1. Product and Company Identification

Company: BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

2. Hazards Identification

Emergency overview

DANGER:
HARMFUL IF SWALLOWED.
MAY BE HARMFUL IF INHALED.
MAY CAUSE BURNS.
MAY CAUSE ALLERGIC SKIN REACTION.
CONTAINS MATERIAL WHICH CAN CAUSE CANCER.
Avoid contact with the skin, eyes and clothing.
Wash thoroughly after handling.
Keep container tightly closed.

State of matter: liquid
Colour: brown
Odour: ammonia-like

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 liquified gases.

Acute toxicity:
Harmful by inhalation, in contact with skin and if swallowed.

Irritation / corrosion:
Causes burns.

Sensitization:
May produce an allergic reaction. Sensitization after skin contact possible. The product has not been tested. The statement has been derived from the properties of the individual components.

Chronic toxicity:

Carcinogenicity: Contains a known carcinogen.
Potential environmental effects

Aquatic toxicity:
The product has not been tested.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>14808-60-7</td>
<td>&gt;= 15.0 - &lt;= 40.0 %</td>
<td>crystalline silica</td>
</tr>
<tr>
<td>9046-10-0</td>
<td>&gt;= 15.0 - &lt;= 40.0 %</td>
<td>alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethanediyl))</td>
</tr>
<tr>
<td>1317-65-3</td>
<td>&gt;= 10.0 - &lt;= 30.0 %</td>
<td>Limestone</td>
</tr>
<tr>
<td>25154-52-3</td>
<td>&gt;= 10.0 - &lt;= 30.0 %</td>
<td>nonylphenol</td>
</tr>
<tr>
<td>111-40-0</td>
<td>&gt;= 3.0 - &lt;= 7.0 %</td>
<td>2,2'-iminodi(ethylamine)</td>
</tr>
<tr>
<td>90-72-2</td>
<td>&gt;= 1.0 - &lt;= 5.0 %</td>
<td>2,4,6-tris(dimethylaminomethyl)phenol</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

General advice:
First aid personnel should pay attention to their own safety. Immediately remove contaminated clothing.

If inhaled:
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

If on skin:
After contact with skin, wash immediately with plenty of water and soap. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor.

5. Fire-Fighting Measures

Flash point: 124 °C (ASTM D93)
Lower explosion limit: No data available.
Upper explosion limit: No data available.

Suitable extinguishing media:
carbon dioxide, dry powder, foam, water spray

Hazards during fire-fighting:
carbon dioxide, carbon monoxide, nitrogen oxides, fumes/smoke, carbon black, corrosive gases/vapours

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

Further information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.
6. Accidental release measures

Personal precautions:
Use personal protective clothing. Do not breathe vapour/aerosol/spray mists. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions:
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Cleanup:
For small amounts: Pick up with inert absorbent material (e.g. sand, earth etc.). Dispose of contaminated material as prescribed.
For large amounts: Pump off product.

7. Handling and Storage

Handling

General advice:
Keep away from sources of ignition - No smoking. Keep container tightly sealed. Handle and open container with care.

Protection against fire and explosion:
The product does not contribute to the spreading of flames, nor is it self combustible, not explosive.

Storage

General advice:
Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight. Store protected against freezing.

8. Exposure Controls and Personal Protection

Components with occupational exposure limits

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>crystalline silica</td>
<td>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.</td>
<td>TWA value 0.025 mg/m³ Respirable fraction ;</td>
</tr>
<tr>
<td>2,2'-iminodi(ethylamine)</td>
<td>ACGIH</td>
<td>TWA value 1 ppm ; Skin Designation ; The substance can be absorbed through the skin.</td>
</tr>
<tr>
<td>Limestone</td>
<td>OSHA</td>
<td>PEL 5 mg/m³ Respirable fraction ; PEL 15 mg/m³ Total dust ;</td>
</tr>
</tbody>
</table>
Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) respirator as necessary.

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

Eye protection:
Tightly fitting safety goggles (chemical goggles) and face shield.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Do not inhale gases/vapours/aerosols. Avoid contact with the skin, eyes and clothing. Handle in accordance with good building materials hygiene and safety practice. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>ammonia-like</td>
</tr>
<tr>
<td>Colour</td>
<td>brown</td>
</tr>
<tr>
<td>pH value</td>
<td>neutral to slightly alkaline</td>
</tr>
<tr>
<td>Boiling range</td>
<td>130 - 300 °C</td>
</tr>
<tr>
<td>Density</td>
<td>12.11 lb/USg</td>
</tr>
<tr>
<td></td>
<td>1.45 g/cm³</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Heavier than air</td>
</tr>
<tr>
<td>Partitioning coefficient n-octanol/water (log Pow)</td>
<td>No data available.</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>insoluble</td>
</tr>
</tbody>
</table>

Other Information: If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Conditions to avoid:
See MSDS section 7 - Handling and storage.

Substances to avoid:
strong bases, strong acids, oxidizing agents

Hazardous reactions:
The product is stable if stored and handled as prescribed/indicated.

Decomposition products:
carbon oxides, nitrogen oxides

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.
11. Toxicological information

Acute toxicity

Information on: alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethanediyl))
Assessment of acute toxicity:
Of moderate toxicity after short-term skin contact. Of moderate toxicity after single ingestion.

Information on: nonylphenol
Assessment of acute toxicity:
Of moderate toxicity after single ingestion. Of low toxicity after short-term skin contact.

Information on: 2,2'-iminodi(ethylamine)
Assessment of acute toxicity:
Of moderate toxicity after single ingestion. Of very high toxicity after short-term inhalation. Of moderate toxicity after short-term skin contact.

Information on: 2,4,6-tris(dimethylaminomethyl)phenol
Assessment of acute toxicity:
Of moderate toxicity after single ingestion. EU-classification

Irritation / corrosion

Information on: alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethanediyl))
Assessment of irritating effects:
Corrosive! Damages skin and eyes.

Information on: nonylphenol
Assessment of irritating effects:
Corrosive! Damages skin and eyes. May cause severe damage to the eyes.

Information on: 2,2'-iminodi(ethylamine)
Assessment of irritating effects:
Corrosive! Damages skin and eyes.

Information on: 2,4,6-tris(dimethylaminomethyl)phenol
Assessment of irritating effects:
Eye contact causes irritation. Skin contact causes irritation.

Sensitization

Information on: 2,2'-iminodi(ethylamine)
Assessment of sensitization:
Sensitization after skin contact possible.

Can sensitize the skin and/or respiratory tract of allergic persons. May produce an allergic reaction.

Repeated dose toxicity

Information on: nonylphenol
Assessment of repeated dose toxicity:
The substance may cause damage to the liver after repeated ingestion. The substance may cause damage to the kidney after repeated ingestion.

Information on: 2,2'-iminodi(ethylamine)
Assessment of repeated dose toxicity:
May affect the liver and kidneys as indicated in animal studies. The substance may cause damage to the kidney after repeated ingestion of high doses, as shown in animal studies.
Carcinogenicity

Information on: crystalline silica
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. In long-term animal studies in which the substance was given by inhalation in high doses, a carcinogenic effect was observed. The substance and its compounds in the form of respirable dusts/aerosols is classified by the German MAK commission as a category 1 carcinogen (substances that cause cancer to humans). A carcinogenic effect cannot safely be ruled out. The inhalation uptake of the alveolar fraction of the fine dust may cause damage to the lungs. The International Agency for Research on Cancer (IARC) has classified this substance as a Group 1 (known) human carcinogen. NTP listed carcinogen

Reproductive toxicity

Information on: nonylphenol
The results of animal studies suggest a fertility impairing effect.

Development:

Information on: nonylphenol
Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

12. Ecological Information

Other adverse effects:
Ecological data are not available. Do not allow to enter drains or waterways.

13. Disposal considerations

Waste disposal of substance:
Observe national and local legal requirements. Residues should be disposed of in the same manner as the substance/product.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
USDOT
Hazard class: 8
Packing group: III
ID number: UN 1760
Hazard label: 8
Proper shipping name: CORROSIVE LIQUID, N.O.S. (contains NONYLPHENOL, DIETHYLENETRIAMINE)
Sea transport
IMDG
Hazard class: 8
Packing group: III
ID number: UN 1760
Hazard label: 8
Marine pollutant: NO
Proper shipping name: CORROSIVE LIQUID, N.O.S. (contains NONYLPHENOL, DIETHYLENETRIAMINE)

Air transport
IATA/ICAO
Hazard class: 8
Packing group: III
ID number: UN 1760
Hazard label: 8
Proper shipping name: CORROSIVE LIQUID, N.O.S. (contains NONYLPHENOL, DIETHYLENETRIAMINE)

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

State regulations
State RTK CAS Number Chemical name
MA, NJ, PA 14808-60-7 crystalline silica
MA, NJ, PA 25154-52-3 nonylphenol
MA, NJ, PA 111-40-0 2,2'-iminodi(ethylamine)

CA Prop. 65:
THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

16. Other Information

HMIS III rating
Health: 3* Flammability: 1 Physical hazard: 0

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: 2012/10/03

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