Material Safety Data Sheet

1. PRODUCT AND COMPANY INFORMATION

Product name : InnoSol-A100

Company : Innochemtech Ltd.
Address : 15, Munpyeonseo-ro 18beon-gil, Daedeok-gu, Daejeon, Republic of Korea
Telephone : +82 42 822 5582
Fax : +82 42 367 5582
E-mail : kbg100488@innochemtech.com

Recommended use : Anion Exchange Ionomer

2. HAZARDS IDENTIFICATION

Hazard·Risk Classification

Physical hazard : Flammable Liquids - Category 4

Health hazards : Skin/ Eye Irritation - category 2, Reproductive toxicity - category 1B
Specific Target Organ Toxicity (single exposure) - Category 3
Specific Target Organ Toxicity (single / repeated exposure) - Category 1
- Target Organs : nervous system, liver

Environment hazard : Not applicable

Label element including precautionary statements

Symbols

Signal word : Danger

Hazard statements

H315 Causes skin irritation
H319 Causes serious eye irritation
H360 May damage fertility or the unborn child

Precautionary statements

Prevention

P201 Obtain special instruction before use.
P202 Do not handle until all safety precautions have been read and understand.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Responses

P305+P351+P338 If in eyes : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists : Get medical advise/attention.

P332+P313 If Skin irritation occurs : Get medical advise/attention.

P362 Take off contaminated clothing and wash before reuse.

Storage

P405 Store locked up.

Disposal P501 Dispose of contents/ container to an approved waste disposal plant.

NFTA Rating

Health : 2 Flammability : 2 Reactivity : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No.	EINECS No.	Conc. %
1-Methyl-2-pyrrolidone	872-50-4	212-828-1	70
Phenol, 2,6-dimethyl-, homopolymer	25134-01-4	No data available from ECHA	20
Etc.	-	-	< 10

4. FIRST AID MEASURES

General advice

Consult physician. Show this safety data sheet to the doctor in attendance.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Rinse mouth with water. Consult a physician.

Other medical attention

Medical personnel should be aware of the protective measures of the substance.

Potential heath effect

May be harmful if swallowed.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, carbon dioxide

Specific hazards arising from the chemical

No data available

Special protective equipment for fire-fighters

Use water spray to cool unopened containers.

Fire fighters should enter area wearing respiratory protection and protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear protective gloves/protective clothing/eye protection/face protection.

Ensure adequate ventilation.

Remove all sources of ignition.

Beware of vapors accumulating to form explosive concentrations.

Avoid contact with skin and eyes.

Avoid inhalation of vapor, mist or gas.

Environmental precautions

Don't dispose the product into drainages.

Methods and materials for containment and cleaning up

Collect with non-combustible absorbent materials.(sand and soil)

7. HANDLING AND STORAGE

Precautions for safe handling

Wear protective gloves/protective clothing/eye protection/face protection.

Do not spray on an open flame or other ignition source.

Provide forced air ventilation in tanks and confined spaces.

Avoid contact with skin and eyes.

Avoid inhalation of vapor, mist or gas.

Use explosion-proof equipment.

Keep away from sources of ignition. - No smoking -

Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

Keep container tightly closed.

Avoid direct sunlight, heat sources, and strong oxidizing agents.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Components with workplace control parameter

KOSHA : No data available

US OSHA : No data available

Appropriate engineering controls : Ventilation

Personal protective equipment

Respiratory protection : Approved respirator equipped with cartridge for organic vapors

Eye protection : Protective goggles

Hand protection : Chemical resistant gloves

Skin and body protection : Working clothes

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Form : Liquid , Color : dark brown.

Odour : No data available

Odour Threshold : No data available

pH : 7.5 ~ 8.5 at 20 ℃ ※ Sample : H2O = 1 : 5 (V/V)

Melting point/freezing point : -24 ℃

Initial boiling point : 200 ℃

Flash point : 90 ℃ - closed cup

Evaporation rate : No data available

Flammability (soild, gas) : No data available

Upper/lower flammability or explosive limits : No data available

Vapour pressure : No data available

Water solubility : No data available

Vapour density : No data available

Relative density : 1.0 g/ml at 20 ℃

Partition coefficient (n-octanol/water) : No data available

Auto-ignition temperature : No spontaneous combustion under 200 ℃

Decomposition temperature : No data available

Viscosity : > 1,500 mPa . s (cP) at 20 ℃

Molecular mass : No data available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Direct sunlight, heat, flames and sparks.

Incompatible materials

Strong oxidizing agents, Strong acids, Strong reducing agents

Hazardous decomposition products

Carbon oxides, Nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - Rat - 3.914 mg/kg

LDLO Inhalation - Rat - 4 h - > 5100 ppm

LD50 Dermal - Rabbit - 8.000 mg/kg

Skin corrosion/irritation

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Damage to fetus possible

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50 - other fish - 4.000 mg/l - 96 h

LC50 - Leuciscus idus (Golden orfe) - > 500 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - > 1.000 mg/l - 24 h

Toxicity to bacteria LC50 - Bacteria - > 9.000 mg/l

Persistence and degradability

Biodegradability Result: 90 % - Readily biodegradable

Bioaccumulative potential : No data available

Mobility in soil : No data available

Other adverse effects : No data available

13. DISPOSAL CONSIDERATIONS

Disposal consideration

Observe all environmental regulations.

Disposal precaution

Avoid disposing to the environment.

14. TRANSPORT INFORMATION

UN TDG : Not dangerous goods

IATA : Not dangerous goods

IMDG : Not dangerous goods

Marine pollution : Not applicable

Special precautions for user : No data available

15. REGULATORY INFORMATION

Korea Industrial Safety and Health Act (GHS) :

Skin / Eye Irritation - Category 2 Reproductive toxicity - Category 1B

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Korea Hazardous Materials Safety Control Act

4th group (Soluble Liquids) 3rd class petroleums

Korea Chemicals Control Act : Not toxic chemical

Korea Persistant Organic Pollutants Control Act : Not applicable

US OSHA Hazards (GHS) : Skin / Eye Irritation, Reproductive toxicity

16. OTHER INFORMATION

Issued Date : 2016. 03. 23.

Revision No. : 1

Revision Date : 22/ 04/ 2021

References

- Toxic & ecological information : OECD SIDS, ECHA, US NLM, HSDB, IARC, CCRIS, JP NITE

Acronyms and Websites

- ECHA : European chemical agency, http://echa.europa.eu/
- US NLM : U.S. National Library of Medicine, http://chem.sis.nlm.nih.gov/chemidplus/
- HSDB : US Hazardous Substances Data Bank, http://toxnet.nlm.nih.gov/
- KOSHA : The Korea Occupational Safety and Health Agency, http://www.kosha.or.kr/
- CCRIS : US Chemical Carcinogenesis Research Information System, http://toxnet.nlm.nih.gov/
- IARC : International Agency for Research on Cancer, http://monographs.iarc.fr/
- JP NITE : Japan National Institute of Technology and Evaluation, http://www.safe.nite.go.jp/

○ This MSDS is composed in line with The Korea Occupational Safety and Health Act Article 41 to protect the health of the employees, and for documentation.

○ This MSDS is composed with reference to documents and criteria provided by KOSHA.