



SAFETY DATA SHEET

YDPN-638NI

Date of issue: May. 29, 2017

Revision date: Jun. 15, 2022

Version: R0003.0001

1. IDENTIFICATION

A. Product name

- YDPN-638NI

B. Recommended use and restriction on use

- General use : Paints, coatings, adhesives, composite and electronic devices.
- Restriction on use : Not available

C. Manufacturer / Supplier / Distributor information

o Manufacturer information

- Company name : KUKDO Chemical Co., Ltd.
- Address : 61, Gasandigital 2-ro, Gumcheon gu, Seoul, Korea
- Dept. : R&D Center
- Telephone number : +82-2-3282-1560
- Emergency telephone number : +82-2-3282-1560
- Fax number : +82-2-3282-1586
- E-mail address : enp@kukdo.com

o Supplier/Distributor information

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2. HAZARD IDENTIFICATION

A. GHS Classification

- Not applicable

B. GHS label elements

o Hazard symbols

- Not applicable

o Signal words

- Not applicable

o Hazard statements

- Not applicable

o Precautionary statements

1) Prevention

- Not applicable

2) Response

- Not applicable

3) Storage

- Not applicable

4) Disposal

- Not applicable

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(%)
Phenol polymer with formaldehyde, glycidyl ether	-	28064-14-4	100

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.
- Wash contaminated clothing thoroughly before re-using.

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

- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Do not approach the tank surrounded by fire until it is extinguished.
- Use appropriate extinguishing measure suitable for surrounding 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**

- Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.
- Ventilate closed spaces before entering.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Move container to safe area from the leak area.
- Do not direct water at spill or source of leak.

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.
- Notify the central and local government if the emission reach the standard threshold.
- Disposal of waste shall be in compliance with the Wastes Control?Act
- 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

- Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Avoid contact with incompatible materials.
- Comply with all applicable laws and regulations for handling
- Refer to Engineering controls and personal protective equipment.
- Do not inhale the steam prolonged or repeated.

B. Conditions for safe storage, including any incompatibilities

- Avoid direct sunlight.
- Keep in the original container.
- Please pay attention to incompatibilities materials and conditions to avoid.
- Keep sealed when not in use.
- No open fire.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

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

B. Engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

C. Individual protection measures, such as personal protective equipment

- o Respiratory protection
 - 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 vaporcartridge(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.
 - Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- o 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.
- o Hand protection
 - Wear appropriate glove.
- o Skin protection
 - Wear appropriate clothing.
- o Others
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES	
A. Appearance	
- Appearance	Liquid
- Color	Pale Yellow
B. Odor	Not available
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	>245 °C
G. Flash point	293 °C
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	< 20mmHg (25°C)
L. Solubility	Insoluble in water
M. Vapour density	Not available
N. Specific gravity(Relative density)	Not available
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	30,000-40,000cps (52°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

- o (Respiratory tracts)
 - Not available
- o (Oral)
 - Not available
- o (Eye-Skin)
 - Not available

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

- o Acute toxicity
 - * Oral
 - [Phenol polymer with formaldehyde, glycidyl ether] : LD50 > 4000 mg/kg Rat
 - * Dermal
 - [Phenol polymer with formaldehyde, glycidyl ether] : LD50 = 6000 mg/kg Rabbit (EpoxyLite)

- * **Inhalation**
 - Not available
- o **Skin corrosion/irritation**
 - Not available
- o **Serious eye damage/irritation**
 - Not available
- o **Respiratory sensitization**
 - Not available
- o **Skin sensitization**
 - Not available
- o **Carcinogenicity**
 - * **IARC**
 - Not available
 - * **OSHA**
 - Not available
 - * **ACGIH**
 - Not available
 - * **NTP**
 - Not available
 - * **EU CLP**
 - Not available
- o **Germ cell mutagenicity**
 - Not available
- o **Reproductive toxicity**
 - Not available
- o **STOT-single exposure**
 - Not available
- o **STOT-repeated exposure**
 - Not available
- o **Aspiration hazard**
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- o **Fish**
 - Not available
- o **Crustaceans**
 - Not available
- o **Algae**
 - Not available

B. Persistence and degradability

- o **Persistence**
 - Not available
- o **Degradability**
 - Not available

C. Bioaccumulative potential

- o **Bioaccumulative potential**
 - [Phenol polymer with formaldehyde, glycidyl ether] : BCF = 3.40 (Estimate)
- o **Biodegration**
 - Not available

D. Mobility in soil

- [Phenol polymer with formaldehyde, glycidyl ether] : Koc = 4365.16 (log = 3.64 (Estimated from water solubility))

E. Other adverse effects

- Not available

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

- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- It shall be treated by incineration

B. Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION**A. UN No. (IMDG CODE/IATA DGR)**

- Not applicable

B. Proper shipping name

- Not applicable

C. Hazard Class

- Not applicable

D. IMDG CODE/IATA DGR 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.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available
- Air transport(IATA): Not subject to IATA regulations.

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

- o POPs Management Law
 - Not applicable
- o Information of EU Classification
 - * Classification
 - 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
- **Montreal Protocol listed ingredients**
 - Not applicable
- **California Proposition 65**
 - MIBK(CAS No. 108-10-1), <800 ppm

List of substance

Cas No.	28064-14-4
Korea (KECL)	KE-28226
USA (TSCA)	Listed
EU	Polymer
Japan (MITI/ENCS)	7-2044
China (IECSC)	Listed
Canada(DSL/NDSL)	DSL
Australia (AICS)	Listed

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

- May, 29, 2017

C. Revision number and Last date revised

- 3 times, Jun. 15, 2022

D. Other

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