

SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAME :NLG HARDENER

COMPANY IDENTIFICATION

Company name :NITTA CORPORATION (INDUSTRIAL PRODUCTS DIV.)

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2. HAZARD IDENTIFICATION

GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

< Ethyl Acetate >

PHYSICAL HAZARDS

- Explosives :Not applicable
- Flammable gases :Not applicable
- Flammable aerosols :Not applicable
- Oxidizing gases :Not applicable
- Gases under pressure :Not applicable
- Flammable liquids :Category 2
- Flammable solids :Not applicable
- Self-reactive substances and mixtures :Not applicable
- Pyrophoric liquids :Not classified
- Pyrophoric solids :Not applicable
- Self-heating substances and mixtures :Not classified
- Substances and mixture which, in contact with water, emit flammable gases :Not applicable
- Oxidizing liquids :Not applicable
- Oxidizing solids :Not applicable
- Organic peroxides :Not applicable
- Corrosive to metals :Not classified

HEALTH HAZARDS

- Acute toxicity (oral) :Not applicable
- Acute toxicity (skin) :Not applicable
- Acute toxicity (inhalation: gas) :Not applicable
- Acute toxicity (inhalation: vapor) :Not applicable
- Acute toxicity (inhalation: dust, mist) :Category 4
- Skin corrosion / irritation :Category2
- Serious eye damages / eye irritation :Category2
- Respiratory sensitization :Category1
- Skin sensitization :Category1
- Germ cell mutagenicity :Classification not possible
- Carcinogenicity :Classification not possible
- Reproductive toxicity :Classification not possible
- Specific target organ toxicity; single exposure :Category1
- Specific target organ toxicity; repeated exposure :Classification not possible
- Aspiration hazard :Classification not possible

ENVIRONMENTAL HAZARDS

- Aquatic toxicity (acute) :Classification not possible
- Aquatic toxicity (chronic) :Classification not possible

GHS LABEL ELEMENTS INCLUDING PRECAUTIONARY STATEMENTS

SYMBOL



- SIGNAL WORD : Danger
- HAZARD STATEMENT : Highly flammable liquid and water
 May be harmful if swallowed
 Causes serious eye irritation

PRECAUTIONARY STATEMENTS**【Prevention】**

- Wear protective gloves/eye protection/face protection.
- Take precautionary measures against ignition by the static discharge and the spark
- Keep away from heat/open flames/hot surface
- Keep container tightly closed

【Response】

- In case of fire : Use dry chemical powder, carbon dioxide, foam, water spray.
- Inhalation : Move to fresh air and keep at rest in a position comfortable for breathing.
- Eyes contact : Rinse cautiously with water for several minutes.
- Skin contact : Rinse skin with water
- Ingestion : Rinse mouth with water.

【Storage】

- Store in a well-ventilated, cool and dry place.
- Keep away from sources of ignition.

【Disposal】

- Dispose of contents / container to waste in accordance with local / regional / national / international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT DESCRIPTION : Mixture

Ingredients	CAS No.	METI No.	Chemical structure	% by weight
Ethyl Acetate	141-78-6	(2)-726	C ₄ H ₈ O ₂	60
4,4'-Diphenylmethane Di-isocyanate	101-68-8	-	C ₁₅ H ₁₀ N ₂ O ₂	28
Poly-isocyanate	-	-	-	-

4. FIRST AID MEASURES**EYES CONTACT**

- Rinse cautiously with water for several minutes.
- If eye irritation persists, get medical advice/attention.

SKIN CONTACT

- Take off immediately all contaminated clothing.
- Gently wash with plenty of soap and water.
- Get medical advice.

INHALATION

- Move to fresh air and keep at rest in a position comfortable for breathing.
- Get medical advice/attention if you feel unwell.

INGESTION

- Rinse mouth with water immediately.

5. FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA

- Dry chemical powder, carbon dioxide, foam, water spray

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

- Because hazardous gases may be generated during fire-fighting, firefighters have to wear appropriate protective equipment (gloves, glasses, and mask, self-contained breathing apparatus)

6. ACCIDENTAL RELEASE MEASURES

- Use extra personal protective equipment .Keep people away from and up wind of spill/leak.
- Prevent product from entering drain.
- Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container.
- In case of large amount of spillage, contain a spill by banding.
- Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulation.

7. HANDLING AND STORAGE

HANDLING

- Avoid contact with eyes, inhale the abrasion dust of this product.
- Avoid contact with water.
- Take measures to prevent the buildup of electrostatic charge.
- Use explosion-proof equipment.
- Prevent generation of vapor or mist.

STORAGE

- Store in a well-ventilated, cool and dry place.
- Store away from incompatible materials such as oxidizing agents.
- Keep away from flame.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredients		CONTROL LIMIT ppm(mg/m ³)	OCCUPATIONAL EXPOSURE LIMITS ppm(mg/m ³)		
			JSOH OELs(TWA)	ACGIH	OSHA
Ethyl Acetate	TWA	200	200/2007	400	N.A
	STEL	N.A	N.A	N.A	N.A
4,4'-diphenylmethane di-isocyanate	TWA	N.A	0.05	0.051	0.02
	STEL	N.A	N.A	N.A	N.A

Engineering control

- Install a closed system or local exhaust. Also install safety shower and eye bath.

PERSONAL PROTECTIVE EQUIPMENT

- Half or full face piece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc.
- Impervious gloves.
- Safety goggles.
- Impervious protective clothing.
- Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

• General Information	
<ul style="list-style-type: none"> • Form : Liquid • Color : Yellow-brown • Odor : Aromatic odor 	<ul style="list-style-type: none"> • Specific Density : approx.1.0(25°C) • Vapor density : - • Vapor pressure : -
<ul style="list-style-type: none"> • Boiling Range : - • Melting point : - 	<ul style="list-style-type: none"> • Flash point : -4°C • Self-igniting : -
<ul style="list-style-type: none"> • Flammable Limits : Lower 2.2% Upper 11.4% 	<ul style="list-style-type: none"> • Water solubility : In soluble • Other solvent miscible : Soluble in toluene, ethyl acetate or acetones

10. STABILITY AND REACTIVITY

- Chemical Stability : Stable under normal temperatures and pressures.
- Hazardous Decomposition Products : No special reactivity has been reported.
- Conditions to Avoid : Spark, Open flame, Static discharge
- Incompatible materials : Oxidizing agents, Acids, Bases, Reducing agents.
- Hazardous Decomposition Products : Carbon monoxide, Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

- | | |
|-----------------------------------|---|
| ▪ Acute Toxicity : | <4,4'-diphenylmethane di-isocyanate>
orl-rat LD50: >15mg/kg
ihl-rat LC50: >370~490mg/m ³ /4h |
| ▪ Skin corrosion/irritation : | slight irritant |
| ▪ Serious eye damage/irritation : | slight irritant |
| ▪ Germ cell mutagenicity : | N.A. |
| ▪ Carcinogenicity : | IARC = N.A. |
| ▪ Reproductive toxicity : | N.A. |

12. ECOLOGICAL INFORMATION

- Eco toxicity
 - Degradability : N.A.
 - Accumulation : N.A.
 - Fish : N.A.

13. DISPOSAL CONSIDERATIONS

- Dispose in accordance with local / regional / national / international regulations.

14. TRANSPORT INFORMATION

- Land : Transport in accordance with your country and regions regulations.
- Sea : Transport in accordance with IMDG Code.
- Air : Transport in accordance with ICAO-TI/IATA-DGR.
- UN number : 1866
- Proper shipping name : Resin solution, flammable(Polyisocyanate solution)
- Hazard class : 3
- Packing group : II

15. REGULATORY INFORMATION

- Observe the law or regulations of your country about this material.

16. OTHER INFORMATION

The information contained herein is furnished based on various literatures currently available, but may not cover all the facts. It is likely to be revised by a new finding.

It is therefore requested to handle with adequate care.

Close attention is necessary for handling because there is an unknown hazardous property in all chemicals. In user's responsibility, please set safe use conditions.