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MSDS No. EA

P.1/5

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

· CHEMICAL PRODUCT NAME

Ethylaniline

· NAME OF MANUFACTURER/SUPPLITER

Mitsuboshi Chemical Co., Ltd.

· NAME OF SECTION

Technical Division

· ADDRESS

14, Kitanoharacho Kamigamo Kita-ku Kyoto Japan

· TELEPHONE NUMBER

075-781-1177

• FAX NUMBER

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2. COMPOSITION/INFORMATION ON INGREDIENTS

• SUBSTANCE/MIXTURE

SUBSTANCE

· CHEMICAL NAME(GENERIC NAME)

N-Ethylaniline

· SYNONYM(S)

N-Ethylbenzeneamine

· CAS REGISTRY NUMBER

103-69-5

· INGREDIENTS AND COMPOSITION

More than 98.5%

· CHEMICAL FORMULA(CONSTITUTIONAL FORMULA, STRUCTUAL FORMULA)

C6H5NHC2H5

· UN CLASS: 6. 1 (Poisonous substances)

• UN No. : 2 2 7 2

3. HAZARDS IDENTIFICATION

· CLASS NAME OF HAZARDOUS CHEMICALS FOR MSDS IN JAPAN

Acute toxic substances

· PHYSICAL AND CHEMICAL HAZARDS

Vapours may catch fire at high temperature.

· ADVERSE HUMAN HEALTH EFFECTS

Toxic by inhalation and if swallowed.

Irritating to eyes and skin.

• ENVIRONMENTAL EFFECTS

Toxic to fish

4. FIRST - AID MEASURES

· EYE CONTACT

Remove all chemicals from contact with the victim's eyes immediately and rinse the eyes with clean water for at least 15 minutes.

If there is pain, a physician should still examine the eyes.

· SKIN CONTACT

Remove all contaminated clothing, shoes and socks from the affected areas as quickly as possible.

Wash the affected areas under tepid running water using a mild soap.

INHALATION

Remove the victim from the contamination immediately to fresh air.

If breathing is weak, irregular or has stopped, open his airway, loosen his collar and belt and administer artificial respiration.

Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

INGESTION

Rinse mouth with water. Try to get the victim to vomit if there in possible.

Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

5. FIRE - FIGHTING MEASURES

· SPECIFIC HAZARDS WITH REGARD TO FIRE - FIGHTING MEASURES

Dry chemical powder, carbon dioxide or dry sand should be used for small fires.

Big fires are best controlled by foam.

Water may infect extinguishments because of growing fires.

Apply water to cool and protect surrounding area.

Keep personnel removed from and upwind of fire.

Move container from fire areas if it can be done without risk.

Firefighters should wear proper protective equipment.

Toxic gases (nitrogen oxides, carbon monoxide) will form upon combustion.

· EXTINGUSHING MEDIA

Dry chemical powder, foam, carbon dioxide, dry sand or water spray.

6. ACCIDENTAL RELEASE MEASURES

Remove to upwind of fire.

Evacuate non essential personnel.

Shut off all sources of ignition; No flares, smoking, or flames in area.

For small spills, absorb spill with inert material (e.g., absorbents, oil catchers or wood - wastes), then place in a chemical waste containers.

For large spills, dike for later disposal, cover with foam, then take up and place in closed container.

Prevent spills from entering sewers, watercourses or low areas.

7. HANDLING AND STORAGE

HANDLING

Use only in the well - ventilated areas.

Shut off all gas pilot and electrical (spark or hot wire) igniters and other sources of ignition.

Do not breathe vapor.

Avoid contact with skin or eyes.

Make available in the work area emergency shower and eyes wash.

STORAGE

Store in a cool, well - ventilated location.

Keep away from heat or sunlight.

Keep containers tightly closed when in not use.

Keep at temperature not exceeding ordinary temperature.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

· CONTROL PARAMETERS

 $ACGIH(1993 \sim 94)$ Not established

• ENGINEERING MEASURES

Use only with adequate ventilation and in closed system.

• PERSONAL PROTECTIVE EQUIPMENT

To prevent any contact, use the below - mentioned equipment:

RESPRATORY PROTECTION; Industrial Canister gas masks

EYE PROTECTION; Safety glasses, Face shield

HAND, SKIN AND BODY PROTECTION; Impervious clothing, Chemical - resistant

gloves, apron and impervious boots.

9. PHYSICAL AND CHEMICAL PROPERTIES

· APPEALANCE, PHYSICAL STATE, FORM, COLOUR, ODOUR

Light yellow or Light brown with characteristic odour.

- DENSITY ; 0. 9625 (20°C)
- · BOILING POINT ; 206℃
- MELTING POINT ; -63.5° C
- VAPOUR PRESSURE ; 1 3 3 Pa (0. 9 9 mmHg) (3 8. 5°C)
- SOLUBILITY IN WATER; 0.46% (20°C)
- · SOLUBILITY IN ORGANIC SOLVENTS; soluble

10. PHYSICAL HAZARD (STABILITY AND REACTIVITY)

- FLASH POINT ; 91°C
- · AUTOIGNITION TEMPERATURE ; Not available
- · UPPER EXPLOSION LIMIT; Not available
- · LOWER EXPLOSION LIMIT; Not available
- FLAMMABILITY
- · NON SPONTANEOUS COMBUSTIBILITY
- · NON REACTVITY WITH WATER OR OXYGEN
- STABILITY and REACTIVITY; This material is stable and uncreative under normal and anticipated storage and handling conditions.

1 1. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Oral LD50(rat) 382 m g/kg

SUB - CHRONIC TOXICITY

Less than 1 mg/kg/day (NOEL) (rat)

· CHRONIC TOXICITY

Liver or kidney et.al., effects.

Blood disturbances (metohemoglobin)

· CORROSIVE PROPERTIE

Not available

· IRRITANT PROPERTIE

The material was painful and irritating to soft skin and eyes.

· CARCINOGENIC EFFECTS

Not available

· MUTAGENIC EFFECTS

Not available

· EFFECTS ON THE PERPRODUCTIVE SYSTEM

Not available

TERATOLOGY

Not available

· ALLERGENIC AND SENSITIZING EFFECTS

Not available

1 2. ECOLOGICAL INFORMATION

- · BIODEGRADABILITY: This substance is not good biodegradable.
- · BIOACCUMULATION: This substance is low bioaccumulation.
- FISH TOXICITY: (killifish) LC50(48hr) 105 mg/l

13. DISPOSAL CONSIDERATION

Burn in a chemical incinerator equipped with an afterburner and scrubber.

Do not flush into the sewer.

14. TRANSPORT INFORMATION

Keep away from source of ignition.

Follow all regulations in your country.

15. REGULATORY INFORMATION

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

16. OTHRE INFORMATION

• REFERENCES

- 1. RTECS No. BX 9780000
- 2. Merck and Co., Inc. The Merck Index 11th Edit. (1989)
- 3. The Sigma Aldrich Library of Chemical Safety Data. Edit. 1 (1985)
- 4. Kagakuhin Anzenkanri Data Book(Kagaku kogyo Nipposha)Vol.1, p.571 (1993)

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