1. Substance/preparation and company identification

Company
BASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932

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

Molecular formula: C4 H6 O2
Synonyms: ACRYLIC ACID, METHYL ESTER

2. 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>96-33-3</td>
<td>99.5 %</td>
<td>methyl acrylate</td>
</tr>
<tr>
<td>79-10-7</td>
<td>&lt; 0.1 %</td>
<td>acrylic acid</td>
</tr>
<tr>
<td>150-76-5</td>
<td>&gt;= 10.0 - &lt;= 220.0 PPM</td>
<td>MEHQ</td>
</tr>
</tbody>
</table>

3. Hazard identification

Emergency overview

WARNING: SEVERELY IRRITATING TO EYES, SKIN, RESPIRATORY TRACT. CAUSES SKIN BURNS. CAUSES EYE BURNS. PROLONGED OR REPEATED CONTACT MAY RESULT IN DERMATITIS. CAN CAUSE NERVOUS SYSTEM DAMAGE. MAY CAUSE DIFFICULTY BREATHING.

Ensure adequate ventilation.
Wear a NIOSH-certified (or equivalent) organic vapour respirator.
Wear NIOSH-certified chemical goggles.
Wear protective clothing.
Eye wash fountains and safety showers must be easily accessible.
Wear full face shield if splashing hazard exists.

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. Harmful in contact with skin. Harmful if swallowed.

Irritation:
Irritating to skin. Irritating to respiratory system. Irritating to eyes. EU-classification

Sensitization:
Caused sensitization in animal studies. Caused sensitization in humans.

Medical conditions aggravated by overexposure:
Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product. See MSDS section 11 - Toxicological information.

Potential environmental effects

Aquatic toxicity:
Acutely toxic 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.

4. First-aid measures

General advice:
Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

If on skin:
Flush with copious amounts of water for at least 15 minutes. Sterile protective dressing. Immediate medical attention required.

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

If swallowed:
Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary oedema.

5. Fire-fighting measures

Flash point: 2.7 °C (27.14 °F) (DIN 51755)
Autoignition: 393 °C (739.40 °F) (DIN 51794)
Lower explosion limit: 2.1 % (V) (-6 °C) (DIN 51794)
Upper explosion limit: 14.5 % (V) (30 °C)

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

Hazards during fire-fighting:
Risk of violent self-polymerization if overheated in a container.

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

**Personal precautions:**
Take appropriate protective measures.
Ensure adequate ventilation. Use personal protective clothing. Breathing protection required.

**Environmental precautions:**
Substance/product is RCRA hazardous due to its properties.

**Cleanup:**
Spills should be contained, solidified, and placed in suitable containers for disposal.

**Further information:**
Release of substance/product can cause fire or explosion. Blanket with firefighting foam.

7. Handling and storage

**Handling**

**General advice:**
Ensure adequate inhibitor and dissolved oxygen level.

**Protection against fire and explosion:**
Substance/product can form explosive mixture with air. Ground all transfer equipment properly to prevent electrostatic discharge. Containers should be grounded against electrostatic charge. It is recommended that all conductive parts of the machinery are grounded. Avoid all sources of ignition: heat, sparks, open flame. Vapours may form explosive mixture with air. Ignitable mixtures can be formed in the emptied container.

Heated containers should be cooled to prevent polymerization. If exposed to fire, keep containers cool by spraying with water. Emergency cooling must be provided for the eventuality of a fire in the vicinity. Sealed containers should be protected against heat as this results in pressure build-up. Avoid influence of heat.

**Storage**

**General advice:**
Risk of polymerization. Protect from direct sunlight.

8. Exposure controls and personal protection

**Components with workplace control parameters**

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>methyl acrylate</td>
<td>PEL 10 ppm 35 mg/m3 ; Skin Designation</td>
<td>TWA value 2 ppm ; Skin Designation</td>
</tr>
<tr>
<td>acrylic acid</td>
<td>ACGIH</td>
<td>TWA value 2 ppm ; Skin Designation</td>
</tr>
<tr>
<td>MEHQ</td>
<td>ACGIH</td>
<td>TWA value 5 mg/m3</td>
</tr>
</tbody>
</table>
Advice on system design:
Provide local exhaust ventilation to maintain recommended P.E.L.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator as needed. At concentrations < 250 ppm, use a chemical cartridge respirator. At concentrations > 250 ppm, use an air-supplied or self-contained breathing apparatus.

Hand protection:
Chemical resistant protective gloves

Eye protection:
Tightly fitting safety goggles (chemical goggles).

Body protection:
light protective clothing

General safety and hygiene measures:
Avoid contact with skin. Avoid inhalation of vapour. Wash soiled clothing immediately.

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>pungent odour</td>
</tr>
<tr>
<td>Colour</td>
<td>colourless</td>
</tr>
<tr>
<td>Melting temperature</td>
<td>approx. -75 °C</td>
</tr>
<tr>
<td></td>
<td>approx. -103.00 °F</td>
</tr>
<tr>
<td>Boiling temperature</td>
<td>approx. 80 °C</td>
</tr>
<tr>
<td></td>
<td>approx. 176.00 °F</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>89 mbar</td>
</tr>
<tr>
<td></td>
<td>342 mbar</td>
</tr>
<tr>
<td></td>
<td>256.52 mmHg</td>
</tr>
<tr>
<td></td>
<td>66.76 mmHg</td>
</tr>
<tr>
<td>Partitioning coefficient n-octanol/water (log Pow):</td>
<td>0.74</td>
</tr>
<tr>
<td>Viscosity, dynamic:</td>
<td>0.5 mPa.s</td>
</tr>
<tr>
<td></td>
<td>(25 °C) (DIN/EN/ISO 3219)</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>52 g/l</td>
</tr>
<tr>
<td></td>
<td>(25 °C)</td>
</tr>
<tr>
<td>Solubility (qualitative):</td>
<td>miscible solvent(s): organic solvents</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Conditions to avoid:

Substances to avoid:
polyvinylchloride, radical formers, free radical initiators, peroxides, mercaptans, nitro-compounds, perborates, azides, ether, ketones, aldehydes, amines, nitrates, nitriles, oxidizing agent, reducing agents, strong bases, acid anhydrides, acid chlorides, concentrated mineral acids, metal salts, inert gas.
Hazardous reactions:
Explosion and fire hazard exists under confined conditions. Ignitable air mixtures can form when the product is heated above the flash point and/or when sprayed or atomized. Formation of explosive gas/air mixtures.
Risk of spontaneous and violent self-polymerization if inhibitor is lost or product is exposed to excessive heat. Risk of spontaneous polymerization when heated or in the presence of UV radiation. With unstabilized product, spontaneous polymerisation may occur e.g. through ambient heat. Polymerization coupled with heat formation. Polymerization produces gases which may burst closed or confined containers. Reactions may cause ignition.
Risk of spontaneous polymerization by oxygen depletion of the liquid phase.
Radical formation can cause exothermic polymerization. Reacts with peroxides and other radical components. Risk of spontaneous polymerization in the presence of starters for radical chain reactions (e.g. peroxides). Reacts with nitric acid. Polymerizes explosively in contact with strong oxidizing agents. Risk of spontaneous polymerization in the presence of oxidizing agents.
Hazardous reactions in presence of mentioned substances to avoid.
The product is stabilized against spontaneous polymerization prior to despatch. The product is stable if stored and handled as prescribed/indicated.

Decomposition products:
carbon monoxide, Carbon dioxide

Corrosion to metals:
No corrosive effect on metal.

11. Toxicological information

Acute toxicity

Oral:
LD50/rat/male: approx. 765 mg/kg (BASF Test)

Inhalation:
LC50/rat/male/female: 5.7 mg/l / 4 h

Dermal:
LD50/rabbit: approx. 1,250 mg/kg

Skin irritation:
rabbit: Irritant. (OECD Guideline 404)

Eye irritation:
rabbit: Risk of serious damage to eyes. (Draize test)

Sensitization:
sensitizing

Chronic toxicity

Genetic toxicity:
Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic.
Carcinogenicity:
In long-term animal studies in which the substance was given by inhalation, a carcinogenic effect was not observed.

Reproductive toxicity:
The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity/teratogenicity:
In animal studies the substance did not cause malformations.

12. Ecological information

Environmental fate and transport

Biodegradation:
Test method: OECD 301D; EEC 92/69, C.4- E (aerobic), activated sludge, domestic
Degree of elimination: 59.9 % (28 d)
Evaluation: Not readily biodegradable (by OECD criteria).
Biodegradable.

Bioaccumulation:
Significant accumulation in organisms is not to be expected.

Environmental toxicity

Acute and prolonged toxicity to fish:
OECD 203; ISO 7346; 84/449/EEC, C.1 Flow through.
trout, rainbow/LC50 (96 h): 3.4 mg/l
OECD 203; ISO 7346; 84/449/EEC, C.1 Flow through.
marine minnow, sheepshead/LC50 (96 h): 1.1 mg/l

Acute toxicity to aquatic invertebrates:
OECD Guideline 202, part 1 Flow through.
Daphnia magna (48 h): 2.6 mg/l
Flow through.
Mysid shrimp/EC50 (96 h): 1.6 mg/l

Toxicity to aquatic plants:
OECD Guideline 201 green algae/EC50 (72 h): 3.55 mg/l

Toxicity to microorganisms:
aquatic activated sludge/Toxic limit concentration (5 d): > 100 mg/l

Other ecotoxicological advice:
Acutely toxic for aquatic organisms.

13. Disposal considerations

Waste disposal of substance:
Incinerate or dispose of in a RCRA-licensed facility.
Do not discharge into drains/surface waters/groundwater.
Contaminated packaging:
Empty containers with less than 1 inch of residue may be landfilled at a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. If containers are not empty, they must be disposed of in a RCRA-licensed facility.

RCRA: D001

14. Transport information

Reference Bill of Lading

15. Regulatory information

Federal Regulations

Registration status:
TSCA, US released / listed

CERCLA RQ: 100 lb

SARA hazard categories (EPCRA 311/312): Acute, Fire

State regulations

State RTK

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical name</th>
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<td>96-33-3</td>
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<td>MEHQ</td>
<td>MA, NJ, PA</td>
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</table>

16. Other information

Recommended use for industrial use only

HMIS III rating

Health: 3  Flammability: 3  Physical hazard: 2

HMIS uses 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 high hazard.
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END OF DATA SHEET