1. Product and Company Identification

Use: Product for construction chemicals

Company
BASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932, USA

2. Hazards Identification

Emergency overview

WARNING:
COMBUSTIBLE.
HARMFUL IF INHALED.
SENSITIZATION CAN OCCUR IN SOME INDIVIDUALS, LEADING TO ASTHMA-LIKE SPASMS OF THE
BRONCHIAL TUBES AND DIFFICULTY BREATHING. INDIVIDUALS WITH A HISTORY OF RESPIRATORY
ILLNESS, ASTHMATIC CONDITIONS, EYE DAMAGE OR TDI SENSITIZATION SHOULD NOT BE EXPOSED
TO THIS PRODUCT. TDI IS INCLUDED IN THE NTP ANNUAL REPORT ON CARCINOGENS. RESULTS
FROM A TDI HEALTH STUDY INDICATE THAT OVEREXPOSURE TO A RESPIRATORY IRRITANT,
RESULTING IN LOWER RESPIRATORY TRACT SYMPTOMS COULD INCREASE THE RISKS OF
DEVELOPING ASTHMA-LIKE REACTIONS FROM SUBSEQUENT TDI EXPOSURE.
CONTAINS MATERIAL WHICH MAY CAUSE CANCER.
Irritating to eyes, respiratory system and skin.
Avoid contact with the skin, eyes and clothing.
Avoid sources of ignition.

State of matter: liquid
Colour: pigmented
Odour: slight odour

Potential health effects

Primary routes of exposure:
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for
gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute toxicity:
May be harmful if inhaled.

Irritation / corrosion:
Irritating to eyes, respiratory system and skin.
Sensitization:
Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract.

Chronic toxicity:

Repeated dose toxicity: Overexposure may cause CNS depression including headache, dizziness, nausea and loss of consciousness.

Signs and symptoms of overexposure:
In sensitized individuals, sensitization reactions may be elicited by structurally similar substances. Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.

Potential environmental effects

Aquatic toxicity:
The product has not been tested.

3. Composition / Information on Ingredients

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<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Chemical name</th>
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<td>&gt;= 10.0 - &lt;= 30.0</td>
<td>Limestone</td>
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<td>14807-96-6</td>
<td>&gt;= 3.0 - &lt;= 7.0</td>
<td>Talc</td>
</tr>
<tr>
<td>13463-67-7</td>
<td>&gt;= 3.0 - &lt;= 7.0</td>
<td>Titanium dioxide</td>
</tr>
<tr>
<td>53306-54-0</td>
<td>&gt;= 1.0 - &lt;= 5.0</td>
<td>bis(2-propylheptyl) phthalate</td>
</tr>
<tr>
<td>8052-41-3</td>
<td>&gt;= 1.0 - &lt;= 5.0</td>
<td>Stoddard solvent</td>
</tr>
<tr>
<td>1305-78-8</td>
<td>&gt;= 0.5 - &lt;= 1.5</td>
<td>Calcium oxide</td>
</tr>
<tr>
<td>91-08-7</td>
<td>&gt;= 0.5 - &lt;= 1.5</td>
<td>Toluene-2,6-diisocyanate</td>
</tr>
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<td>125643-61-0</td>
<td>&gt;= 0.1 - &lt;= 1.0</td>
<td>Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, C7-9-branched alkyl esters</td>
</tr>
<tr>
<td>584-84-9</td>
<td>&gt;= 0.1 - &lt;= 1.0</td>
<td>Toluene-2,4-diisocyanate</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

General advice:
Remove contaminated clothing.

If inhaled:
Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:
Wash affected areas thoroughly with soap and water. Consult a doctor if skin irritation persists.

If in eyes:
In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

If swallowed:
Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.

Note to physician
Antidote: Specific antidotes or neutralizers to isocyanates do not exist.
Treatment: Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.
5. Fire-Fighting Measures

Flash point: 81.5 °C (178.7 °F) (ASTM D3278)

Autoignition: not applicable
Self-ignition temperature: not self-igniting

Suitable extinguishing media:
water spray, foam, carbon dioxide

Hazards during fire-fighting:
nitrous gases, fumes/smoke, isocyanate, vapour

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Sealed containers should be protected against heat as this results in pressure build-up.

6. Accidental release measures

Personal precautions:
Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions:
Do not discharge into drains/surface waters/groundwater.

Cleanup:
Ensure adequate ventilation. Avoid sources of ignition.
For small amounts: Sweep/shovel up. Dispose of absorbed material in accordance with regulations.
For large amounts: Contain spillage. Pick up with suitable absorbent material. Sweep/shovel up. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Handling
General advice:
Avoid contact with the skin, eyes and clothing. Avoid excessive temperatures. Avoid humidity.

Protection against fire and explosion:
Avoid all sources of ignition: heat, sparks, open flame. If exposed to fire, keep containers cool by spraying with water.

Storage
General advice:
Keep container tightly closed and in a well-ventilated place.

Storage stability:
Storage temperature: 65 - 104 °F
Protect against moisture.

8. Exposure Controls and Personal Protection

Components with workplace control parameters
Stoddard solvent OSHA PEL 500 ppm 2,900 mg/m³
Titanium dioxide
  ACGIH TWA value 100 ppm ;
  OSHA PEL 15 mg/m³ Total dust ;
  ACGIH TWA value 10 mg/m³ ;
  OSHA PEL 5 mg/m³ ;
  ACGIH TWA value 2 mg/m³ ;
  OSHA

calcium oxide
  ACGIH TWA value 10 mg/m³ ;
  OSHA PEL 5 mg/m³ ;
  ACGIH TWA value 2 mg/m³ ;

Talc
  OSHA TWA value 20 millions of particles per cubic foot of air ;
  TWA value 2.4 millions of particles per cubic foot of air Respirable ;
  The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.
  TWA value 0.1 mg/m³ Respirable ;
  The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.
  TWA value 0.3 mg/m³ Total dust ;
  The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.

ACGIH TWA value 2 mg/m³ Respirable fraction ;
The value is for particulate matter containing no asbestos and <1% crystalline silica.

toluene-2,6-diisocyanate
  ACGIH TWA value 0.005 ppm ; STEL value 0.02 ppm ;

Toluene-2,4-diisocyanate
  OSHA CLV 0.02 ppm 0.14 mg/m³ ;
  ACGIH TWA value 0.005 ppm ; STEL value 0.02 ppm ;

Limestone
  OSHA PEL 5 mg/m³ Respirable fraction ; PEL 15 mg/m³ Total dust ;

Advice on system design:
Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:
When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place.

Hand protection:
Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:
Safety glasses with side-shields. Wear face shield if splashing hazard exists.

Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

9. Physical and Chemical Properties

Form: paste
Odour: slight odour
Colour: pigmented
pH value: not applicable
10. Stability and Reactivity

**Conditions to avoid:**
Avoid moisture. Avoid prolonged exposure to extreme heat. Avoid sources of ignition.

**Substances to avoid:**
water, alcohols, strong bases, oxidizing agents, Substances/products that react with isocyanates.

**Hazardous reactions:**
The product is chemically stable.

**Decomposition products:**
Hazardous decomposition products: TOLYLIDENEDIISOCYANATE, carbon monoxide, hydrogen cyanide, aromatic isocyanates, gases/vapours, carbon oxides, nitrogen oxides

**Oxidizing properties:**
Not an oxidizer.

11. Toxicological information

**Acute toxicity**

Information on: Stoddard solvent
Assessment of acute toxicity:
Aspiration may result in chemical pneumonitis, which may be fatal.

Information on: toluene-2,6-diisocyanate
Assessment of acute toxicity:
Of very high toxicity after short-term inhalation. In animal studies the substance is virtually nontoxic after a single ingestion. In animal studies the substance is virtually nontoxic after a single skin contact.
EU-classification

Information on: toluene-2,4-diisocyanate
Assessment of acute toxicity:
Of very high toxicity after short-term inhalation. Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

**Irritation / corrosion**

Information on: calcium oxide
Assessment of irritating effects:
Corrosive! Damages skin and eyes.

Information on: toluene-2,6-diisocyanate
Assessment of irritating effects:
Irritating to eyes and skin.

Information on: toluene-2,4-diisocyanate
Assessment of irritating effects:
Irritating to eyes and skin.

**Sensitization**
Information on: toluene-2,6-diisocyanate
Assessment of sensitization:
The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible.

Information on: toluene-2,4-diisocyanate
Assessment of sensitization:
The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible.

Repeated dose toxicity

Information on: bis(2-propylheptyl) phthalate
Assessment of repeated dose toxicity:
Repeated exposure to high doses of the substance causes reversible liver changes in rodents. According to present knowledge, these effects do not occur in man.

Information on: Stoddard solvent
Assessment of repeated dose toxicity:
Overexposure may cause liver and kidney toxicity. Repeated exposures may result in pulmonary congestion.

Information on: toluene-2,4-diisocyanate
Assessment of repeated dose toxicity:
The substance may cause damage to the lung even after repeated inhalation of low doses, as shown in animal studies.

Information on: Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,C7-9-branched alkyl esters
Assessment of repeated dose toxicity:
Repeated exposure may cause adverse thyroid effects as indicated in animal studies. The substance may cause damage to the liver even after repeated ingestion of low doses, as shown in animal studies.

Genetic toxicity

Information on: toluene-2,6-diisocyanate
The substance was mutagenic in various test systems with bacterias and cell cultures; however, these results could not be confirmed in tests with mammals. Literature data.

Information on: toluene-2,4-diisocyanate
The substance was mutagenic in various test systems with bacterias and cell cultures; however, these results could not be confirmed in tests with mammals. Literature data.

Carcinogenicity

Information on: bis(2-propylheptyl) phthalate
In long-term studies in rodents exposed to high doses, a tumorigenic effect was found; however, these results are thought to be due to a rodent-specific liver effect that is not relevant to humans. The product has not been tested. The statement has been derived from products of a similar structure or composition.

Information on: Titanium dioxide
IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans). In long-term studies in rats in which the substance was given by inhalation, a carcinogenic effect was observed. Tumors were only observed in rats after chronic inhalative exposure to high concentrations which caused sustained lung inflammation. In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. Dermal exposure is not expected to be carcinogenic.

Information on: toluene-2,6-diisocyanate
IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).

Information on: toluene-2,4-diisocyanate
IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans). NTP listed carcinogen
12. Ecological Information

Aquatic toxicity

Information on: toluene-2,4-diisocyanate
Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The product may hydrolyse. The test result may be partially due to degradation products.

Other adverse effects:

Do not release untreated into natural waters. Do not allow to enter soil, waterways or waste water channels. The product has not been tested. The statement has been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:
Do not discharge into drains/surface waters/groundwater. Dispose of in accordance with local authority regulations.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.
Do not reuse empty containers.

14. Transport Information

Reference Bill of Lading

15. Regulatory Information

Federal Regulations

Registration status: Chemical TSCA, US released / listed

OSHA hazard category: IARC 1, 2A or 2B carcinogen; NTP listed carcinogen; Chronic target organ effects reported; OSHA PEL established; ACGIH TLV established

EPCRA 311/312 (Hazard categories): Acute; Chronic

EPCRA 313:

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CERCLA RQ:

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State regulations

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CA Prop. 65: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

16. Other Information

HMIS III rating

Health: 2a Flammability: 1 Physical hazard: 1

NFPA and HMIS use a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria. The NFPA system was developed to provide an on-the-spot alert to the hazards of a material, and their severity, to emergency responders. The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

MSDS Prepared by:
BASF NA Product Regulations
msds@basf.com
MSDS Prepared on: 2011/06/14

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY BASF HEREUNDER ARE GIVEN GRATIS AND BASF ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.
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