



SAFETY DATA SHEET

NIXOL A-2002H

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1. IDENTIFICATION

A. Product name

- NIXOL A-2002H [007-445]

B. Recommended use and restriction on use

- General use : Flexible Polyurethane Foam
 - Restriction on use : Not available

C. Manufacturer / Supplier / Distributor information

- Company name : KPX Chemical Co., Ltd.
 - Address : 103, Napdo-ro, Nam-gu, Ulsan, 44781, Republic of Korea
 - Dept. : R&D Lab
 - Telephone number : +82-52-279-0321
 - Emergency telephone number : +82-52-279-0200
 - Fax number : +82-52-268-6410
 - E-mail address : jspark@kpxchemical.com

2. HAZARD IDENTIFICATION

A. GHS Classification

- Skin sensitization : Category1

B. GHS label elements

o Hazard symbols



o Signal words

- Warning

o Hazard statements

- H317 May cause an allergic skin reaction

o Precautionary statements

1) Prevention

- P261 Avoid breathing gas/mist/vapours/spray.
 - P272 Contaminated work clothing should not be allowed out of the workplace.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.

2) Response

- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 - P321 Specific treatment
 - P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 - P363 Wash contaminated clothing before reuse.

3) Storage

- Not applicable

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

C. Other hazards which do not result in classification : (NFPA Classification)

o NFPA grade (0 ~ 4 level)

- Health : 0, Flammability : 1, Reactivity : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
Methyloxirane polymer with oxirane, ether with 1,2,3-propanetriol (3:1)	-	9082-00-2	90~98
Water	Dihydrogen oxide ; Oxidane	7732-18-5	0~5

4. FIRST AID MEASURES**A. Eye contact**

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.
- Go to the hospital immediately if symptoms (flare, irritate) occur.
- Wash thoroughly after handling.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

5. FIREFIGHTING MEASURES**A. Suitable (Unsuitable) extinguishing media**

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

B. Specific hazards arising from the chemical

- Not available

C. Special protective actions for firefighters

- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Do not access if the tank on fire.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly.

6. ACCIDENTAL RELEASE MEASURES**A. Personal precautions, protective equipment and emergency procedures**

- Must work against the wind, let the upwind people to evacuate.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Move container to safe area from the leak area.
- Handling the damaged containers or spilled material after wearing protective equipment.
- Do not direct water at spill or source of leak.
- Avoid skin contact and inhalation.

B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

C. Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Avoid direct physical contact.
- Get the manual before use.
- Refer to Engineering controls and personal protective equipment.
- Do not handle until all safety precautions have been read and understood.
- Do not inhale the steam prolonged or repeated.

B. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Do not apply any physical shock to container.
- Please pay attention to incompatibilities materials and conditions to avoid.
- No open fire.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- o ACGIH TLV
 - Not available
- o OSHA PEL
 - Not available

B. Engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

C. Individual protection measures, such as personal protective equipment

- o Respiratory protection
 - Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
 - Respiratory protection is ranked in order from minimum to maximum.
 - Consider warning properties before use.
 - Any chemical cartridge respirator with organic vapor cartridge(s).
 - Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
 - Any air-purifying respirator with a full facepiece and an organic vapor canister.
 - For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

- **Eye protection**
 - Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
 - Provide an emergency eye wash station and quick drench shower in the immediate work area.
- **Hand protection**
 - Wear appropriate glove.
- **Skin protection**
 - Wear appropriate clothing.
- **Others**
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Liquid(Viscous liquid)
- Color	Unclear Colorless Liquid
B. Odor	Slight
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	Not available
G. Flash point	225 °C
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Negligible at ambient temperature
L. Solubility	Slightly soluble(in water)
M. Vapour density	Not available
N. Specific gravity(Relative density)	1.020 ~ 1.040 (at 25 °C)
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	1,000 ~ 1,500 (cps at 25 °C)
S. Molecular weight	Not available

10. STABILITY AND REACTIVITY

A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

- (Respiratory tracts)
 - Not available

- (Oral)
 - Not available
- (Eye-Skin)
 - May cause an allergic skin reaction

B. Delayed and immediate effects and also chronic effects from short and long term exposure

- Acute toxicity
 - * Oral - ATE MIX : >5000mg/kg
 - [Methyloxirane polymer with oxirane, ether with 1,2,3-propanetriol (3:1)] : LD50 > 10,000 mg/kg Rat (NLM: ChemIDPlus)
 - [Water] : LD50 > 90000 mg/kg Rat (KOSHA)
 - * Dermal - ATE MIX : >5000mg/kg
 - [Methyloxirane polymer with oxirane, ether with 1,2,3-propanetriol (3:1)] : LD50 > 5,000 mg/kg Rabbit (NLM: ChemIDPlus)
 - * Inhalation - ATE MIX : Not available
 - Not available
- Skin corrosion/irritation
 - Not available
- Serious eye damage/irritation
 - Not available
- Respiratory sensitization
 - Not available
- Skin sensitization
 - May cause an allergic skin reaction
- Carcinogenicity
 - * IARC
 - Not available
 - * OSHA
 - Not available
 - * ACGIH
 - Not available
 - * NTP
 - Not available
 - * EU CLP
 - Not available
- Germ cell mutagenicity
 - Not available
- Reproductive toxicity
 - Not available
- STOT-single exposure
 - Not available
- STOT-repeated exposure
 - Not available
- Aspiration hazard
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- Fish
 - Not available
- Crustaceans
 - Not available
- Algae
 - Not available

B. Persistence and degradability

- Persistence
 - [Water] : log Kow = -1.38
- Degradability
 - Not available

C. Bioaccumulative potential

- Bioaccumulative potential
 - Not available
- Biodegradation
 - Not available

D. Mobility in soil

- Not available

E. Other adverse effects

- Not available

13. DISPOSAL CONSIDERATIONS**A. Disposal methods**

- Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.

B. Special precautions for disposal

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION**A. UN No. (IMDG)**

- Not applicable

B. Proper shipping name

- Not applicable

C. Hazard Class

- Not applicable

D. IMDG Packing group

- Not applicable

E. Marine pollutant

- Not applicable

F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- Air transport(IATA): Not subject to IATA regulations.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available

15. REGULATORY INFORMATION**A. National and/or international regulatory information**

- POPs Management Law
 - Not applicable
- Information of EU Classification
 - * Classification
 - Not applicable
 - * Risk Phrases

- Not applicable
- * **Safety Phrase**
 - Not applicable
- o **U.S. Federal regulations**
 - * **OSHA PROCESS SAFETY (29CFR1910.119)**
 - Not applicable
 - * **CERCLA Section 103 (40CFR302.4)**
 - Not applicable
 - * **EPCRA Section 302 (40CFR355.30)**
 - Not applicable
 - * **EPCRA Section 304 (40CFR355.40)**
 - Not applicable
 - * **EPCRA Section 313 (40CFR372.65)**
 - Not applicable
- o **Rotterdam Convention listed ingredients**
 - Not applicable
- o **Stockholm Convention listed ingredients**
 - Not applicable
- o **Montreal Protocol listed ingredients**
 - Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2018-02-20

C. Revision number and Last date revised

- 2 times, 2018-02-20

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).