

Safety Data Sheet

ELASTOMERIC ACTIVATOR Part A

Revision date : 2009/11/10

Version: 1.0

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(260344/SDS_GEN_US/EN)

1. Product and Company Identification

Company

Watson Bowman Acme Corporation
95 Pineview Drive
Amherst, NY 14228
USA

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP

2. Hazards Identification

Emergency overview

CAUTION:

CONTAINS DIPHENYLMETHANE DIISOCYANATE (CAS No. 101-68-8). INHALATION OF MDI MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHLESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING.

State of matter: liquid

Colour: yellow

Odour: aromatic

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:

Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

Irritation / corrosion:

Eye contact causes irritation. Skin contact causes irritation.

Sensitization:

Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract. Studies in animals suggest that dermal exposure may lead to pulmonary sensitization. However, the relevance of this result for humans is unclear.

Medical conditions aggravated by overexposure:

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The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Persons with history of respiratory disease or hypersensitivity should not be exposed to this product. An animal study indicated that MDI may induce respiratory hypersensitivity following dermal exposure. Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Preemployment and periodic medical examinations with respiratory function tests (FEV, FVC as a minimum) are suggested. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended. Contact may aggravate pulmonary disorders.

Signs and symptoms of overexposure:
Symptoms can appear later.

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
101-68-8	>= 15.0 - <= 40.0 %	Diphenylmethane-4,4'-diisocyanate (MDI)
26447-40-5	>= 10.0 - <= 30.0 %	Methylenediphenyl diisocyanate

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. If irritation develops, seek medical attention.

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:	187.7 °C	(ASTM D93)
Autoignition:		No data available.
Lower explosion limit:		No data available.
Upper explosion limit:		No data available.
Self-ignition temperature:		not self-igniting

Suitable extinguishing media:

water, dry extinguishing media, carbon dioxide, foam

Hazards during fire-fighting:

nitrous gases, fumes/smoke, isocyanate, vapour

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Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Keep containers cool by spraying with water if exposed to fire.

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:

Dike spillage.

For small amounts: Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.

For large amounts: If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

For residues: The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes.

7. Handling and Storage

Handling

General advice:

Mix thoroughly before use. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Protection against fire and explosion:

No explosion proofing necessary.

Storage

General advice:

Formation of CO₂ and build up of pressure possible. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

Storage incompatibility:

General advice: Segregate from bases.

Storage stability:

Storage temperature: 60 - 80 °F

Protect against moisture.

8. Exposure Controls and Personal Protection

Components with workplace control parameters

Diphenylmethane-4,4'-diisocyanate (MDI)	OSHA ACGIH	CLV 0.02 ppm TWA value 0.005 ppm ;
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Advice on system design:

Provide local exhaust ventilation to maintain recommended P.E.L.

Personal protective equipment

Respiratory protection:

For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions. 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, Suitable materials, chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, fluoroelastomer (Viton)

Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Suitable materials, saran-coated material

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:	liquid	
Odour:	aromatic, slight odour	
Colour:	yellow	
pH value:		not applicable
Boiling point:		No data available.
Vapour pressure:		(25 °C)
Density:	approx. 1.21 g/cm ³	(25 °C)
Vapour density:	8.5	
Partitioning coefficient n-octanol/water (log Pow):		No data available.
Viscosity, dynamic:		No data available.

10. Stability and Reactivity

Conditions to avoid:

Avoid moisture.

Substances to avoid:

water, alcohols, strong bases, Substances/products that react with isocyanates.

Hazardous reactions:

The product is chemically stable.

Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalis. Reacts with amines. Risk of exothermic reaction. Risk of violent reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

Decomposition products:

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

Thermal decomposition:

> 400 °F

Risk of polymerization above the indicated temperature in the presence of moisture and isocyanate reactive substances.

11. Toxicological information

Acute toxicity

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Assessment of acute toxicity:

Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

Irritation / corrosion

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Assessment of irritating effects:

Irritating to eyes, respiratory system and skin.

Sensitization

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Assessment of sensitization:

The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible. Studies in animals suggest that dermal exposure may lead to pulmonary sensitization. However, the relevance of this result for humans is unclear.

Carcinogenicity

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Indication of possible carcinogenic effect in animal tests. However, the relevance of this result for humans is unclear.

Development:

Information on: MDI

The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

12. Ecological Information

Aquatic toxicity

Information on: MDI

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to 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 maybe partially due to degradation products.

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13. Disposal considerations

Waste disposal of substance:

Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal:

DRUMS:

Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Refer to 40 CFR § 261.7 (residues of hazardous waste in empty containers). Check with reconditioner to determine if decontamination is required. Decontaminate containers prior to disposal. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

OSHA hazard category:

Chronic target organ effects reported; ACGIH TLV established

EPCRA 311/312 (Hazard categories):

Acute; Chronic

EPCRA 313:

CAS Number

101-68-8

Chemical name

Diphenylmethane-4,4'-diisocyanate (MDI)

State regulations

State RTK

MA, NJ, PA
NJ

CAS Number

101-68-8
26447-40-5

Chemical name

Diphenylmethane-4,4'-diisocyanate (MDI)
Methylenediphenyl diisocyanate

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16. Other Information

HMIS III rating

Health: 2_a 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.

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Local Contact Information

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