



# SAFETY DATA SHEET

## ( SDS )

The date of preparation	September 19,2015
Revised date	February 9, 2017
Ver.	GD02

### 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND THE SUPPLIER

Product Name	CORONATE 2793
Manufacturer	TOSOH CORPORATION
Address	3-8-2,SHIBA,MINATO-KU,TOKYO 105-8623, JAPAN
Department in charge	Urethane Division +81-3-5427-6340
Emergency phone number	Urethane Division +81-3-5427-6340
Recommended use and restrictions on use	
General industrial products	

### 2. HAZARD IDENTIFICATION

#### GHS classification

Flammable gases:	Not applicable
Oxidizing gases:	Not applicable
Gases under pressure:	Not applicable
Flammable liquids:	Not classified
Flammable solids:	Not applicable
Oxidizing liquids:	Classification not possible
Corrosive to metals:	Classification not possible

#### Acute toxicity

Oral:	Category 4
Dermal:	Category 4
Inhalation(Gases):	Not applicable
Inhalation(Vapours):	Category 4
Inhalation(Dusts/Mists):	Classification not possible
Skin corrosion/Irritation:	Classification not possible
Serious eye damage/eye irritation:	Classification not possible

#### Sensitization

Respiratory:	Classification not possible
Skin:	Classification not possible
Germ cell mutagenicity:	Classification not possible
Carcinogenicity:	Classification not possible
Reproductive toxicity:	Classification not possible
Specific target organ toxicity (Single exposure):	Classification not possible
Specific target organ toxicity (Repeated exposure):	Classification not possible
Aspiration hazard:	Classification not possible

#### Aquatic environment

Acute hazard:	Classification not possible
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Long-term hazard:  
Hazardous to the Ozone layer:

Classification not possible  
Classification not possible

GHS label elements



**Warning**

Hazard Statement:

Harmful if swallowed  
Harmful in contact with skin  
Harmful if inhaled.

Precautionary statement:

«Precautionary measures»

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
Do not eat, drink or smoke when using this product.  
Not to treat an allergic reaction to a person.  
Keep container tightly closed. (There is a danger of explosion if the carbon dioxide generated when water enters.)

«Measures to be taken»

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.  
IF SWALLOWED: Rinse mouth. Do not induce vomiting.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
In case of fire: Use dry chemical powder, carbon dioxide, foam, large volumes of water spray.  
If spilled : Sprayed with a neutralizing agent to neutralize. Removed by adsorption sand, earth, sawdust, etc.

«Storage»

Store in a well-ventilated place. Keep cool.

«Disposal»

Dispose of contents/container to waste in accordance with local / regional / national / international regulations (to be specified).

Other hazards which do not result in GHS classification:

No information available

Important symptoms:

No information available

Summary of assumed emergency:

No information available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Classification of the chemical substance or/mixture:

Single product

Chemical name or common name:

Modified polyisocyanate

Concentration or concentration range:

Chemical name or common name	Abbreviation	Concentration or concentration range	Reference number in Gazetted List in Japan		CAS No
			Japanese Chemical Substances Control Law (JCSCL)	Japanese Industrial Safety and Health Law	
Modified polyisocyanate	—	> 99 %	Existense (7-820)	Existence	Trade secret

Chemical formula:

Not available

Component subject to regulation :

Ingredient	Japanese Industrial Safety and Health Law	Japanese PRTR Law (Pollutant Release and Transfer Register)
Modified polyisocyanate	Not applicable to the substances for labelling/deliver of documents required in Japanese Industrial Safety and Health Law	Not applicable to the specified chemical substances of Japanese PRTR Law
HDI	Japanese Industrial Safety and Health Law (Article 57-2 of the Law) - SDS require Number 519	Not applicable to the specified chemical substances of Japanese PRTR Law

PRTR Law shows the information for each chemical substances since April, 2010

This product contains following regulated substances. Chemical name : Hexamethylene diisocyanate (HDI), Contents : [0.40 %](representative value), CAS No. : 822-06-0

Impurities and stabilizing additives which contribute to the classification of GHS:

To make this product stabilize, trace additives are included.

### 4. FIRST-AID MEASURES

IF INHALED:

Make an arrangement to get medical attention immediately.

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF ON SKIN:

Remove / Take off immediately contaminated clothing and shoes etc.

Rinse the part that touches the product, by washing with water or lukewarm water flow.

Wash with soap and water.

Seek medical advice or attention, if there are change in the appearance or pain persists.

IF IN EYES:

After washing eyes with clean water for at least 15 minutes, immediately get medical attention.

During washing eyes, open eyelids with fingers and wash so that water can flow all over the eyeball and eyelid.

IF SWALLOWED:

Do not induce vomiting.

Get medical advice/attention immediately.

Rinse mouth well. Seek medical advice/attention immediately.

Spit it in person voluntarily if possible, to vomit.

Most important effects and symptoms:

No information available

Protection for first-aid responders:

No information available

Note to physician:

No information available

## 5. FIRE-FIGHTING MEASURES

Extinguishing media:

Dry chemical powder, carbon dioxide, foam, large volume of water spray

Unsuitable extinguishing media:

Water jet

Specific hazards arising from the chemical if burning:

There is a risk of generating a hazard gas in a fire.

Specific fire fighting measures:

Wear self-contained breathing apparatus and protective gloves, because cracked gas and steam are generated in the case of fire. Water is drained off to the drum, container etc. that have not ignited, and it tries to prevent fire spreading, overheating, and explosion of containers.

After the fire is extinguished, neutralize the spilled material with decontaminant. Do not let outsiders enter the place fire.

Special protective equipment for fire fighter:

In the extinction work, wear self-contained breathing apparatus and protective gloves, because cracked gas and steam are generated.

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Work from upwind side and guide people away from downwind of the leakage.

Better ventilation of the place spilled.

Put on protection glasses, safety gloves.

Restrict entry of unauthorized personnel.

Temporary leak repair parts, stop the leak.

Environmental precautions:

Do not drain the leaked product into the rivers and the sewage directly.

Adhered and collected waste material should be promptly disposed of, in accordance with appropriate laws and regulations.

Method of cleaning up:

Small spill: Remove adsorbed sand, earth, sawdust, etc.

Small spill: If wiping rags, waste paper, etc., remove and store in a container with a lid.

Large spill: As spilled liquid can not spread, enclosed sand, earth, sawdust, etc.

Large spill: Recovered in the liquid container as much as possible.

Large spill: Which could not be recovered sprayed with a neutralizing agent to neutralize or Removed by the above method.

Large spill: Wash the spillage area clean with water.

Prevention measures of secondary disaster:

Immediately remove the nearby ignition source, and prepare fire extinguishing agent.

Use safe tools which will not generate sparks.

## 7. HANDLING AND STORAGE

### Handling

#### Appropriate engineering controls:

Wear appropriate protective goggles, rubber gloves, a gas mask for organic gas.

Handling is performed in a well ventilated place.

#### Local and entire ventilation:

No information available

#### General precautions:

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

The operator should be trained in handling this product.

#### Safe handling advice:

When the pressure in the container is high, loosen the lib slightly, decrease the pressure, and remove the lib.

Working space is a non smoking. Forbid to use the open flame heating element, high-temperature heating elements.

Restrict unauthorised personnel entering.

Do not the filling of container this products to the unwashed containers and attached water containers.

#### Avoid contact:

Pay attention to avoid contact with water or substance which react with this product.

#### Hygiene measures:

Contaminated protective clothing, protective equipment should be replaced as soon as possible.

### Storage

#### Appropriate engineering controls:

No information available

#### Safe storage conditions:

Once a container is opened, the container should be sealed with dry nitrogen or dry air (dew point < -30°C) and be closed tightly.

Keep container tightly closed. Store it in a well-ventilated place.

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

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

#### Safe containers and packaging materials:

Use a packaging container, made from a suitable material that has excellent corrosion resistance, and having airtight. The packaging container should be prescribed in Fire and Disaster Management Act and UN transport regulations.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Facility measures

Facilities in where this material is handled should be structured with the perfectly closed system.

Make available emergency safety shower and eye wash in the work area.

### Administrative levels

Not established

### Occupational Exposure Limits

HDI	0.005ppm	TWA	Japan Society for Occupational Health
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HDI	0.005ppm	TWA	ACGIH
HDI	0.005ppm	TWA	DFG MAK

#### Personal protective equipment

##### Respiratory protection:

Respirator for organic gases

##### Hand protection

Rubber or resin gloves

##### Eyes Protection:

Protective glasses with side version or protection goggles

##### Skin and body protection:

Long sleeve work protective clothing

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Colour:	Pale yellow
Odour(Odour threshold):	Almost odorless
pH:	Not Applicable
Melting point/Freezing point:	Unknown
Boiling point:	Unknown
Initial boiling point:	Unknown
Boiling range:	Unknown
Flash point:	226 °C Cleveland Open Cup
Evaporation rate:	Unknown
Flammability (solid, gas):	Unknown
Lower flammability or explosive limits:	Unknown
Upper flammability or explosive limits:	Unknown
Vapor pressure:	Unknown
Vapor density:	Unknown
Specific gravity (Relative density):	1.11 g/cm <sup>3</sup> (25 °C)
Solubility:	slightly soluble(Water) Soluble(Toluene) Soluble(ethyl acetate) Soluble(Acetone)
Partition coefficient; n-octanol/water:	Unknown
Auto-ignition temperature:	Unknown
Decomposition temperature:	Unknown
Viscosity:	1600 mPa·s (25 °C)
Other information:	No information available

## 10. STABILITY AND REACTIVITY

Stability	Flammability	some
	Ignition quality	na
	Oxidizing	na
	Self-reactive, Explosiveness	na
	Explosive dust	na
	Other	na

#### Reactivity

Exothermic react with water forming CO<sub>2</sub>. Exothermic react with active-hydrogen compound (alcohols,

amine and so on). The polymerization reaction with an alkaline substance, a tertiary amine and so on.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity:

HDI	Oral (rat) : Category 4 : LD50 = 747mg/kg (calculated value) based on CERI Hazard data 2000-50, 2001 (738, 960) and SIDS, 2004 (746, 959)
HDI	Skin (rabbit) : Category 3 : LD50 = 593mg/kg (adopt low value) based on CERI Hazard data 2000-50, 2001 (593), and SIDS, 2004 (599)
HDI	Inhalation (gas) : Not applicable : Liquid (GHS definition)
HDI	Inhalation (vapour) (rat) : Category 1 [Vapour = mist is not mixed almost] : LC50 = 20ppm/4hr (calculated value) based on ATSDR,1998 (0.31mg/L), Ministry of the Environment Risk Assessment Vol.2, 2003 (0.06mg/L) and SIDS, 2004 (0.124 mg/L, 0.31 mg/L, 0.15mg/L) : 'Vapour that dose not contain most of the mist.' (90% or less of the saturated vapour pressure concentration : 70ppm (CERI hazard data 2000-50 (2001)) At the saturated vapour pressure 0.007kPa at 25°C)

### Skin corrosion/Irritation:

HDI	(rabbit) Substance is corrosive to the skin. (SIDS, 2004) : Category 1A - 1C
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### Serious eye damage/eye irritation:

HDI	(rabbit) Substance is corrosive to the eyes. (SIDS, 2004) : Category 1 (Test results compliant with OECD Test Guideline 405)
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### Respiratory sensitization or Skin sensitization:

HDI	respiratory sensitization : Category 1 [There is a respiratory sensitization.] (man) Induce allergic asthma, hypersensitivity pneumonitis, contact hypersensitivity. CERI Hazard data 2000-50 (2001), Ministry of the Environment Risk Assessment Vol.2 (2003), AGCIH (7TH, 2001)
HDI	skin sensitization : Category 1 [There is a skin sensitization.] (guinea pig) Skin sensitization test results were positive. (SIDS, 2004) 'There is a skin sensitization.' : Japanese Society of Occupational and Environmental Allergy / Special committee

### Germ cell mutagenicity:

HDI	Not classified : No data heritable mutagenicity test. No data Germ cell IN VIVO mutagenicity test. Somatic cell IN VIVO mutagenicity tests (micronucleus test) is negative. (SIDS, 2004)
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### Carcinogenicity:

HDI	There was no existing classification and no information. : Classification not possible
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### Reproductive toxicity:

HDI	There was no impact on the occurrence of the next generation of parent animals and breeding performance. (SIDS, 2004)
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### Specific target organ toxicity - Single exposure:

HDI	Category 1 (Respiratory system) :(rat) Inhalation exposure, pulmonary edema and pneumonia were seen. (ATSDR, 1998) (Experimental animal) There are effects in guidance value range of Category 1.
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### Specific target organ toxicity - Repeated exposure:

HDI	Category 1 (Respiratory system) : CERI Hazard data 2000-50 (2001):(man) Irritation of the eyes, nose and throat, and discomfort of cough and chest. (rat) There are inflammation of the windpipe and there are necrosis of the epithelium of the nasal turbinates, and squamous metaplasia of the nasal turbinates. In the lung, there are epithelial formation and interstitial pneumonia. In the nasal cavity, there are degeneration of the olfactory epithelium, and hyperkeratosis and ulceration or erosion. (Experimental animal) There are effects in guidance value
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range of Category 1.

Aspiration hazard:  
Unknown

## 12. ECOLOGICAL INFORMATION

Ecotoxicity

Fish:

HDI No available

Crustacea:

HDI Crustacean (Daphnia magna)  $EC_{50} \geq 89.1 \text{ mg/L/48hr}$  (SIDS, 2004) : Not classified

Algae:

No information available

Persistence/Degradability:

No information available

Bioaccumulative Potential:

No information available

Mobility in soil:

No information available

Hazardous to the Ozone layer:

No information available

Other adverse effects:

Do not dispose into a general environment due to no data in many items.

## 13. DISPOSAL CONSIDERATIONS

Residual wastes:

Disposed of as a solid form by reacting a polyol.

Stirring the liquid neutralizing agent, was added dropwise and allowed to stand for 2 days this product detoxified changed to urea compound.

Dispose of contents/container to waste treatment company having the official approval of laws and regulation.

Incinerated in appropriate facilities.

Contaminated containers and packaging:

Empty container filled with water and allowed to stand for 2 days (Should not be sealed), then, disconnect the water.

Neutralizing agent to put the container, and processes to be washed after neutralizing.

Used container should be punctured and scrapped, so that it is not used for any other purpose.

## 14. TRANSPORT INFORMATION

International Regulations

Land : Transport in accordance with your country and regions regulations.

(RID, ADR, DOT etc.)

Sea : Transport in accordance with IMDG Code.

Air : Transport in accordance with ICAO-TI/ IATA-DGR.

UN number:	Not applicable
Proper shipping name:	— (Modified polyisocyanate)
Hazard class:	Not applicable
Packing group:	Not applicable
Marine Pollutant:	Not applicable
IMDG class:	Not applicable

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 or dry air should be charged into the container for transportation after filling or extracting.

Ship hazardous materials transportation and storage regulations based on the Ship Safety Act:

It corresponds to "poison" hazardous materials, if you want to maritime transport, and transport you necessity to take measures in accordance with the law Ship Safety.

## 15. REGULATORY INFORMATION

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

## 16. OTHER INFORMATION

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When the revision of this SDS is received, please dispose of the old one.

Contact for Description Contents

Please contact to the following our department.



TOSOH

Please contact to our customer services in your region for the product inquiries.

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**TOSOH CORPORATION**

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