



MERECO

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 01/13/2009

Version 2

Reviewed on 01/13/2009

1 Identification of substance

- **Trade name:** **Metrethane 4757 Activator**
- **Application of the substance / the preparation:** Hardening agent / Curing agent
- **Manufacturer/Supplier:** Mereco Division
Metachem Resins Corporation
1505 Main Street
West Warwick, RI 02893
USA Phone +1 / 401 / 822-9300
- **Information department:** Technical department.
email = info@mereco.com
- **Emergency information:** Telephone: (401) 822-9300

* 2 Composition/Data on components

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· Components:	
antioxidant	Xi; R 38

- **Additional information:** This material is non-hazardous.
For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Hazard description:** Not applicable.
- **Information pertaining to particular dangers for man and environment:** The product does not have to be labelled due to the calculation procedure of international guidelines.
- **Classification system:** The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**
 - Health = 1
 - Fire = 1
 - Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**
 - Health = 1
 - Fire = 1
 - Reactivity = 0

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4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling:**
 - **Information for safe handling:** No special measures required. Store in cool, dry place in tightly closed receptacles. Use only in well ventilated areas.
 - **Information about protection against explosions and fires:** No special measures required.
- **Storage:**
 - **Requirements to be met by storerooms and receptacles:** No special requirements.
 - **Information about storage in one common storage facility:** Not required.

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Trade name: **Metrethane 4757 Activator**

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- **Further information about storage conditions:** None.

* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
 - **General protective and hygienic measures:** The usual precautionary measures for handling chemicals should be followed.
 - **Breathing equipment:** Not required.
 - **Protection of hands:** The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material is based on consideration of the penetration times, rates of diffusion and the degradation of the material.
 - **Material of gloves** The selection of suitable gloves depends not only on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
 - **Penetration time of glove material** The exact penetration time has to be determined by the glove manufacturer and has to be observed.
 - **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

· General Information	
· Form:	Liquid
· Color:	Clear
· Odor:	Mild
· Change in condition	
· Melting point/Melting range:	Undetermined.

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· Boiling point/Boiling range:	301°C
· Flash point:	205°C
· Ignition temperature:	450.0°C
· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Vapor pressure at 20°C:	1.0 hPa
· Density at 20°C:	0.9 g/cm ³
· Solubility in / Miscibility with	
· Water:	Not miscible or difficult to mix.
· Solvent content:	
· Organic solvents:	0.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
 - **Dangerous reactions** No dangerous reactions known.
 - **Dangerous products of decomposition:** No dangerous decomposition products known.
-

11 Toxicological information

- **Acute toxicity:**
 - **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritating effect.
 - **Sensitization:** No sensitizing effects known.
 - **Additional toxicological information:** The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
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12 Ecological information

- **General notes:** Generally not hazardous for water
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13 Disposal considerations

- **Product:**
 - **Recommendation:** Smaller quantities can be disposed of with household waste.
 - **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.
-

14 Transport information

· DOT regulations:	
· Hazard class:	- Not Regulated
· Proper shipping name (technical name):	Not Regulated
· Land transport ADR/RID (cross-border):	
· ADR/RID class:	- Not Regulated
· Maritime transport IMDG:	
· IMDG Class:	- Not Regulated
· Marine pollutant:	No
· Air transport ICAO-TI and IATA-DGR:	
· ICAO/IATA Class:	- Not Regulated

* 15 Regulations

- **Sara**

· Section 302 (extremely hazardous substances):
None of the ingredients is listed.
· Section 313 (Specific toxic chemical listings):
None of the ingredients is listed by CAS number.
· Sections 311/312 (Specific hazard chemical listings):
None of the ingredients is listed.
· Sections 311/312 Hazard Categorizations:
None of the ingredients is listed.
· TSCA (Toxic Substances Control Act):
All ingredients are listed.

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· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**

Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant R-phrases** 38 Irritating to skin.

· **Department issuing MSDS:** Technical department

· **Contact:** Dr. John F. Plummer

· *** Data compared to the previous version altered.**



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1 Identification of substance

- **Trade name:** **Metrethane 4757 Base**
- **Application of the substance / the preparation** Isocyanate resin
- **Manufacturer/Supplier:** Mereco Division
Metachem Resins Corporation
1505 Main Street
West Warwick, RI 02893
USA Phone +1 / 401 / 822-9300
- **Information department:** Technical department.
email = info@mereco.com
- **Emergency information:** Telephone: (401) 822-9300

* 2 Composition/Data on components

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· Components:		
9016-87-9	diphenylmethanediisocyanate, isomers and homologues	Xn, Xi; R 20-36/37/38-40-42/43-48/20
101-68-8	4,4'-methylenediphenyl diisocyanate	Xn, Xi; R 20-36/37/38-40-42/43-48/20
26447-40-5	methylenediphenyl diisocyanate (2,2'; 2,4)	Xn, Xi; R 20-36/37/38-40-42/43-48/20

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

* 3 Hazards identification

- **Hazard description:** Xn Harmful
- **Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.
Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.

 - R 20 Harmful by inhalation.
 - R 36/37/38 Irritating to eyes, respiratory system and skin.
 - R 40 Limited evidence of a carcinogenic effect.
 - R 42/43 May cause sensitisation by inhalation and skin contact.
 - R 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Contains isocyanates. See information supplied by the manufacturer.

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- **Classification system:** The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**
 - Health = 3
 - Fire = 1
 - Reactivity = 1
- **HMIS-ratings (scale 0 - 4)**
 - Health = *3
 - Fire = 1
 - Reactivity = 1

* 4 First aid measures

- **General information:** Symptoms of poisoning may even occur after several hours; therefore medical observation is necessary for at least 48 hours after the accident.
Seek immediate medical advice.
- **After inhalation:** Supply fresh air. For added safety, call a doctor.
In case of unconsciousness place patient in a stable side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Induce vomiting, if person is conscious. Seek medical help.
- **Information for doctor:**
 - **The following symptoms may occur:**
 - Breathing difficulty
 - Nausea

5 Fire fighting measures

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
Foam
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards caused by the material, its products of combustion or resulting gases:** Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information:** Cool endangered receptacles with water spray.

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6 Accidental release measures

- **Person-related safety precautions:** Mouth respiratory protective device.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.

7 Handling and storage

- **Handling:**
 - **Information for safe handling:** Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Use only in well ventilated areas.
 - **Information about protection against explosions and fires:** Protect from heat.
Emergency cooling must be available in case of nearby fire.
- **Storage:**
 - **Requirements to be met by storerooms and receptacles:** No special requirements.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** Keep receptacle tightly sealed.
Protect from humidity and water.
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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· Components with limit values that require monitoring at the workplace:
101-68-8 4,4'-methylenediphenyl diisocyanate

PEL	Short-term value: C 0.2 mg/m ³ , C 0.02 ppm
REL	Short-term value: C 0.2* mg/m ³ , C 0.02* ppm
	Long-term value: 0.05 mg/m ³ , 0.005 ppm
	*10-min
TLV	0.051 mg/m ³ , 0.005 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· Personal protective equipment:
· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:

Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material is based on consideration of the penetration times, rates of diffusion and the degradation of the material.

· Material of gloves

The selection of suitable gloves depends not only on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact penetration time has to be determined by the glove manufacturer and has to be observed.

· Eye protection:

Tightly sealed goggles

9 Physical and chemical properties
· General Information

· Form:	Liquid
· Color:	Dark brown
· Odor:	Mild

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<ul style="list-style-type: none"> · Change in condition <ul style="list-style-type: none"> · Melting point/Melting range: Undetermined. · Boiling point/Boiling range: 190°C 	
· Flash point:	111°C
· Ignition temperature:	400°C
· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
<ul style="list-style-type: none"> · Explosion limits: <ul style="list-style-type: none"> · Lower: 0.4 Vol % 	
· Vapor pressure at 20°C:	0 hPa
· Density at 20°C:	1.24 g/cm ³
<ul style="list-style-type: none"> · Solubility in / Miscibility with <ul style="list-style-type: none"> · Water: Hydrolized. 	
<ul style="list-style-type: none"> · Solvent content: <ul style="list-style-type: none"> · Organic solvents: 0.0 % 	

* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:** Protect from humidity and water.
- **Dangerous reactions**
 - Reacts with water.
 - Reacts with amines.
- **Dangerous products of decomposition:**
 - Nitrogen oxides
 - Isocyanate
 - Irritant gases/vapors (possible HCN)

11 Toxicological information

- **Acute toxicity:**

<ul style="list-style-type: none"> · LD/LC50 values that are relevant for classification: 		
101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	2200 mg/kg (mouse) > 10.000 mg/kg (rat)
Dermal	LD50	> 6200 mg/kg (rabbit)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.

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- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through inhalation.
Sensitization possible through skin contact.
- **Additional toxicological information:** The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

12 Ecological information

- **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**
- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· DOT regulations:	
· Hazard class:	- Not Regulated
· Proper shipping name (technical name):	Not Regulated
· Land transport ADR/RID (cross-border):	
· ADR/RID class:	- Not Regulated
· Maritime transport IMDG:	
· IMDG Class:	- Not Regulated
· Marine pollutant:	No
· Air transport ICAO-TI and IATA-DGR:	
· ICAO/IATA Class:	- Not Regulated

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Trade name: **Metrethane 4757 Base**

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* 15 Regulations

· Sara

· Section 302 (extremely hazardous substances):	
None of the ingredients is listed.	

· Section 313 (Specific toxic chemical listings):		
9016-87-9	diphenylmethanediisocyanate, isomers and homologues	40-60%
101-68-8	4,4'-methylenediphenyl diisocyanate	20-40%

· Sections 311/312 (Specific hazard chemical listings):	
All ingredients are listed.	

· Sections 311/312 Hazard Categorizations:			
9016-87-9	diphenylmethanediisocyanate, isomers and homologues	A = Acute; C = Chronic (health hazards)	40-60%
101-68-8	4,4'-methylenediphenyl diisocyanate	A = Acute; C = Chronic (health hazards)	20-40%
26447-40-5	methylenediphenyl diisocyanate (2,2'; 2,4)	A = Acute; C = Chronic (health hazards)	10-20%

· TSCA (Toxic Substances Control Act):	
All ingredients are listed.	

· Proposition 65

· Chemicals known to cause cancer:	
None of the ingredients is listed.	

· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	

· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	

· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	

· Carcinogenicity categories

· EPA (Environmental Protection Agency)		
9016-87-9	diphenylmethanediisocyanate, isomers and homologues	CBD
101-68-8	4,4'-methylenediphenyl diisocyanate	CBD

· IARC (International Agency for Research on Cancer)			
9016-87-9	diphenylmethanediisocyanate, isomers and homologues	3	40-60%
101-68-8	4,4'-methylenediphenyl diisocyanate	3	20-40%

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· NTP (National Toxicology Program)			
None of the ingredients is listed.			
· TLV (Threshold Limit Value established by ACGIH)			
None of the ingredients is listed.			
· MAK (German Maximum Workplace Concentration)			
9016-87-9	diphenylmethanediisocyanate, isomers and homologues	4	40-60%
101-68-8	4,4'-methylenediphenyl diisocyanate	4	20-40%
· NIOSH-Ca (National Institute for Occupational Safety and Health)			
None of the ingredients is listed.			
· OSHA-Ca (Occupational Safety & Health Administration)			
None of the ingredients is listed.			

· Product related hazard informations:

The product has been classified and marked in accordance with directives on hazardous materials.

· Hazard symbols:

Xn Harmful

· Hazard-determining components of labelling:

diphenylmethanediisocyanate,
isomers and homologues
4,4'-methylenediphenyl diisocyanate
methylenediphenyl
diisocyanate (2,2'; 2,4)

· Risk phrases:

20 Harmful by inhalation.
36/37/38 Irritating to eyes, respiratory system and skin.
40 Limited evidence of a carcinogenic effect.
42/43 May cause sensitisation by inhalation and skin contact.
48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

· Safety phrases:

1/2 Keep locked up and out of the reach of children.
23 Do not breathe gas/fumes/vapour/spray.
36/37 Wear suitable protective clothing and gloves.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· Special labeling of certain preparations:

Contains isocyanates. See information supplied by the manufacturer.

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*** 16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant R-phrases**
 - 20 Harmful by inhalation.
 - 36/37/38 Irritating to eyes, respiratory system and skin.
 - 40 Limited evidence of a carcinogenic effect.
 - 42/43 May cause sensitisation by inhalation and skin contact.
 - 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- **Department issuing MSDS:** Technical department
- **Contact:** Dr. John F. Plummer
- *** Data compared to the previous version altered.**

USA