

# SAFETY DATA SHEET

### FOR INDUSTRIAL USE ONLY

### Wonderbond(TM) EPI CL-1

### Section 1. Product and company identification

**GHS** product identifier

MSDS Number Product type Material uses Wonderbond(TM) EPI CL-1

300000018165 Crosslinking Agent

: Engineered Wood Applications

Manufacturer/Supplier/Impor

ter

Hexion Inc.

180 East Broad Street Columbus, Ohio 43215 USA

Contact person : 4information@hexion.com

**Telephone** : For additional health and safety or regulatory information, call

1 888 443 9466.

**Emergency telephone number** : For Emergency Medical Assistance

Call Health & Safety Information Services

1-866-303-6949

For Emergency Transportation Information CHEMTREC US Domestic (800) 424-9300 CHEMTREC International (703) 527-3887 CANUTEC CA Domestic (613) 996-6666

### Section 2. Hazards identification

Classification of the substance or mixture

: ACUTE TOXICITY:inhalation - Category 4 SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

RESPIRATORY SENSITIZATION - Category 1

SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

[Respiratory tract irritation] - Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED

EXPOSURE) [respiratory tract] - Category 2

**GHS** label elements

Hazard pictograms

Signal word : Danger

**Hazard statements** 

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated

exposure. (respiratory tract)

### **Precautionary statements**

General : Not applicable.

**Prevention** : Obtain special instructions before use.

Do not handle until all safety precautions have been read and

understood.

Use personal protective equipment as required.

Wear protective gloves. Wear eye or face protection.

In case of inadequate ventilation wear respiratory protection.

Use only outdoors or in a well-ventilated area.

Do not breathe vapor.

Wash hands thoroughly after handling.

Contaminated work clothing should not be allowed out of the

workplace.

**Response** : Get medical attention if you feel unwell.

IF exposed or concerned:

Get medical attention.

#### IF INHALED:

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

for breathing.

Call a POISON CENTER or physician if you feel unwell.

If experiencing respiratory symptoms: Call a POISON CENTER or physician.

#### IF ON SKIN:

Wash with plenty of soap and water.

Take off contaminated clothing.

Wash contaminated clothing before reuse.

If skin irritation or rash occurs:

Get medical attention.

### IF IN EYES:

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical attention.

Storage : Store locked up.

Version:

**Disposal** : Dispose of contents and container in accordance with all local,

regional, national and international regulations.

Other hazards which do not result in classification

None known.

# Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	% by weight	CAS
		number
Polymeric Diphenylmethane Diisocyanate	90 - 100	9016-87-9
Diphenylmethane 4,4'-Diisocyanate (MDI)	50 - 70	101-68-8

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

### Description of necessary first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.

Skin contact

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a

collar, tie, belt or waistband.

### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** 

Protection of first aid personnel

No specific treatment.

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

### **Section 5. Fire-fighting measures**

### **Extinguishing media**

Suitable extinguishing media Unsuitable extinguishing media

- Use an extinguishing agent suitable for the surrounding fire.
- None known.

Specific hazards arising from the chemical

Hazardous thermal decomposition products

- : In a fire or if heated, a pressure increase will occur and the container may burst.
- : Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides

Special protective actions for firefighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and selfcontained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** 

: Avoid dispersal of spilled material and runoff and contact with soil,

waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and material for containment and cleaning up

Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

# Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** 

: Put on appropriate personal protective equipment (see section 8 of SDS). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

# Section 8. Exposure controls/personal protection

#### **Control parameters**

### Occupational exposure limits

Ingredient name	Exposure limits
Polymeric Diphenylmethane Diisocyanate	OSHA PEL (1993-06-30) expressed as CN Time Weighted Average (TWA) 5 mg/m3
	OSHA PEL 1989 Vacated (1989-03-01) expressed as CN
	Time Weighted Average (TWA) 5 mg/m3
Diphenylmethane 4,4'-Diisocyanate	ACGIH TLV (1994-09-01)
(MDI)	Time Weighted Average (TWA) 0.005 ppm
	NIOSH REL (1994-06-01)
	Time Weighted Average (TWA) 0.05 mg/m3 0.005 ppm
	Ceiling 0.2 mg/m3 0.02 ppm
	OSHA PEL (1993-06-30)
	Ceiling 0.2 mg/m3 0.02 ppm

# Recommended monitoring procedures

Medical supervision of all employees who handle or come in contact with isocyanates is recommended including pre-employment and periodic medical examinations. Persons with respiratory problems including asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or skin allergies should be evaluated to determine their suitability for working with this product. Possible reasons for medical exclusion from isocyanate handling areas include pulmonary respiratory allergies such as hay fever, eczema, history of prior isocyanate sensitization, or lack of smell (anosmia). Once a person is accurately diagnosed as sensitized to an isocyanate, no further exposure should be permitted.

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

### **Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### **Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

### Eye/face protection

Safety eyewear complying with an approved standard should be used

when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

### **Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved

standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves

cannot be accurately estimated.

**Body protection**: Personal protective equipment for the body should be selected based

on the task being performed and the risks involved and should be

approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures

should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this

product.

**Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with

an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the

selected respirator.

### Section 9. Physical and chemical properties

#### **Appearance**

Physical state : Liquid Color : Brown.

Odor : Slight musty
Odor threshold : Not available

**pH** : Not applicable.

Melting point/ Freezing point :  $0 \,^{\circ}\text{C} (32.00 \,^{\circ}\text{F})$ 

**Boiling point** :  $208 \, ^{\circ}\text{C} \, (406.40 \, ^{\circ}\text{F})$ 

Flash point : Pensky-Martens Closed Cup: 199 °C (390.20 °F) (ASTM D 93)

Burning time: Not availableBurning rate: Not availableEvaporation rate: Not available

Flammability (solid, gas) : Not available

Lower and upper explosive : Lower: Not available (flammable) limits : Upper: Not available

**Vapor pressure** : 0.00001 mm Hg @ 25 °C (77.00 °F)

Vapor density : Not available

**Relative density** : 1.24 @ 25 °C (77.00 °F)

Bulk density : 10.3 lb/gal

**Solubility** : Not available **Solubility in water** : Reacts

**Partition coefficient: n-** : Not available

octanol/water

**Auto-ignition temperature** : Not available

**Decomposition temperature** : Not available **SADT** : Not available

Viscosity : Dynamic: Not available

Kinematic: Not available

#### Other information

The SDS is not to be used as a specification sheet. For Specific technical information on the product listed above, a sales specification sheet should be obtained from your Hexion representative.

# Section 10. Stability and reactivity

**Reactivity** : Stable under normal conditions.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions**: Under normal conditions of storage and use, hazardous reactions will

not occur.

Conditions to avoid : No specific data.

**Incompatible materials**: Reactive or incompatible with the following materials:

oxidizing materials

**Hazardous decomposition products**: Under normal conditions of storage and use, hazardous decomposition

products should not be produced.

### Section 11. Toxicological information

### **Information on toxicological effects**

#### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Polymeric Diphenylmethane Diisocyanate				
	LD50 Oral	Rat	49,000 mg/kg	-
	LC50 Inhalation	Rat	0.49 mg/l	4 h

	LD50 Dermal	Rabbit	9,400 mg/kg	=
Diphenylmethane 4,4'-Diisocy	yanate (MDI)			
	LD50 Oral	Rat	9,200 mg/kg	-
	LC50 Inhalation	Rat	0.368 mg/l	4 h
	LD50 Dermal	Rabbit	> 10,000 mg/kg	-

Conclusion/Summary : Not available

### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
Polymeric Diphenylmethane	eyes - Mild	Rabbit			-
Diisocyanate	irritant				

Conclusion/Summary

Skin:Not availableeyes:Not availableRespiratory:Not available

**Sensitization** 

**Conclusion/Summary** 

Skin: Not availableRespiratory: Not available

**Mutagenicity** 

Conclusion/Summary : Not available

Carcinogenicity

Conclusion/Summary : Not available

**Reproductive toxicity** 

Conclusion/Summary : Not available

**Teratogenicity** 

Conclusion/Summary : Not available

### **Specific target organ toxicity (single exposure)**

Not available

Product/ingredient name	Category	Route of exposure	Target organs
Polymeric Diphenylmethane	Category 3		Respiratory tract irritation
Diisocyanate			
Diphenylmethane 4,4'-	Category 3		Respiratory tract irritation
Diisocyanate (MDI)			

### Specific target organ toxicity (repeated exposure)

Not available

Product/ingredient name	Category	Route of exposure	Target organs
Polymeric Diphenylmethane	Category 2		respiratory tract
Diisocyanate			
Diphenylmethane 4,4'-	Category 2		respiratory tract
Diisocyanate (MDI)			

### **Aspiration hazard**

Not available

Information on the likely routes of

exposure

Not available

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

Inhalation : Harmful if inhaled. May cause respiratory irritation. May cause allergy

or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects

may be delayed following exposure.

**Skin contact**: Causes skin irritation. May cause an allergic skin reaction.

**Ingestion**: Irritating to mouth, throat and stomach.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:

pain or irritation

watering redness

**Inhalation** : Adverse symptoms may include the following:

respiratory tract irritation

coughing

wheezing and breathing difficulties

asthma

**Skin contact** : Adverse symptoms may include the following:

irritation redness

**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

### **Short term exposure**

**Potential immediate effects** : Not available **Potential delayed effects** : Not available

Long term exposure

Potential immediate effects : Not available
Potential delayed effects : Not available

### Potential chronic health effects

Conclusion/Summary : Not available

**General** : May cause damage to organs through prolonged or repeated exposure.

Once sensitized, a severe allergic reaction may occur when

subsequently exposed to very low levels.

Carcinogenicity: May cause cancer, based on animal data. Limited evidence of a

carcinogenic effect. Risk of cancer depends on duration and level of exposure. Suspected of causing cancer. Risk of cancer depends on

duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards. No known significant

effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards. No known significant

effects or critical hazards.

**Developmental effects**: No known significant effects or critical hazards. No known significant

effects or critical hazards.

Fertility effects : No known significant effects or critical hazards. No known significant

effects or critical hazards.

### **Numerical measures of toxicity**

### Acute toxicity estimates

Route	ATE value
Inhalation (dusts and mists)	1.607 mg/l

## Section 12. Ecological information

### **Toxicity**

Conclusion/Summary : Not available

Persistence/degradability

Conclusion/Summary : Not available

#### Mobility in soil

Soil/water partition coefficient

(KOC)

: Not available

Other adverse effects : No known significant effects or critical hazards.

# Section 13. Disposal considerations

#### Disposal methods

Version:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

# **Section 14. Transport information**

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

#### **International transport regulations**

Regulatory	atory UN/NA Proper shipping name		Classes/*PG	Reportable
information number				Quantity (RQ)
CFR	3082	ENVIRONMENTALLY	Class 9 III	Diphenylmethane
		HAZARDOUS SUBSTANCE,		4,4'-Diisocyanate
		LIQUID, N.O.S.		(MDI)
		(Diphenylmethane 4,4'-		
		Diisocyanate (MDI))		

TDG Non-regulated

IMO/IMDG Non-regulated

IATA (Cargo) Non-regulated

\*PG: Packing group

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## **Section 15. Regulatory information**

### **United States**

U.S. Federal regulations

: United States - TSCA 12(b) - Chemical export notification: None required.

United States - TSCA 5(a)2 - Final significant new use rules: Not listed United States - TSCA 5(a)2 - Proposed significant new use rules: Not

listed

United States - TSCA 5(e) - Substances consent order: Not listed SARA 311/312 Classification - Immediate (acute) health hazard

### **SARA 313**

		Product name	CAS number
Form R - Reporting requirements	:	Isocyanic acid, polymethylenepolyphenyle ne ester	9016-87-9
	:	Benzene, 1,1'- methylenebis[4- isocyanato-	101-68-8

Supplier notification	:	Isocyanic acid, polymethylenepolyphenyle ne ester	9016-87-9
	:	Benzene, 1,1'- methylenebis[4- isocyanato-	101-68-8

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

California Prop. 65:

None required.

United States inventory (TSCA

All components are listed or exempted.

**8b**)

**Canada** 

WHMIS (Canada)

Class D-1A: Material causing immediate and serious toxic effects (Very

toxic).

Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

**Canadian lists** 

**Canadian NPRI** 

The following components are listed: Isocyanic acid,

polymethylenepolyphenylene ester Benzene, 1,1'-methylenebis[4-

isocyanato-

**CEPA Toxic substances** 

: None required.

### **International regulations**

**International lists** 

: Australia inventory (AICS): All components are listed or exempted.

**Canada inventory:** All components are listed or exempted. **Japan inventory:** All components are listed or exempted.

**China inventory (IECSC):** All components are listed or exempted.

**Korea inventory:** All components are listed or exempted.

New Zealand Inventory (NZIoC): All components are listed or exempted. Philippines inventory (PICCS): All components are listed or exempted. United States inventory (TSCA 8b): All components are listed or exempted.

**Taiwan inventory (CSNN):** All components are listed or exempted.

### **Section 16. Other information**

Hazardous Material Information System III (U.S.A.):

Tidzar dous iviacer air imormación system irir (e isirir)			2131111)
	Health	*	3
	Flammability		1
	Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA).

HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

Full text of abbreviated H

statements

Not applicable.

#### History

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Version : 4.0

Prepared by

Key to abbreviations

: Product Safety Stewardship

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

 $LogPow = logarithm\ of\ the\ octanol/water\ partition\ coefficient$ 

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) RID = The Regulations concerning the International Carriage of Dangerous Goods by

Rail

UN = United Nations

**References** : Not available

### Notice to reader

Version:

4.0

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