



Date of PDF Creation 12/20/2016 Reviewed on 07/18/2018

1 Identification

- · Product identifier
- Trade name: Trassig Base Layer Binder
- · Article number: 71020000
- · Application of the substance / the mixture Binder
- Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Trassig Corp. 65 Redding Rd. #874 Georgetown CT 06829 203-659-0456

- · Information department: Product Development Department
- Emergency telephone number:

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night.

Within USA and Canada: (800) 424-9300

Outside USA and Canada: +1 (703) 527-3887 (Collect Calls Not Accepted)

2 Hazard(s) identification

· Classification of the substance or mixture



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 1B H350 May cause cancer.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Storage:

Store in a well-ventilated place. Keep container tightly closed. In closed containers, there may be a risk of pressure build up due to water contamination (Liberated CO2 Gas). Store locked up.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

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Safety Data Sheet acc. to OSHA HCS

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Trade name: Trassig Base Layer Binder

· Hazard pictograms





GHS08

· Signal word Danger

Hazard-determining components of labeling:

Extracts (petroleum), light paraffinic distillate solvent

4,4'-methylenediphenyl diisocyanate

Polymeric Diphenylmethane Diisocyanate

methylenediphenyl diisocyanate (MDI) Mixed Isomers

Hazard statements

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause cancer.

May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Do not breathe dust/fume/gas/mist/vapors/spray.

[In case of inadequate ventilation] wear respiratory protection.

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see on this label).

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

· NFPA ratings (scale 0 - 4)



Health = 2Fire = 1 Reactivity = 1

HMIS-ratings (scale 0 - 4)



Health = *2

Reactivity = 1

- · Other hazards
- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.

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· **vPvB:** Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Aromatic Isocyanate Prepolymer

Dangerous components:			
64742-05-8	Extracts (petroleum), light paraffinic distillate solvent	20 - 30%	
101-68-8	4,4'-methylenediphenyl diisocyanate	10 - 20%	
26447-40-5	methylenediphenyl diisocyanate (MDI) Mixed Isomers	5 - 10%	
9016-87-9	Polymeric Diphenylmethane Diisocyanate	5 - 10%	

· Additional information:

CAS 101-68-8 is an MDI isomer that is a component of CAS 9016-87-9

CAS 101-68-8 is an MDI isomer that is a component of CAS 26447-40-5

4 First-aid measures

- Description of first aid measures
- · General information:

Symptoms of poisoning may even occur after several hours; therefore, medical observation is required for at least 48 hours after the accident.

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of respiratory failure or breathing irregularities, commence resuscitation or administer oxygen.

In case of unconsciousness, place patient stably in side position for transportation.

· After skin contact:

Instantly wash with water and soap and rinse thoroughly. Remove any contaminated clothing. If skin irritation persists, seek medical advice.

- · After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing: Do not induce vomiting; immediately call for medical help.
- Information for doctor:

Most important symptoms and effects, both acute and delayed

Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g., fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

Acute Skin Contact: Causes irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

Chronic Skin Contact: Prolonged contact can cause reddening, swelling, rash, and, in some cases, skin sensitization. Animal tests and other research indicate that skin contact with diisocyanates can play a role in causing sensitization and respiratory reaction.

Indication of any immediate medical attention and special treatment needed. No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- · Special hazards arising from the substance or mixture

Can be released in case of fire:

Nitrogen Oxides (NOx)

Carbon Monoxide (CÓ)

Hydrogen Cyanide (HCN)

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- · Advice for firefighters
- · Protective equipment:

Wear breathing apparatus

Wear full protective suit with self-contained breathing apparatus

See section 8

· Additional information Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

- · Environmental precautions: Do not allow product to reach sewage system or bodies of water.
- Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Transfer to a waste container. Keep the material damp and exposed to the air in a secure area (CO2-formation!) until completely solidified. The waste can then be disposed of on an approved landfill or a special refuse dump. Ensure adequate ventilation.

In the event of a large spill, treat spill area with decontamination solution. Preparation of decontamination solution: Prepare a mixture of 0.2 - 0.5% liquid detergent and 3 - 8% concentrated ammonium hydroxide in water (5 - 10% sodium carbonate may be substituted for the ammonium hydroxide).

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· Handling:

Precautions for safe handling

Ensure good ventilation/exhaust at the workplace.

Open and handle receptacle with care.

Keep containers tightly sealed.

Prevent formation of aerosols.

Exhaust ventilation required during spraying or when material is being used at temperatures above 100 degrees F.

· Information about protection against explosions and fires:

Keep respiratory protective device available.

Pay attention to the general rules of internal fire prevention.

- · Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles:

Recommended ideal storage temperature range: 59 - 77 degrees F. Product should not be stored below 40 degrees or above 110 degrees F.

- Information about storage in one common storage facility: Store away from foodstuffs.
- · Further information about storage conditions: Keep container tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

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

Components with limit values that require monitoring at the workplace:		
101-68-8 4,4'-methylenediphenyl diisocyanate		
PEL	Ceiling limit value: 0.2 mg/m³, 0.02 ppm	
REL	Long-term value: 0.05 mg/m³, 0.005 ppm Ceiling limit value: 0.2* mg/m³, 0.02* ppm *10-min	
TLV	Long-term value: 0.051 mg/m³, 0.005 ppm	

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26447-40-5 methylenediphenyl diisocyanate (MDI) Mixed Isomers		
ACGIH TLV	Short-term value: 0.05 mg/m³	
NIOSH REL/CEILING	Short-term value: 0.2 mg/m³	
NIOSH REL/TWA	Short-term value: 0.05 mg/m³	
OSHA PEL	Short-term value: 0.2 mg/m³	

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work.

Store protective clothing separately. Avoid contact with the eyes and skin.

Gases fumes and aerosols should not be inhaled.

Breathing equipment:

Aiborne MDI concentrations greater than the ACGIH TLV-TWA (TLV) or OSHA PEL-C (PEL) can occur in inadequately ventilated environments when MDI is sprayed, aerosolized or heated. In such cases, respiratory protection must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The type of respiratory protection available includes (1) an atmosphere-supplying respirator such as a self-contained breathing apparatus (SCBA) or a supplied air respirator (SAR) in the positive pressure or continuous flow mode, or (2) an airpurfying respirator (APR). If an APR is selected then (a) the cartridge must be equipped with an end-of-service life indicator (ESLI) certified by NIOSH, or (b) a change out schedule, based on the objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. The basis for the change out schedule must be described in the written respirator program. Further, if an APR is selected, the airborne diisocyanate concentration must be no greater than 10 times the TLV or PEL. The recommended APR cartridge is an organic vapor/particulate filter combination cartridge (OV/P100).

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

The following glove types are recommended: neoprene, nitrile rubber, PVC or butyl rubber. Thin, disposable latex gloves should be avoided for repeated or long term handling of the material. Recommended thickness of the glove material: 5 - 6 mil Selection of the glove material should be based on the consideration of penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend 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 break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Tightly sealed goggles

Body protection: Protective work clothing

9 Physical and chemical properties

- Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid
Color: Dark brown
Odor: Characteristic
Odor threshold: Not determined.

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pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	> 200 °C (> 392 °F)
· Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	
Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1.05 g/cm³ (8.762 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Insoluble, Reacts
Partition coefficient (n-octanol/wat	ter): Not determined.
· Viscosity:	
Dynamic at 20 °C (68 °F):	3800 mPas
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

Reactivity

Contact with moisture, other materials that react with isocyanates, or temperatures above 350 F (177 C), may cause polymerization

- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions

Exothermic reaction with amines and alcohols

Reacts with water to liberate CO2 gas which may build pressure in closed containers

- · Conditions to avoid No further relevant information available.
- Incompatible materials:

Exothermic reaction with amines and alcohols. Reacts with water forming heat, carbon dioxide and insoluble urea. The combined effect of carbon dioxide and heat can produce enough pressure to rupture a closed container.

· Hazardous decomposition products:

By Fire and High Heat: Carbon Monoxide, Carbon Dioxide, Oxides of Nitrogen and traces of HCN.

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11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50	LD/LC50 values that are relevant for classification:		
101-68-8 4,4'-methylenediphenyl diisocyanate			
Oral	LD50	2200 mg/kg (mouse)	
26447-40-	26447-40-5 methylenediphenyl diisocyanate (MDI) Mixed Isomers		
Oral	LD50	> 5000 mg/kg (rat)	
Dermal	LD50	> 5000 mg/kg (rabbit)	
Inhalative	LC50/4 h	2240 mg/l (rat)	

- Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eve: Irritating effect.
- Sensitization:

Sensitization possible through inhalation.

Sensitization possible through skin contact.

· Additional toxicological information:

Possible carcinogen

Contains slight traces of ingredients that may cause cancer.

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)			
101-68-8	4,4'-methylenediphenyl diisocyanate	3	
9016-87-9	Polymeric Diphenylmethane Diisocyanate	3	
· NTP (National Toxicology Program)			
None of the ingredients is listed.			
· OSHA-Ca (Occupational Safety & Health Administration)			
None of the	None of the ingredients is listed.		

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- General notes:

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

This product is not miscible with water. Reacts with water at the interface producing CO2 gas and forming a solid and insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (eg. detergents) or by water-soluble solvents. Previous experience demonstrates that polyurea is inert and non-degradable.

Water hazard class 2 (Self-assessment): hazardous for water

- Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- Other adverse effects No further relevant information available.

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13 Disposal considerations

- · Waste treatment methods
- Recommendation:

Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

Recommendation: Disposal must be made according to official regulations.			
4 Transport information			
· UN-Number · DOT, ADR, ADN, IMDG, IATA	Void		
· UN proper shipping name · DOT, ADR, ADN, IMDG, IATA	Void		
· Transport hazard class(es)			
· DOT, ADR, ADN, IMDG, IATA · Class	Void		
· Packing group · DOT, ADR, IMDG, IATA	Void		
· Environmental hazards: · Marine pollutant:	No		
· Special precautions for user · Danger code (Kemler):	Not applicable.		
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	f Not applicable.		
· Transport/Additional information:			
·DOT	Single containers less than 5,000 lbs are not regulated. Single containers with 5,000 lbs or more of 4,4' methylenediphenyl diisocyanate are regulated as Class 9, NA 3082, PG III.		
· UN "Model Regulation":	Void		

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara

Section 355	(extremel	v hazardous	substances):
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None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

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

9016-87-9 Polymeric Diphenylmethane Diisocyanate

TSCA (Toxic Substances Control Act):

All ingredients are listed.

- Proposition 65
- · Chemicals known to cause cancer:

This product contains chemicals in trace quantities that are on the California Proposition 65 carcinogens list.

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

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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.	

· Cancerogenity categories			
· EPA (Environmental Protection Agency)			
101-68-8 4,4'-methylenediphenyl diisocyanate	D, CBD		
9016-87-9 Polymeric Diphenylmethane Diisocyanate	CBD		
· TLV (Threshold Limit Value established by ACGIH)			
None of the ingredients is listed.			
· NIOSH-Ca (National Institute for Occupational Safety and Health)			
None of the ingredients is listed.			

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms





GHS07 GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

Extracts (petroleum), light paraffinic distillate solvent

4,4'-methylenediphenyl diisocyanate

Polymeric Diphenylmethane Diisocyanate

methylenediphenyl diisocyanate (MDI) Mixed Isomers

Hazard statements

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause cancer.

May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Do not breathe dust/fume/gas/mist/vapors/spray.

[In case of inadequate ventilation] wear respiratory protection.

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see on this label).

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

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- · National regulations:
- Additional classification according to Decree on Hazardous Materials:

Carcinogenic hazardous material group III (dangerous).

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

- · Department issuing SDS: Product Development Department
- · Contact: Product Development Department
- · Date of preparation / last revision 07/18/2018/ -
- Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation - Category 1

Carc. 1B: Carcinogenicity - Category 1B

STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2