

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/04/2016

Reviewed on 05/19/2015

## 1 Identification

- **Product identifier**
- **Trade name:** 5200A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Alpha Systems, LLC  
5120 Beck Drive  
ELKHART, IN 46516  
USA
- **Information department:** Product safety department
- **Emergency telephone number:**  
CHEMTREC Emergency: (800) 424-9300  
During normal opening times: +1 (574) 295-5206

## 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. 2 H351 Suspected of causing cancer.  
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

- 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.  
 STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**
- **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:**  
diphenylmethanediisocyanate, isomeres and homologues  
4,4'-methylenediphenyl diisocyanate  
o-(p-isocyanatobenzyl)phenyl isocyanate
- **Hazard statements**  
Harmful if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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May cause an allergic skin reaction.

Suspected of causing cancer.

May cause respiratory irritation.

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.

Do not eat, drink or smoke when using this product.

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.

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

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

• **Classification system:**

• **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 1

Reactivity = 1

• **HMIS-ratings (scale 0 - 4)**



Health = \*2

Fire = 1

Reactivity = 1

• **Other hazards**

• **Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

## 3 Composition/information on ingredients

• **Chemical characterization: Mixtures**

• **Description:** Mixture of the substances listed below with nonhazardous additions.

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· <b>Dangerous components:</b>		
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	60.0%
101-68-8	4,4'-methylenediphenyl diisocyanate ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	45.0%
5873-54-1	o-(p-isocyanatobenzyl)phenyl isocyanate ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	5.0%

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

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

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in 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.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**

Acute: 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, non specific 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 the lungs). Chemical or hyper sensitivity 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.

Causes skin 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. Contact with MDI can cause discoloration.

Causes eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

May cause irritation of the digestive tract. Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Delayed colon symptoms affecting the respiratory tract can also occur several hours after overexposure.

**NOTES TO PHYSICIANS:** Eyes: stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision. Skin: This compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound. Inhalation: Extreme asthmatic reactions that may occur in sensitized persons can be life threatening. Administer oxygen or artificial respiration as needed. Asthmatic

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symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

Use fire fighting measures that suit the environment.

Dry chemical, Carbon dioxide (CO<sub>2</sub>), foam, water spray for large fires.

Unsuitable extinguishing media: high volume water jet.

· **Special hazards arising from the substance or mixture**

Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO<sub>2</sub> formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

· **Advice for firefighters**

Fire Fighting Procedure: Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots, and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

Hazardous decomposition products: By fire and heat: carbon dioxide, CO<sub>2</sub>, carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke, isocyanate, isocyanic acid, other undetermined compounds.

· **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Implement site emergency response plan. Evacuate non-emergency personnel. The magnitude of the evacuation depends upon the quantity released, site conditions, and the ambient temperature. Isolate the area and prevent access of unauthorized personnel. Notify management. call CHEMTREC at 1-800-424-9300 for assistance and advice.

Wear necessary personal protective equipment (PPE) as specified in the SDS or the site emergency response plan.

Ventilate and remove ignition sources. Control the source of the leak. Contain the released material by damming, diking, retaining, or diverting into an appropriate containment area. Absorb or pump off as much of the spilled material as possible. When using absorbent, completely cover the spill area with suitable absorbent material (e.g., vermiculite, kitty litter, Oil-Dri, etc...).

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Allow for the absorbent material to absorb the spilled liquid. shovel the absorbent material into an approved metal container (i.e., 55-gallon salvage drum). Do not fill the container more than 2/3 full to allow for expansion, and do not tighten the lid on the container. Repeat application of absorbent material until all liquid has been removed from the surface.

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Decontaminate the spill surface area using a neutralization solution (see list of solutions on the SDS); scrubbing the surface with a broom or brush helps the decontamination solution to penetrate into porous surfaces. Wait at least 15 minutes after first application of the neutralization solution. Cover the area with absorbent material and shovel this into an approved metal container. Check for residual surface contamination using Swype test kits, available from Colorimetric Laboratories, Inc. (CLI) at 847-803-3737. If the Swype test pad demonstrates that isocyanate remains on the surface (red color on pad), repeat applications of neutralization solution, with scrubbing, followed by absorbent until the surface is decontaminated (no color change on Swype pad). Apply lid loosely to metal waste container (do not tighten the lid because carbon dioxide gas and heat can be generated from the neutralization process). With the lid still loosely in place, move the container to an isolated, well-ventilated area to allow release of carbon dioxide. After 72 hours, seal the container, and properly dispose of the waste material and any contaminated equipment (i.e., broom or brush) in accordance with existing federal, state and local regulations.

**Additional Spill Procedures/Neutralization:** Products or product mixtures that have been shown to be effective neutralization solutions for decontaminating surfaces, tools, or equipment that have been in contact with an isocyanate includes:

Spartan Chemical Company: 1-800-537-8990:

Spartan ShineLine Emulsifier Plus

Spartan SC-200 Heavy Duty Cleaner

Colorimetric Laboratories, Inc. (CLI): 1-847-803-3737

Isocyanate Decontamination Solution

A mixture of 80% water, 20% non-ionic surfactant (e.g. Plurafac SL-62, Tergitol TMN-10).

Mix equal amounts of the following:

Mineral spirits (80%), VM&P Naphtha (15%), and household detergent (5%), and

A 50-50 mixture of monoethanolamine and water.

In a separate container, blend the two solutions in a 1:1 ratio by volume. Immediately prior to applying this blended neutralization solution onto the contaminated surface area, mix or agitate the container to help ensure uniform mixing of the ingredients.

If the above products are not available, the following products can be obtained through retail outlets:

ZEP Commercial Heavy-Duty Floor Stripper

Greased Lightning Super Strength Cleaner and Degreaser

EASY OFF Grill and Oven Cleaner or EASY OFF Fume Free Oven Cleaner

A mixture of 50% Simple Green Pro HD Heavy-Duty Cleaner and 50% household ammonia.

A mixture of 90% Fantastic Heavy Duty All Purpose Cleaner and 10% household ammonia.

**Note:** Always wear proper PPE when cleaning up an isocyanate spill and using a neutralization solution. It may take two or more applications of the neutralization solution to decontaminate the surface. Check for residual surface contamination using a surface wipe method such as CLI Swype pad.

· **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/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about protection against explosions and fires:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**  
Substances to avoid: water, amines, strong bases, alcohols, copper alloys
- **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.
- **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/m <sup>3</sup> , 0.02 ppm
REL	Long-term value: 0.05 mg/m <sup>3</sup> , 0.005 ppm Ceiling limit value: 0.2* mg/m <sup>3</sup> , 0.02* ppm *10-min
TLV	Long-term value: 0.051 mg/m <sup>3</sup> , 0.005 ppm

- **Additional information:**  
The lists that were valid during the creation were used as basis.  
**Medical Surveillance:** All applicants who are assigned to an isocyanate work area should undergo a pre-placement medical evaluation. A history of eczema or respiratory allergies such as hay fever, are possible reasons for medical exclusion from isocyanate areas. Applicants who have a history of adult asthma should be restricted from work with isocyanates. Applicants with a history of prior isocyanate sensitization should be excluded from further work with isocyanates. A comprehensive annual medical surveillance program should be instituted for all employees who are potentially exposed to diisocyanates. Once a worker has been diagnosed as sensitized to any isocyanate, no further exposure can be permitted. Refer to the Bayer pamphlet (Medical Surveillance Program for Isocyanate Workers) for additional guidance.

Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

- **Exposure controls**
- **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.  
Airborne 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 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 air-purifying 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 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

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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).

**Industrial Hygiene/Ventilation Measures:** Local exhaust should be used to maintain levels below the TLV whenever MDI is heated, sprayed, or aerosolized. Standard reference sources regarding industrial ventilation (e.g., ACGIH Industrial Ventilation Manual) should be consulted for guidance about adequate ventilation. To ensure that published exposure limits have not been exceeded, monitoring for airborne diisocyanate should become part of the overall employee exposure characterization program. NIOSH, OSHA, Bayer, and others have developed sampling and analytical methods. Bayer methods can be made available, upon request.

· **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 on consideration of the penetration times, rates of diffusion and the degradation  
Gloves should be worn. Nitrile rubber showed excellent resistance. Butyl rubber, neoprene and PVC are also effective.

· **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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Brown
<b>Odor:</b>	musty
<b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	208 °C (406 °F)

· **Flash point:** 198 °C (388 °F)

· **Flammability (solid, gaseous):** Not applicable.

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· <b>Ignition temperature:</b>	400 °C (752 °F)
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	0.4 Vol %
<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not determined.
· <b>Density at 20 °C (68 °F):</b>	1.234 g/cm <sup>3</sup> (10.298 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Solids content:</b>	100.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**  
Contact with moisture, other materials that react with isocyanates, or temperatures above 350F (177C), may cause polymerization.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Avoid water, amines, strong bases, alcohols, copper alloys.
- **Hazardous decomposition products:**  
By Fire and Heat: Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke, isocyanate, isocyanic acid, other undetermined compounds.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>		
101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	2200 mg/kg (mouse)

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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **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  
Likely routes of exposure: Skin contact, Inhalation, Eye contact

- **Carcinogenic categories**

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

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	3
101-68-8	4,4'-methylenediphenyl diisocyanate	3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** Biodegradation: 0%, Exposure time: 28 days, i.e. not degradable.
- **Behavior in environmental systems:**
- **Bioaccumulative potential**  
Oncorhynchus mykiss (rainbow trout), Exposure time: 112 days, < BCF. Does not bioaccumulate.
- **Mobility in soil** No further relevant information available.
- **Additional 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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Waste Disposal Method: Waste disposal should be in accordance with existing federal, state and local environmental control laws. Incineration is the preferred method.
- **Uncleaned packagings:**
- **Recommendation:**  
Empty Container Precautions: empty containers retain product residue, observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all

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product residues are removed prior to disposal.

· **Recommended cleansing agent:** See SDS Section 6.

## 14 Transport information

· **UN-Number**  
 · **DOT, IMDG, IATA**  
 · **ADN**

UN3082  
 not regulated

· **UN proper shipping name**

Other regulated substances, liquid, n.o.s. (contains 4,4'-diphenylmethane Diisocyanate (MDI))

Hazard class or Division: 9  
 UN/NA Number: NA3082  
 Packaging Group: III  
 Hazard Label(s): Class 9

RSPA/DOT Regulated Components: 4,4'- Diphenylmethane Diisocyanate (MDI)

Reportable Quantity: 5040 Kg (11,111 lb)

Sea Transport (IMDG): Non-regulated

Air Transport (ICAO/IATA): Non-regulated

Additional Transportation Information: When in individual containers of less than the Product RQ, this material ships as non-regulated.

MARPOL/IBC

PRODUCT NAME: Diphenylmethane Diisocyanate

POLLUTION CATEGORY: Y

SHIP TYPE: 2

FLASH POINT: 390°F

· **DOT**  
 · **ADN**  
 · **IMDG, IATA**

Environmentally hazardous substances, liquid, n.o.s.  
 not regulated  
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
 N.O.S.

· **Transport hazard class(es)**

· **DOT**  
 · **Class**  
 · **ADN/R Class:**

9 Miscellaneous dangerous substances and articles  
 not regulated

· **Packing group**  
 · **DOT**  
 · **IMDG, IATA**

III  
 not regulated

· **Environmental hazards:**  
 · **Marine pollutant:**

No

· **Special precautions for user**

Not applicable.

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· <b>EMS Number:</b>	F-A,S-F
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	UN3082, Environmentally hazardous substances, liquid, n.o.s.

## 15 Regulatory information

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

U.S. EPA CERCLA Hazardous Substances (40 CFR 302) Components:

4,4'- Diphenylmethane Diisocyanate (MDI) Reportable Quantity: 5,000 lbs

SARA Section 311/312 Hazard Categories:

Acute Health Hazard

Chronic Health Hazard

U.S. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

State Right-To-Know Information: The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

This product contains a trace (ppm) amount of phenyl isocyanate (CAS 103-71-9) and monochlorobenzene (CAS 108-90-7) as impurities.

Massachusetts, New Jersey or Pennsylvania Right-To-Know Substance Lists:

Weight %	Components	CAS
50-60	Polymeric Diphenylmethane Diisocyanate	9016-87-9
35-45	4,4'-Diphenylmethane Diisocyanate	101-68-8
1-5	2,4'- Diphenylmethane Diisocyanate	5873-54-1

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

Weight %	Components	CAS
50-60	Polymeric Diphenylmethane Diisocyanate	9016-87-9
35-45	4,4'- Diphenylmethane Diisocyanate	101-68-8

California Prop. 65

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No.S7-40-10;Date 2012-08-22).

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

9016-87-9 | diphenylmethanediisocyanate, isomeres and homologues

(Contd. on page 12)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/04/2016

Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 11)

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

· **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.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

9016-87-9 | diphenylmethanediisocyanate, isomeres and homologues

CBD

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

D, 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:**

diphenylmethanediisocyanate, isomeres and homologues

4,4'-methylenediphenyl diisocyanate

o-(p-isocyanatobenzyl)phenyl isocyanate

· **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.

Suspected of causing cancer.

May cause respiratory irritation.

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.

(Contd. on page 13)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 02/04/2016

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**Trade name: 5200A**

(Contd. of page 12)

Do not eat, drink or smoke when using this product.  
 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.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.  
 • **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:** LABORATORY
- **Contact:** SAFETY DATA SHEET DEPARTMENT
- **Date of preparation / last revision** 02/04/2016 / -
- **Abbreviations and acronyms:**
  - 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
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
  - Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
  - Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
  - Carc. 2: Carcinogenicity, Hazard Category 2
  - STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
  - STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2