

**Nippon Polyurethane Industry Co., Ltd.**

High Performance Urethane Department  
15F Mita NN Bldg. 4-1-23, Shiba,  
Minato-ku, Tokyo 108-0014 Japan  
Phone: +81-3-5439-8622 Fax: +81-3-5439-8632

Date of printing: September 8, 2008  
Version: No.2.02  
Date of revision: March 13, 2008  
Date of issue: April 1, 2007

**Product name: CORONATE HL****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name</b>	<b>CORONATE HL</b>
<b>General description</b>	Modified polyisocyanate solution
<b>Manufacturer</b>	<b>Nippon Polyurethane Industry Co., Ltd.</b> 4-1-23, Shiba, Minato-ku, Tokyo Japan
<b>Emergency telephone number</b>	+81-3-5439-8622 High Performance Urethane Department ( Monday ~ Friday, Japan standard time 9:00 a.m. ~ 6:00 p.m.)

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

<b><u>Chemical name</u></b>	<b><u>wt%</u></b>	<b><u>CAS registry</u></b>
Ethyl acetate	25	141-78-6
Modified polyisocyanate	75	Trade secret
Hexamethylene diisocyanate (HDI)	< 1	822-06-0
<b>Control parameters</b>		
Ethyl acetate	400ppm	ACGIH(TLV-TWA)2001
HDI	0.005ppm	ACGIH(TLV-TWA)2001

**3. HAZARDS IDENTIFICATION**

<b>Emergency overview</b>	Flammable liquid. Acute toxic substance. May form explosive gas mixture with air.
<b>Major health hazards</b> (For Ethyl acetate) Respiratory tract irritation, eye irritation, skin irritation, central nervous system depression. (For HDI) Harmful if inhaled, respiratory tract irritation, skin irritation, eye irritation, allergic reactions.	
<b>Physical hazards:</b>	Reaction with water produces heat and carbon dioxide gas. May polymerize. Container may rupture or explode.
Physical form :	Liquid, Color : Pale yellow, Odor : Solvent
<b>Potential health effect</b>	
<b>Eye contact</b> (For Ethyl acetate)	
<b>Short term exposure:</b>	irritation
<b>Long term exposure:</b>	irritation



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(For HDI)

**Short term exposure:** irritation, tearing

**Long term exposure:** same as effects reported in short term exposure

**Ingestion**

(For Ethyl acetate)

**Short term exposure:** irritation, headache, drowsiness, dizziness, loss of coordinating, unconsciousness

**Long term exposure:** not available

(For HDI)

**Short term exposure:** vomiting

**Long term exposure:** not available

**Inhalation**

(For Ethyl acetate)

**Short term exposure:** irritation, headache, drowsiness, dizziness, loss of coordinating, unconsciousness

**Long term exposure:** not available

(For HDI)

**Short term exposure:** irritation, allergic reactions, wheezing, asthma, lung congestion.

**Long term exposure:** lung damage

**Skin contact**

(For Ethyl acetate)

**Short term exposure:** irritation

**Long term exposure:** irritation

(For HDI)

**Short term exposure:** irritation, blisters, rash

**Long term exposure:** itching

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**4. FIRST AID MEASURES**

**Eye contact**

Hold eyelids apart and immediately flush eyes with plenty of clean water for at least 15 minutes and seek immediate medical advice.

**Ingestion**

If swallowed, seek medical advice immediately. Wash out mouth with water.  
Do not induce vomiting.

**Inhalation**

Remove the patient immediately to an area with fresh air. Seek medical attention.

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**Product name: CORONATE HL****Skin contact**

Remove all contaminated clothing and shoes immediately.  
Wash the contaminated area thoroughly with tepid running water followed by soap.  
If irritation persists or inflammation is caused, seek medical advice.

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**5. FIRE FIGHTING MEASURES**

Flash point	3°C, determined by closed cup flash test.
Autoignition temperature	Not available
Explosion limits	Not available
Flammability	Yes
Combustibility	Yes
Oxidizability	None
Self reactivity	None
Dust explosion	None

**General hazard**

During a fire, aerosols or gases may be generated through decomposition.

**Fire fighting instructions**

Positive pressure self-contained breathing apparatus and full protective clothing and gloves should be provided.

Splash water onto drums and facilities which are not on fire to avoid fire spreading and heat evolved.

After the fire is extinguished, neutralize the spilled material with decontaminant.

Restrict entry of unauthorized personnel.

**Extinguishing media:** dry chemical powder, carbon dioxide, large amount of water and foam.

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**6. ACCIDENTAL RELEASE MEASURES****General**

Immediately remove all sources of ignition and flammable material.

In case of fire, use powder or foam as extinguishing media.

Full protective equipment including respiratory protective apparatus should be worn.

Deny entry to unauthorized personnel.

Stay in windward position at the time of disposal.

The hazard area should be well-ventilated.

Safely stop discharge.

**Small spill**



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Neutralize the leakage/spillage with decontaminant, or by admixing it with sand, clay or sawdust.

Dispose it in a chemical waste container.

**Large spill**

Admix with sand, clay or sawdust to prevent the spillage/leakage from further spreading out.

Dispose it in a chemical waste container. This container should not be closed.

Neutralize the residues with decontaminant.

Wash the spillage area clean with water.

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**7. HANDLING AND STORAGE**

**Handling**

The operator should be trained in handling this product.

Appropriate safety measures and protective equipment should be used for this operation.

Provide adequate ventilation and the operator should use protective equipment.

When the drum is pressurized, unscrew the bung slowly to release the pressure before taking it off.

This product should not be filled in an unwashed or wet container.

The use of fire is strictly prohibited in the work area.

Adequate engineering control should be provided for anti-static electricity.

Those who show allergenic and sensitizing effects should not be in charge.

**Storage**

Keep container properly sealed and store indoors in a well ventilated area.

Once opened, the container should be closed and sealed with nitrogen gas to prevent moisture.

If stored outdoors, the container should be covered with waterproof canvas sheet to avoid being exposed in the rain.

The use of fire is strictly prohibited in the work area.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering controls**

Local exhaust ventilation should be provided for indoors use.

Readily accessible eye and hand wash stations should be provided.

**Personal protection**

Chemical goggles, rubber gloves and suitable respiratory equipment.

**Exposure limit:**

Refer to Section 2

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**Product name: CORONATE HL****9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical form	Liquid
Color	Pale yellow
Odor	Solvent
Boiling point	Not available
Vapor pressure	Not available
Evaporation rate	Not available
Freezing point	Not available
Specific gravity	1.086 at 23°C
Initial boiling point	Not available
Viscosity	400 mm <sup>2</sup> /s at 23°C
Solubility (water)	Insoluble
Solubility (other)	Soluble in toluene, ethyl acetate or acetone

Note: The above data are typical physical properties and should not be taken as a specification.

**10. STABILITY AND REACTIVITY****Chemical stability(Condition to avoid)**

High temperature and moisture

**Incompatibility**

This product reacts with materials with active hydrogen groups such as amines and alcohols.

**Hazardous decomposition product**

Reaction with water produces heat and carbon dioxide gas.

**Hazardous polymerization**

will occur. It gets polymerized by alkaline materials or tertiary amines.

**11. TOXICOLOGICAL INFORMATION**

<b>Corrosive properties</b>	Not available
<b>Irritant properties</b> (For Ethyl acetate)	
May cause irritation on mucous membrane.	Will be narcotic.
<b>Allergenic and sensitizing effects</b>	Not available
<b>Acute toxicity</b> (For Ethyl acetate)	
Oral (rat)	LD 50 5,620 mg/kg
Prolonged inhalation may cause acute pulmonary edema.	

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<b>Sub-acute toxicity</b>	Not available
<b>Chronic toxicity</b>	Not available
<b>Carcinogenic effects</b>	Not available
<b>Mutagenic effects</b>	Not available
<b>Effects on the reproductive system</b>	Not available
<b>Teratogenic effects</b>	Not available
<b>Others</b>	Not available

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**12. ECOLOGICAL INFORMATION**

<b>Biodegradability</b>	Not available
<b>Bioaccumulation</b>	Not available
<b>Fish toxicity</b>	Not available
<b>Other information on ecotoxicity</b>	Not available

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

This product should be incinerated in an appropriate facility.  
This product should be treated by authorized agents professionally trained in disposing industrial waste.

**Handling empty container after use**

Empty drum should be left to stand with water and left unsealed for 24 hours.  
Water should subsequently be removed afterward.  
Used container should be punctured and scrapped.

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**14. TRANSPORT INFORMATION**

Proper shipping name:	Resin solution (Modified polyisocyanate solution)
Hazardous class:	3 Flammable liquid
Identification number:	UN 1866
IMDG class:	3 Flammable liquid

Follow all the regulations in your country.

Be sure that the container is tightly sealed, that no leakage is found and that all the necessary indications are specified.

Filling, loading and extracting operations should be performed under the supervision of an authorized operator.

Nitrogen gas should be charged into the container for transportation after filling or extracting.



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**15. REGULATORY INFORMATION**

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Regulatory information with regard to this substance in your country should be examined by your own responsibility.

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**16. OTHER INFORMATION**

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Reason for issue: Update to new format

Prepared by: Technical department

All the chemical materials may present unknown hazards and should be used in caution.

The information herein is given in good faith, but no warranty, express or implied is made.

Consult Nippon Polyurethane Industry Co., Ltd. for further information.

Date of the first issue: June 11, 1987