



The Chemical Company

Safety Data Sheet ACRYLAMIDE 50% SOLUTION

Revision date : 2010/06/07

Page: 1/8

Version: 1.1

(30481735/SDS GEN_US/EN)

1. Product and Company Identification

Use: Intermediate

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

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

2. Hazards Identification

Emergency overview

WARNING:

Irritating to eyes and respiratory system.

Contains acrylamide, which is a potent peripheral neurotoxin. Subchronic and chronic exposure results in neurotoxicity. NOAEL: 0.2 mg/kg/day. The effects are cumulative, the first signs of poisoning are skin peel.

Potential sensitizer.

Contains a component that is an IARC 2A carcinogen - probable human carcinogen.

Toxic if swallowed.

Toxic by absorption.

State of matter: liquid

Colour: colourless

Odour: odourless

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.

Chronic toxicity:

Carcinogenicity: Acrylamide has been confirmed as an animal carcinogen by ACGIH, NTP and IARC.

Epidemiology studies appear to indicate no significant excess of cancer among exposed workers.

The substance caused cancer in animal studies.

Repeated dose toxicity: Repeated inhalation exposure to low concentrations may affect certain organs.

Repeated dermal exposure to small quantities may affect certain organs. Repeated oral exposure may to small quantities affect certain organs.

Reproductive toxicity: The results of animal studies suggest a fertility impairing effect.

Safety Data Sheet

ACRYLAMIDE 50% SOLUTION

Revision date : 2010/06/07
Version: 1.1

Page: 2/8
(30481735/SDS GEN US/EN)

Teratogenicity: Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Genotoxicity: Capable of causing genetic defects.

Signs and symptoms of overexposure:

Overexposure may cause: convulsions, weakness, incoordination, difficulty breathing, hypotension, confusion, delusions, tremors

Potential environmental effects

Aquatic toxicity:

Acutely harmful for aquatic organisms. Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
79-06-1	30.0 - 60.0 %	acrylamide

4. First-Aid Measures

If inhaled:

Fresh air. If not breathing, give artificial respiration. If necessary, give oxygen. If breathing difficulties develop, aid in breathing and seek immediate medical attention.

If on skin:

Immediately wash thoroughly with soap and water, seek medical attention.

Wash affected areas with water while removing contaminated clothing. Seek medical attention.

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:

If swallowed, rinse mouth with water (only if the person is conscious). Call a poison control center or physician for treatment advice. Never give anything by mouth to an unconscious person.

5. Fire-Fighting Measures

Flash point:

not applicable

Self-ignition temperature:

not self-igniting

Based on its structural properties the product is not classified as self-igniting.

Suitable extinguishing media:

carbon dioxide, water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons:

The product has not been tested.

Hazards during fire-fighting:

carbon oxides, nitrogen oxides

Cool endangered containers with water-spray. Risk of violent self-polymerization if overheated in a container.

Safety Data Sheet

ACRYLAMIDE 50% SOLUTION

Revision date : 2010/06/07
Version: 1.1

Page: 3/8
(30481735/SDS_GEN_US/EN)

Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

6. Accidental release measures

Cleanup:
Pick up with inert absorbent material (e.g. sand, earth etc.). Place into approved waste containers. Wear suitable protective equipment. Avoid release to the environment.

7. Handling and Storage

Handling

General advice:
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin, eyes and clothing. Provide good ventilation of working area (local exhaust ventilation if necessary).

Storage

General advice:
Keep container tightly closed and dry; store in a cool place.

Storage stability:
Storage temperature: 15 - 28 °C
Protect from heat and cold.

Temperature tolerance
If frozen, thaw out slowly and stir well before use.
Product that is frozen and/or tending to sedimentation can be liquified or homogenized by careful application of indirect heat (do not use flames or direct contact with a heat source).

8. Exposure Controls and Personal Protection

Components with workplace control parameters

acrylamide	OSHA	PEL 0.3 mg/m3 ; Skin Designation ; The substance can be absorbed through the skin.
	ACGIH	TWA value 0.03 mg/m3 Inhalable fraction and vapor ; Skin Designation Inhalable fraction and vapor ; The substance can be absorbed through the skin.

Advice on system design:
Ensure adequate ventilation.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:
Chemical resistant protective gloves

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

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

Safety Data Sheet

ACRYLAMIDE 50% SOLUTION

Revision date : 2010/06/07

Version: 1.1

Page: 4/8

(30481735/SDS_GEN_US/EN)

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	odourless	
Colour:	colourless	
pH value:	6.0	
Melting point:		not applicable
Boiling point:	105.5 °C	
Vapour pressure:	25 mbar	(25 °C)
Density:	1.04 g/cm3	(20 °C)
% volatiles:		not determined
Solubility in water:		miscible

10. Stability and Reactivity

Conditions to avoid:

Avoid excessive temperatures. Avoid direct sunlight.

Substances to avoid:

Nickel, copper, Iron, polymerization initiators

Hazardous reactions:

Risk of spontaneous and violent self-polymerization if inhibitor is lost or product is exposed to excessive heat.
Stable under normal conditions.

Decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

No data available.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50
Species: rat
Value: 124 mg/kg
Data of the active component

Inhalation:

No data available.

Dermal:

Type of value: LD50
Species: rat
Value: 400 mg/kg
Data of the active component

Irritation / corrosion

Safety Data Sheet

ACRYLAMIDE 50% SOLUTION

Revision date : 2010/06/07

Version: 1.1

Page: 5/8

(30481735/SDS_GEN_US/EN)

Skin:

Species: rabbit

Result: Slightly irritating.

Eye:

Species: cat

Result: moderately irritating

Sensitization:

Guinea pig maximization test

Species: guinea pig

Result: sensitizing

Reproductive toxicity

Information on: acrylamide

The results of animal studies suggest a fertility impairing effect.

Development:

Information on: acrylamide

Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Other Information:

Numerous studies in a number of animal species have shown that the nervous system is a principal target site for the toxic effects of acrylamide. Sufficient repeated exposure to acrylamide causes degenerative peripheral nerve changes that result from an accumulation of damage at the sites of toxicity. Epidemiological studies in humans exposed in industry or accidentally suggest that the nervous system is a principal target site for toxicity caused by acrylamide in humans.

12. Ecological Information

Fish

Acute:

static

Poecilia reticulata/LC50 (14 d): 34.81 mg/l

Nominal concentration. Literature data.

Aquatic invertebrates

Acute:

Directive 79/831/EEC Flow through.

Mysid shrimp/LC50 (96 h): 78 mg/l

Literature data.

Aquatic plants

Toxicity to aquatic plants:

static

green algae/EC50: 72 mg/l

Literature data.

Microorganisms

Toxicity to microorganisms:

Safety Data Sheet

ACRYLAMIDE 50% SOLUTION

Revision date : 2010/06/07
Version: 1.1

Page: 6/8
(30481735/SDS GEN US/EN)

aquatic
Bacteria/EC50: 13.5 mg/l

Degradability / Persistence

Biological / Abiological Degradation

Test method: OECD 301D; EEC 92/69, C.4-E (aerobic), activated sludge, domestic
Method of analysis: BOD of the ThOD
Degree of elimination: 100 % (28 d)
Evaluation: Readily biodegradable (according to OECD criteria).

Bioaccumulation

Oryzias latipes (20 d) Bioconcentration factor 2.57
Accumulation in organisms is not to be expected.
The ecological data given are those of the active ingredient.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations.

RCRA:

This product is considered a hazardous waste under RCRA (40 CFR 261.21).

U007 (waste acrylamide)

14. Transport Information

Land transport

USDOT

Hazard class: 6.1
Packing group: III
ID number: UN 3426
Hazard label: 6.1
Proper shipping name: ACRYLAMIDE SOLUTION

Sea transport

IMDG

Hazard class: 6.1
Packing group: III
ID number: UN 3426
Hazard label: 6.1
Marine pollutant: NO
Proper shipping name: ACRYLAMIDE SOLUTION

Air transport

IATA/ICAO

Hazard class: 6.1
Packing group: III
ID number: UN 3426
Hazard label: 6.1
Proper shipping name: ACRYLAMIDE SOLUTION

Safety Data Sheet

ACRYLAMIDE 50% SOLUTION

Revision date : 2010/06/07
Version: 1.1

Page: 7/8
(30481735/SDS GEN US/EN)

15. Regulatory Information

VOC content:

not determined

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

OSHA hazard category: This material is classified as hazardous under OSHA regulations.;

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

Reportable Quantity for release: 9,615 lb

State regulations

State RTK
MA, NJ, PA

CAS Number
79-06-1

Chemical name
acrylamide

CA Prop. 65:

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

16. Other Information

NFPA Hazard codes:

Health : 2 Fire: 0 Reactivity: 1 Special:

HMIS III rating

Health: 2+ Flammability: 0 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: 2010/06/07

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Safety Data Sheet

ACRYLAMIDE 50% SOLUTION

Revision date : 2010/06/07

Page: 8/8

Version: 1.1

(30481735/SDS GEN US/EN)

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Due to the merger of CIBA and BASF Group all Material Safety Data Sheets have been reassessed on the basis of consolidated information. This may have resulted in changes of the Material Safety Data Sheets. In case you have questions concerning such changes please contact us at the address mentioned in Section I.

END OF DATA SHEET