



acc. to ISO/DIS 11014

Printing date 01/13/2009 Version 2 Reviewed on 01/13/2009

#### 1 Identification of substance

· Trade name:

**Metrethane 4758 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:
Mineral filler

· Additional information:

Xi; R 36/37/38

For the wording of the listed risk phrases refer to section 16.

This material is a blend of liquid curing agents and mineral or ceramic powders. The powders do not pose airborne hazards to the user of this formulated product because they are completely encapsulated in the liquid materials. If any of the specific powdered ingredients are hazardous in accordance with Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) they are identified in Section 15 of the MSDS (SARA

Section 313).

#### 3 Hazards identification

· Hazard description:

Xi Irritant

 Information pertaining to particular dangers for man and environment:

The product has to be labelled due to the calculation procedure of

international guidelines.

R 36/37/38 Irritating to eyes, respiratory system and skin.

• Classification system: The classification was made according to the latest editions of international substances lists, and expanded upon from company

and literature data.

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## **Material Safety Data Sheet**

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Trade name: Metrethane 4758 Activator

• NFPA ratings (scale 0 - 4) Health = 1

Fire = 1

Reactivity = 0

· HMIS-ratings (scale 0 - 4) Health = 1

Fire = 1Reactivity = 0

4 First aid measures

· After inhalation: 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.

· After eye contact: Rinse opened eye for several minutes under running water. If

symptoms persist, consult a doctor.

· 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:

· Measures for environmental

protection:

· Measures for cleaning/

collecting:

Mouth respiratory protective device.

Do not allow to enter sewers/ surface or ground water.

Absorb with liquid-binding material (sand, diatomite, acid binders,

universal binders, sawdust). 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.

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 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:

Further information about

**storage conditions:** Keep receptacle tightly sealed.

### \* 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:

Not required.

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:** 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.

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· 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: · Color: · Odor:	Viscous Beige Mild
<ul> <li>Change in condition</li> <li>Melting point/Melting range:</li> <li>Boiling point/Boiling range:</li> </ul>	Undetermined. 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:	1.35 g/cm <sup>3</sup>
· 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: Irritant gases/vapors

### 11 Toxicological information

· Acute toxicity:

· Primary irritant effect:

· on the skin: Irritant to skin and mucous membranes.

· on the eye: Irritating effect.

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· Sensitization:

· Additional toxicological information:

No sensitizing effects known.

The product shows the following dangers according to internally

approved calculation methods for preparations:

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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### \* 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.

· 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.

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· 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 has been classified and marked in accordance with

directives on hazardous materials.

· Hazard symbols:

Xi Irritant

· Risk phrases:

36/37/38 Irritating to eyes, respiratory system and skin.

· Safety phrases:

23 Do not breathe gas/fumes/vapour/spray.

26 In case of contact with eyes, rinse immediately with plenty of

water and seek medical advice.

37 Wear suitable gloves.

60 This material and its container must be disposed of as

hazardous waste.

#### 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

36/37/38 Irritating to eyes, respiratory system and skin.

· Department issuing MSDS:

Technical department Dr. John F. Plummer

· Contact: · \* Data compared to the

previous version altered.



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#### 1 Identification of substance

· Trade name:

**Metrethane 4758 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:			
	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	
	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 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

Induce vomiting, if person is conscious. Seek medical help.

for transportation.

Immediately wash with water and soap and rinse thoroughly. · After skin contact:

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: · 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

· 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/m³, C 0.02 ppm REL Short-term value: C 0.2\* mg/m³, C 0.02\* ppm Long-term value: 0.05 mg/m³, 0.005 ppm

\*10-min

TLV 0.051 mg/m³, 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: · Color: · Odor:	Liquid Dark brown Mild	

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	,	coma nom page :
Change in condition     Melting point/Melting range:     Boiling point/Boiling range:		
· 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.	
· Explosion limits: · Lower:	0.4 Vol %	
· Vapor pressure at 20°C:	0 hPa	
· Density at 20°C:	1.24 g/cm <sup>3</sup>	
· Solubility in / Miscibility with · Water:	Hydrolized.	
Solvent content:     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: · Dangerous reactions

Protect from humidity and water.

Reacts with water. Reacts with amines.

· Dangerous products of

decomposition:

Nitrogen oxides

Isocyanate

Irritant gases/vapors (possible HCN)

### 11 Toxicological information

· Acute toxicity:

· LD/L0	· LD/LC50 values that are relevant for classification:		
101-68-	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

Noti

· Air transport ICAO-TI and IATA-DGR:

· ICAO/IATA Class:

· Marine pollutant:

No

Not Regulated

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Reviewed on 01/13/2009 **Printing date 01/13/2009** Version 2 Trade name: Metrethane 4758 Base (Contd. from page 6) \* 15 Regulations · Sara · Section 302 (extremely hazardous substances): None of the ingredients is listed. · Section 313 (Specific toxic chemical listings): 9016-87-9 diphenylmethanediisocyanate, 40-60% isomers and homologues 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, A = Acute; C = Chronic (health hazards) 40-60% isomers and homologues 101-68-8 4,4'-methylenediphenyl A = Acute; C = Chronic (health hazards) 20-40% diisocyanate 26447-40-5 methylenediphenyl A = Acute; C = Chronic (health hazards) 10-20% diisocyanate (2,2'; 2,4) · 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, CBD isomers and homologues 101-68-8 4,4'-methylenediphenyl diisocyanate CBD · IARC (International Agency for Research on Cancer) 9016-87-9 diphenylmethanediisocyanate. 3 40-60% isomers and homologues

101-68-8 4,4'-methylenediphenyl diisocyanate

3 20-40% (Contd. on page 8)

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-			(Contd. from page
· NTP (I	National Toxicology	Program)	
None of th	e ingredients is listed		
· TLV (	Threshold Limit Valu	e established by ACGIH)	
None of th	e ingredients is listed		
· MAK (	German Maximum V	Vorkplace Concentration)	
9016-87-9	diphenylmethanediis isomers and homolo		4 40-60%
101-68-8	4,4'-methylenediphe	nyl diisocyanate	4 20-40%
· NIOSF	- H-Ca (National Institu	ite for Occupational Safety and	Health)
None of th	e ingredients is listed.		
· OSHA	-Ca (Occupational S	afety & Health Administration)	
None of th	e 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.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.

Do not breathe gas/fumes/vapour/spray. 36/37 Wear suitable protective clothing and gloves.

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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Trade name: Metrethane 4758 Base

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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 -