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HI 38058/81
pH Wide Range Indicator

Safety Data Sheet

According to Regulation (EC) No. 1907/2006
OSHA Regulation 29 CFR 1910.1200
Canadian Regulation SOR/88-66

Revision Date: 2009-06-10
Reason for Revision: 29 CFR 1910.1200 and SOR/88-66 Compliance

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 38058-81 pH Wide Range Indicator

Additional Product Codes: HI 3881-5

Application: Determination of pH in Water Samples

Company Information (USA):
Hanna Instruments, Inc.
584 Park East Dr, Woonsocket, Rhode Island, USA 02895

Technical Service Contact Information:
1-800-426-6287 (8:30AM - 5:00PM ET)
+1-401-766-4260 (8:30AM - 5:00PM ET)

USA Emergency Contact Information: 1-800-424-9300 (Chemtrec 24Hr. Emergency)

International Emergency Contact Information: +1-703-527-3887 (Chemtrec 24Hr. Emergency)

E-mail Address: tech@hannainst.com

SECTION 2: HAZARD IDENTIFICATION

Highly Flammable.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component: Ethyl Alcohol

EC-No.: 200-578-6

CAS-No.: 64-17-5

Hazard: F

Phrases: R: 11

Content: > 20% - < 30%

SECTION 4: FIRST AID MEASURES

After Inhalation: Remove to fresh air.

After Skin Contact: Wash affected area 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.

General Information: Not available

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:
Foam, Dry Powder, 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:
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 save 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.

SECTION 7: HANDLING AND STORAGE

Handling:

Takes measures to prevent electrostatic charging. Keep away from sources of ignition. 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.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	*Value*	*Source*	*Type*	*Value*	*Source*
Ethanol					
TWA (8hr)	1907 mg/m³	Belgium	TWA (8hr)	1900 mg/m³	Canada (Ontario)
TWA (8hr)	1880 mg/m³	Canada (Quebec)	TWA (8hr)	1900 mg/m³	France
TWA (8hr)	960 mg/m³	Germany	TWA (8hr)	1900 mg/m³	Greece
TWA (8hr)	1900 mg/m³	Hungary	TWA (8hr)	260 mg/m³	Netherlands
TWA (8hr)	1900 mg/m³	Poland	TWA (8hr)	1000 ppm	Portugal
TWA (8hr)	1900 mg/m³	Romania	TWA (8hr)	1910 mg/m³	Spain
TWA (8hr)	1920 mg/m³	UK	TWA (8hr)	1000 ppm	USA (ACGIH)
TWA (8hr)	1000 ppm	USA (OSHA)			

Engineering:

Maintain general industrial hygiene practice.

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:	*Protective Gloves:*	*Eye Protection:*
Required when vapors/aerosols are generated.	Rubber or plastic	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:	Dark colored liquid	***Odor:***	Alcohol-like odor	***Density at 20° C:***	0.97 g/cm³
Melting Point:	ND	***Boiling Point:***	ND	***Solubility:***	Soluble
pH at 20° C:	ND	***Explosion Limit:***	ND	***Flash Point:***	ND
Thermal Decomp.:	NA				

SECTION 10: *STABILITY AND REACTIVITY*

Conditions to be Avoided:

Heating

Hazardous Polymerization:

Will not occur.

Further Information:

Flammable. Explosive with air in a vaporous/gaseous state.

Hazardous Decomposition Products:

No information available.

Substances to be Avoided:

Risk of ignition or formation of inflammable gases or vapors with: alkali metals, alkaline earth metals, alkali oxides, strong oxidizing agents, halogen-halogen compounds, CrO_3, chromyl chloride, ethylene oxide, fluorine, perchlorates, potassium permanganate/ SULFURIC acid, perchloric acid, permanganic acid, phosphorus oxides, nitric acid, nitrogen dioxide, uranium hexafluoride, hydrogen peroxide

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

Quantitative data on the toxicity of this product is not available.

Potential Health Effects:

Inhalation:	Slight mucosal irritations. Risk of absorption.
Skin Contact:	After long-term exposure to the chemical: dermatitis.
Eye Contact:	Slight irritations.
Ingestion:	Nausea, vomiting, diarrhoea. Systemic effects: euphoria. After absorption: salivation dizziness, inebriation, narcosis, respiratory paralysis.
Further Data:	The product should be handled with the usual care when dealing with chemicals.

Component Toxicity

Acute Toxicity:

Ethanol

LD50: Oral - Rat - 7060 mg/kg

Chronic Toxicity:

Not Available

Additional Data:

APPLICABLE TO MAIN COMPONENT:
The following applies to Ethyl alcohol – as the pure substance:
Specific symptoms in animal studies:
Eye irritation test (rabbit): No irritation (OECD 405).
Skin irritation test (rabbit): No irritation (OECD 404).
Subacute to chronic toxicity
Sensitization:
Sensitisation test (Magnusson and Kligman): negative. (IUCLID)
Bacterial mutagenicity: Salmonella typhimurium: negative. (in vitro) (National Toxicology Program)
Further toxicological information
After inhalation of vapours: slight mucosal irritations. Risk of absorption.
After skin contact: After long-term exposure to the chemical: dermatitis.
After eye contact: Slight irritations.
After swallowing of large amounts: nausea and vomiting.
Systemic effects: euphoria.
After absorption of large quantities: dizziness, inebriation, narcosis, respiratory

APPLICABLE TO MAIN COMPONENT:
The following applies to Ethylene glycol – as the pure substance:
Acute toxicity
LD50 (oral, rat): >2000 mg/kg (IUCLID).
LDLo (oral, human): 786 mg/kg (RTECS).
Specific symptoms in animal studies:
Eye irritation test (rabbit): Slight irritations (IUCLID).
Skin irritation test (rabbit): Slight irritations (IUCLID).
Subacute to chronic toxicity
Sensitization:
Patch test (humans): negative. (IUCLID)
Bacterial mutagenicity: Ames test: negative. (in vitro) (IUCLID)
Mutagenicity (mammal cell test): negative. (in vitro) (IUCLID)
Mutagenicity (mammal cell test): chromosome aberration negative. (in vitro) (National Toxicology Program)
Further toxicological information
After skin contact: Slight irritations. Danger of skin absorption.
After eye contact: Slight irritations.
After swallowing: Nausea, vomiting, agitation, CNS disorders.
Systemic effects: After a latency period: tiredness, ataxia (impaired locomotor coordination), unconsciousness. Damage of: kidneys.

SECTION 12: ECOLOGICAL INFORMATION

Quantitative data on the ecotoxicity of this product is not available.

APPLICABLE TO PARTIAL COMPONENT:
The following applies to Ethyl alcohol – as the pure substance:
Abiotic degradation:
Rapid degradation. (air)
Biologic degradation: Biodegradation: 94 % (OECD 301 E);
Readily biodegradable.
Behavior in environmental compartments:
Distribution: log Pow: -0.31 (experimental) (Lit.);
No bioaccumulation is to be expected (log Pow <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 (IUCLID);
Daphnia toxicity: Daphnia magna EC50: 9268-14221 mg/L /48 h (IUCLID);
Maximum permissible toxic concentration:
Algeal toxicity: Sc.quadricauda IC5: 5000 mg/L /7 d (Lit.); Bacterial toxicity: Ps.putida EC5: 6500 mg/L /16 h (IUCLID); Protozoa: E.sulcatum EC5: 65 mg/L /72 h (Lit.).
Further ecologic data:
BOD5: 0.93-1.67 g/g (Lit.); COD: 1.99 g/g (IUCLID); TOD: 2.10 g/g (Lit.); BOD 74 % from TOD /5 d (IUCLID); COD 90 % from TOD (Lit.);

APPLICABLE TO PARTIAL COMPONENT:
The following applies to Ethylene glycol – as the pure substance:
Biologic degradation:
Biodegradation: 83-96 % /14 d (OECD 301 C).
Readily biodegradable.
Behavior in environmental compartments:
Distribution: log Pow: -1.36 (experimental) (Lit.).
No bioaccumulation is to be expected (log Pow <1).
Ecotoxic effects:
Biological effects:
Fish toxicity: Onchorhynchus mykiss LC50: >18500 mg/L /96 h (External MSDS).
Daphnia toxicity: Daphnia magna EC50: 74000 mg/L /24 h (Lit.).
Bacterial toxicity: Ps.putida EC50: >10000 mg/L /16 h (Lit.).
Maximum permissible toxic concentration:
Algeal toxicity: Sc.quadricauda IC5: >10000 mg/L /7 d (Lit.).
Protozoa: E.sulcatum EC5: >10000 mg/L /72 h (Lit.).
Further ecologic data:
Degradability:
BOD5: 0.78 g/g (IUCLID).
COD: 1.19 g/g (IUCLID).
TOD: 1.29 g/g (IUCLID).
BOD 60 % from TOD /5 d (IUCLID).

Further Data: 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.

SECTION 14: TRANSPORTATION INFORMATION

Land:	***Sea:***	***Air:***
Not subject to transport regulations	Not subject to transport regulations	Not subject to transport regulations

SECTION 15: REGULATORY INFORMATION

Labeling according to EC Directives:

Symbol: F: Highly Flammable
R-phrases: 11: Highly flammable.
S-phrases: 7-16-25: Keep container tightly closed. Keep away from sources of ignition - No smoking. Avoid contact with eyes.

SECTION 16: OTHER INFORMATION

Text of R-phrases under Section 3

11: Highly flammable.

Revision Information

Revision Date:	2009-06-10
Supersedes edition of:	2008-12-01
Reason for revision:	29 CFR 1910.1200 and SOR/88-66 Compliance

Legend

NA: Not Applicable
ND: Not Determined

THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF THE PROPERTIES OF THE PRODUCT.