Safety Data Sheet

1. PRODUCT AND COMPANY INFORMATION

Product name : OPIDEX OPA Solution

Company : Firson Co., Ltd.

Address : #47, Baekseokgongdan 1-ro, Seobuk-gu, Cheonan-si, Chungcheongnam-do,

Republic of Korea

Telephone : +82 1833 8200

Fax : +82 41 566 8321

Recommended use of the chemical and restrictions on use

Recommended use : Sterilizing agent and disinfectant for medical instrument

Restrictions on use: Foodstuffs

2. HAZARDS IDENTIFICATION

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Physical hazard: Not applicable

Health hazard: Eye Irritation - Category 2

Environment hazard: Aquatic Environment - Chronic 3

Label elements including precautionary statements

Symbol Signal word: Warning



Hazard statements H319 Causes serious eye irritation

H412 Harmful to aquatic life with long lasting effects

Precautionary statements

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

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

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 advice/attention.

Storage Not applicable

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

NFPA Rating

 $Health: 1 \qquad \qquad Flammability: 0 \qquad \qquad Reactivity: 0 \qquad \qquad Water \ reactivity: 0$

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No.	EINECS No.	Conc. %
ortho-Phthalaldehyde	643-79-8	211-402-2	0.55 %
Dibasic potassium phosphate	7758-11-4	231-834-5	0.655 %
Monobasic potassium phosphate	7778-77-0	231-913-4	0.19 %
Triethylene Glycol	112-27-6	203-953-2	0.1 %
Polyoxyethylene(12-14) Alkyl Ether	68439-50-9	939-912-7	0.1 %
Benzotriazole	95-14-7	202-394-1	0.01 %
Citric Acid Hydrate	5949-29-1	200-662-2	0.0001 %
Trisodium Hydroxyethylethylenediamine Triacetate	139-89-9	205-381-9	0.0002 %
Alizarine Cyanine Green F	4403-90-1	224-546-6	0.0002 %
Purified Water	7732-18-5	231-791-2	98.5945 %

4. FIRST AID MEASURES

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.

If inhaled

If breathed in, move person into fresh air.

If not breathing, give artificial respiration.

Consult a physician.

If swallowed

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 health effect

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point : No flash occurred under 250 ℃ (Cleveland open cup)

Autoignition temperature: No spontaneous combustion under 200 °C

Suitable extinguishing media

Water spray, alcohol-resistant foam, 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

Do not eat, drink or smoke when using this product.

Avoid contact with eyes.

Environmental precautions

Don't dispose the product into drainages.

Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Wash hands thoroughly after handling.

Avoid contact with eyes.

Do not eat, drink or smoke when using this product.

Conditions for safe storage

Keep container tightly closed.

Keep in a dry and well-ventilated place. Keep cool.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Components with workplace control parameter

KOSHA: No data available

US ACGIH: No data available

Appropriate engineering controls: Emergency shower

Personal protective equipment

Respiratory protection: General vapor mask

Hand protection : Protective gloves
Eye protection : Protective goggles

Skin and body protection: Working clothes

9. PHYSICAL AND CHEMICAL PROPERTIES

State: Liquid at 20 °C

Flash point: No flash occurred under 250 °C (Cleveland open cup)

Autoignition temperature: No spontaneous combustion under 200 °C

 $pH: 6.5 \sim 7.5$ at 20 °C

Viscosity : < 2 mPa \cdot s (cP) at 20 °C

Density: 1.0 at 20 $^{\circ}$ C

Water solubility: Soluble at 20 ℃

Boiling point (Initial) : > 95 °C

Explosive properties: No self-reaction hazard ** UN TDG test & criteria - Test E3

Oxidizing properties: No oxidizing hazard
** UN TDG test & criteria - Test O2

Vapour pressure : No data available

Freezing range (Initial): No data available

Decomposition temperature: No data available

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

Evaporation rate: No data available

Lower explosion limit / Upper explosion limit : No data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

No data available

Materials to avoid

Substances which, in contact with water, emit flammable gases

Hazardous decomposition products

Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Skin rabbit LD50 : No data available Inhalation rat LC50 : No data available

Respiratory sensitization: No data available

Skin sensitization

Germ cell mutagenicity: No data available

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure (GHS): No data available

Specific target organ toxicity - repeated exposure (GHS): No data available

Aspiration hazard: No data available

12. ECOLOGICAL INFORMATION

Toxicity

Crustacean LC50 : > 10 mg/L, 48 h Algae EC50 : No data available

Persistence and degradability : No data available

Bioaccumulative potential : No data available

Mobility in soil : No data available

Other adverse effect : No data available

13. DISPOSAL CONSIDERATIONS

Disposal consideration

Observe all environmental regulations.

Disposal precaution

Keep in suitable, closed containers for disposal.

14. TRANSPORT INFORMATION

UN TDG: Not dangerous goods

IATA: Not dangerous goods

IMDG: Not dangerous goods

Marine pollution: Not applicable

Special precaution

Fire EmS Guide: F-A (Recommendation)

Spillage EmS Guide: Not dangerous goods

15. REGULATORY INFORMATION

Korea Industrial Safety and Health Act (GHS):

Eye Irritation - Category 2

Aquatic Environment - Chronic 3

Korea Hazardous Materials Safety Control Act : Not hazardous material

Korea Chemicals Control Act : Not toxic chemical

Korea Persistent Organic Pollutants Control Act : Not applicable

US OSHA Hazards (GHS): Eye Irritation, Chronic Aquatic Environment

16. OTHER INFORMATION

Issued Date : 2020. 01. 05.

Revision No. : 1

Revision Date: 2023, 01, 10,

References

- GHS Classification:

Korea SDS Testing Lab Certificate (Report No. 2016-03-002139), US NLM

- Physical and chemical properties : Korea SDS Testing Lab Certificate
- Transport information : Korea SDS Testing Lab Certificate
- 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/

* Hazards Testing and Classification

Korea SDS Testing Laboratory

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The product composition is provided by the mentioned company of this SDS' section 1. This SDS 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 SDS is composed with reference to documents and criteria provided by KOSHA.

