swallowing** : immediately make victim drink plenty of water. Summon doctor.

SECTION 5 – FIRE-FIGHTING MEASURES

- **Suitable extinguishing media**
 - Foam, dry powder or carbon dioxide.
- **Special risks:**
 - Combustible. Vapors heavier than air. Forms explosive mixtures with air at ambient temperatures. Keep away from sources of ignition.
- **Special protective equipment for fire fighting:**
 - Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.
- **Additional information:**
 - Cool container with spray water from a safe distance. Take measures to prevent electrostatic charging.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- **Personal precautions:**
 - Avoid substance contact. Do not inhale vapors. Ensure supply of fresh air in enclosed rooms.
- **Environmental precautions:**
 - Do not discharge into the drains/surface waters/groundwater.
- **Additional notes:**
 - Take up with liquid-absorbent material.
 - Clean up affected area and dispose according to local regulation.

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SECTION 7 - HANDLING AND STORAGE

- **Handling:**
 - Takes measures to prevent electrostatic charging.
 - Keep away from sources of ignition.
 - Work under hood. Do not inhale substance.
 - Avoid generation of vapors/aerosols.
- **Storage:**
 - Tightly closed. In a well ventilated place. Keep away from sources of ignition and heat. Store at room temperature (+15 to +25 °C recommended).
 - Protect from light and moisture.
 - Accessible only for authorized persons.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

- **Personal protective equipment:**
 - Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.
- **Respiratory protection:**
 - Required when vapors/aerosols are generated. Work under hood.
- **Protective gloves:**
 - Rubber or plastic
- **Eye protection:**
 - Goggles or face mask
- **Industrial hygiene:**
 - Change contaminated clothing. Apply skin- protective barrier cream.
 - Wash hands after working with substance.

SECTION 9 - PHYSICAL/CHEMICAL PROPERTIES

- **Appearance and odor** : yellow-orange liquid, alcohol-like odor.
- **Solubility in water** : soluble
- **Melting point** : ND
- **Boiling point** : ND
- **pH value at 20 °C** : ND
- **Density at 20 °C** : 0.79 g/cm³
- **Ignition temperature** : ~ 425°C
- **Flash point** : ~ 23°C
- **Explosion limits** : lower not available
upper not available
- **log Pow** : -0.32 (ethanol)

SECTION 10 - STABILITY AND REACTIVITY

- **Conditions to be avoided:**
 - Heating.
- **Substances to be avoided:**
 - no information available.
- **Hazardous polymerization:**
 - will not occur.
- **Hazardous decomposition products:**
 - no information available.
- **Further information:**
 - Flammable.
 - Explosive with air in a vaporous/gaseous state.

SECTION 11 - TOXICOLOGICAL INFORMATION

APPLICABLE TO MAIN COMPONENT(S):

Acute toxicity

LC₅₀ (inhalation, rat): >8000 mg/l /4 h (ethanol).

LD₅₀ (dermal, rabbit): >20000 mg/kg (ethanol).

LD₅₀ (oral, rat): 6200 mg/kg (ethanol).

Specific symptoms in animal studies:

Eye irritation test (rabbit): Irritations (ethanol).

Skin irritation test (rabbit): No irritation (ethanol).

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Subacute to chronic toxicity

Applicable to the main component:

Sensitization:

Sensitisation test (Magnusson and Kligman): negative.

Bacterial mutagenicity: Salmonella typhimurium: negative.

Bacterial mutagenicity: Ames test: negative.

Property of this product must be anticipated on the basis from the components of the preparation:

- **In case if inhalation of vapors** : slight mucosal irritations. Risk of absorption.
- **In case of skin contact** : after long-term exposure to the chemical: dermatitis.
- **In case of eye contact** : slight irritations.
- **In case of ingestion of large amounts** : nausea, vomiting, diarrhoea.
- **Systemic effects** : euphoria.
- **After absorption of large amounts** : salivation dizziness, inebriation, narcosis, respiratory paralysis.
- **Further data** : the product should be handled with the care usual when dealing with chemicals.

SECTION 12 - ECOLOGICAL INFORMATION

APPLICABLE TO MAIN COMPONENT(S):

Abiotic degradation:

Rapid degradation. (air)

Biologic degradation:

Biodegradation: 94 % modified OECD screening test;

Readily biodegradable.

Behavior in environmental compartments:

Distribution: log p(o/w): -0.32 (ethanol);

No bioaccumulation is to be expected (log P(o/w) <1).

*Ecotoxic effects:**Biological effects:*

In high concentrations: Harmful effect on aquatic organisms. When used properly, no impairments in the function of waste-water treatment plants are to be expected.

Fish toxicity: L.idus LC₅₀ : 8140 mg/l /48 h;Daphnia toxicity: Daphnia magna EC₅₀ : 926814221 mg/l /48 h;

Maximum permissible toxic concentration:

Algeal toxicity: Sc.quadricauda IC₅ : 5000 mg/l /7 d; Bacterial toxicity: Ps.putida EC₅ : 6500 mg/l /16h; Protozoa: E.sulcatum EC₅ : 65 mg/l /72 h.*Further ecologic data:*

BOD 5 : 0.93-1.67 g/g; COD: 1.99 g/g; TOD: 2.10 g/g; BOD 74 % from TOD /5 d; COD 90 % from TOD;

No ecological problems are to be expected when the product is handled and used with due care and attention.

SECTION 13 - DISPOSAL CONSIDERATIONS• **Waste disposal:**

- Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice.
- Handle contaminated packaging in the same way as the substance itself.

