

Safety Data Sheet

Product name : Solution-D

Date of Issue : Feb 4, 2004

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1. IDENTIFICATION

Product Name : Solution D
Manufacturer : ELM Inc.
Address : 2398, Kaseda Miyabara, Minamisatsuma, Kagoshima, Japan
Section : 1st Development Department
Info Phone : +81-993-53-6930
Fax : +81-993-53-7160
Emergency Phone : +81-993-53-6930
Reference Number : B-61
Intended Use : Detergent

2. HAZARDS IDENTIFICATION

【GHS CLASSIFICATION】

PHYSICAL AND CHEMICAL HAZARDS

Flammable liquids : Not applicable

HEALTH HAZARDS

Acute toxicity Oral : Not applicable
Acute toxicity Dermal : Not applicable
Acute toxicity Inhalation (gas) : Not classified
Acute toxicity Inhalation (vapor) : Not classified
Skin corrosion/irritation : Category 3
Serious eye damage/eye irritation : Category 2B
Respiratory sensitization : Classification not possible
Skin sensitization : Not applicable
Germ cell mutagenicity : Classification not possible
Carcinogenicity : Classification not possible
Reproductive toxicity : Classification not possible
Specific target organ toxicity – Single exposure : Classification not possible
Specific target organ toxicity –Repeated exposure : Classification not possible
Aspiration Hazard : Classification not possible

ENVIRONMENTAL HAZARDS

Hazardous to the aquatic environment acute : Classification not possible
Hazardous to the aquatic environment Chronic : Classification not possible

【ALLOCATION OF LABEL ELEMENTS】

HAZARD PICTOGRAMS : None
SIGNAL WORD : Warning
HAZARD STATEMENT : Causes skin irritation
: Causes eye irritation

PRECAUTIONARY STATEMENT

: As a precaution against skin irritation, avoid contact with skin. In case of contact, wash away with soap immediately.
: As a precaution against eye irritation, avoid contact with eyes. In case of contact, rinse with plenty of water immediately and consult a physician.
: When using, wear protection goggles, gloves and protection cloths such as long sleeved shirts and full length pants.
: Wash limbs with soap, gargle and wash eyes thoroughly after each use.

3. COMPOSITION / INFORMATION OF INGREDIENTS

SUBSTANCE/MIXTURE : Mixture
CHEMICAL NAME / ACTIVE INGREDIENT : (1) Lauryl dimethylaminoacetic acid betaine
OTHER INGREDIENTS : (2) Magnesium chloride hexahydrate
CHEMICAL FORMULA : $C_{18}H_{35}NO_4$
CONTENTS : Non-disclosure
CAS REGISTRY NUMBER : (1) 683-10-3, (2) 7786-30-3
PRTR : No information
CHEMICAL SUBSTANCES AND REGULATION : (1) 2-2709, (2) 1-223

4. FIRST-AID MEASURES

INHALATION:

Expose to fresh air immediately. Cover the body with blanket to keep warm, then rest.
If signs/symptoms persist, consult a physician.

SKIN CONTACT:

Wash away with a large amount of water and soap. Change cloths after use and do not do the laundry with other cloths.

EYE CONTACT:

Flush eyes with a large amount of water immediately for more than 15 minutes. Get immediate medical attention.

IF SWALLOWED:

Rinse the mouth thoroughly and do not induce vomiting. Call a physician.

5. FIRE-FIGHTING MEASURES

SUITABLE FIRE EXTINGUISHER : Water, Foam, Powder, Carbon dioxide
NOT SUITABLE FIRE EXTINGUISHER : None in particular
SPECIFIC HAZARD IN CASE OF FIRE : None in particular
FIRE-FIGHTING MEASURE : Extinguish the origin of fire immediately with fire extinguisher.
: Sprinkle water to cool down container and surrounding equipment.
: Fight the fire in the windward.

6. ACCIDENTAL RELEASE MEASURES

HUMAN HEALTH PRECAUTION : Ventilate enough during use in indoor place.
: In case of leakage, prohibit unauthorized staff from entering the area.
: Wear protection equipment.

ENVIRONMENTAL PRECAUTION

: Do not release into river, sewer and fish-farming pond.
: Ensure leaking liquid do not run into river and fish-farming pond.

CLEANING UP METHODS

: In of case a small quantity, absorb leaking liquid with absorbent such as sawdust, soil, sand and waste cloth. Then wipe off the rest with waste cloth or dust cloth.
: In case of a large quantity, shut off sources of ignition and prevent more leaking and collect leaking liquid into metal-covered containers with vacuum pump or shovel.

7. HANDLING AND STORAGE

HANDLING : Use in a well-ventilated place.
: Locate an equipment to wash eyes and body which is available for emergency in work place.

- : Close container tightly after each use.
- : Avoid contact with eyes, skin and clothes.
- : Use protection goggles and gloves.
- : Wash hands and face, then gargle after each use.

PRECAUTION : Not applicable

SAFE HANDLING PRECAUTION : Not applicable

STORAGE : Keep container tightly closed. Keep away from source of ignition and direct sunlight. Store in a cool place.

: Keep out of small children

RECOMMENDED SAFE MAERIALS FOR CONTAINER : Glass bottle or Polyethylene bottle

8. EXPOSURE CONTROL/PERSONAL PROTECTION

EQUIPMENT MEASURES : No information

EXPOSURE LIMITS : Control concentration: Not Specified

: Acceptable concentration: Not Specified

MEASURING METHODS : No information

RESPIRATORY PROTECTION : Not required

PROTECTION GOGGLES : Required

PROTECTION GLOVES : Required

PROTECTION WEARS : Long sleeves shirt and long pants required

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Clear and light yellow liquid

ODOR : Peculiar odor.

PH (1% aq.soln) : 4.5 - 7.0

MELTING/FREEZING POINT : No information

BOILING POINT(°C) : No data

FLASH POINT : Unmeasurable

IGNITION POINT : None

FLAMMABILIT : None

EXPLOSIVE LIMITS : None

VAPOR PRESSURE (mmHg) : No data

DENSITY (Air=1) : 1.00-1.02 g/cm³ (20°C)

SOLUBILITY IN WATER : Soluble

PARTITION COEFFICIENT N-OCTANOL/WATER	: No data
DECOMPOSITION TEMPERATURE	: No data
DISSOCIATION CONSTANT	: No data
VISCOSITY(mPa s/25°C)	: 40

10. PHYSICAL HAZARD (STABILITY AND REACTIVITY)

STABILITY	: Stable under normal condition and anticipated storage
HAZARDOUS POLYMERIZATION	: No information
CONDITION TO AVOID	: No information
INCOMPATIBILITY	: No information
HAZARDOUS DECOMPOSITION PRODUCTS	: No information

11. TOXICOLOGICAL INFORMATION

Acute toxicity Oral	: No information
Acute toxicity Dermal	: No information
Acute toxicity Inhalation (gas)	: No information
Acute toxicity Inhalation (vapor)	: No information
Skin corrosion/irritation	: Slight irritation
Serious eye damage/eye irritation	: Slight irritation
Respiratory sensitization	: No information
Skin sensitization	: Negative
Germ cell mutagenicity	: None
Carcinogenicity	: None
Reproductive toxicity	: No information
Specific target organ toxicity – Single exposure	: No information
Specific target organ toxicity –Repeated exposure	: No information
Aspiration Hazard	: No information

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Carp : No information

Shellfish : No information

Algae : No information

RESIDUAL EFFECT/DEGRADABILITY : No information

BIOACCUMULATION : No information

MOBILITY IN SOIL : No information

13. DISPOSAL CONSIDERATION

Dumping or leaving unnecessary chemical might cause unexpected accident. Deal with in proper way following legal regulations. Deal with empty bottle and bag in proper ways. It is recommended to be disposed by Industrial waste disposer following legal regulations.

14. TRANSPORT INFORMATION

SPECIFIC SAFETY MEASURES AND CONDITIONS

: Ensure that there is no damage, rust and leakage of container before shipment. Load with no collapse and fall and ensure to prevent load collapse.

: Top Load Only

INTERNATIONAL REGULATION

UN Classification : Not applicable

UN Number : Not applicable

DOMESTIC REGULATION

LAND TRANSPORTATION

Fire Defense Law : Not applicable

Poisonous and Hazardous Control Law : Not applicable

MARINE TRANSPORTATION

Ship Safety Law : Not applicable

AIR TRANSPORTATION

Aviation Law : Not applicable

15. REGULATORY INFORMATION

LAW CONCERNING POLLUTANT RELEASE AND TRANSFER REGISTER

	: Not applicable
INDUSTRIAL SAFETY AND HEALTH LAW	: Not applicable
POISONOUS AND HAZARDOUS CONTROL LAW	: Not applicable
FIRE DIFENSE LAW	: Not applicable
CHEMICAL SUBSTANCES AND REGULATION	: (2-2709) (1-223)
SHIP SAFETY LAW	: Not applicable
AVIATION LAW	: Not applicable

16. OTHER INFORMATION

REFERENCES:

SDS for Materials

Website of National Institute of Technology and Evaluation

This SDS is based on currently available documents. Regarding Physical and chemical properties and Hazards identifications, however, it does not guarantee the accuracy. The precautionary statement above should be applied under normal conditions or situations. In case of use under special conditions, appropriate measures are needed for each use.