



Insert Iron

Safety Data Sheet

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products

Date of issue: 01/18/2019

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : Insert Iron
Other means of identification : Polyurethane Bonding Adhesive

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Gluing inserts in carbon, cedar, aluminum and fiberglass arrow shafts

1.3. Details of the supplier of the safety data sheet

Manufacturer:

Bohning Company Ltd.
7361 North Seven Mile Road
Lake City, MI 49651
Tel: 231-229-4247

1.4. Emergency telephone number

Emergency number : HAZMAT +1-800-373-7542 (24 hours)
HAZMAT (International Shipments) +1-484-951-2432 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Resp. Sens. 1	H334
Skin Sens. 1	H317
STOT SE 3	H335
STOT RE 2	H373

WHMIS Classification

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

GHS08

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 - May cause respiratory irritation
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) :

P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P264 - Wash thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P272 - Contaminated work clothing should not be allowed out of the workplace
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P284 - [In case of inadequate ventilation] wear respiratory protection
P301+330+331 - IF SWALLOWED, rinse mouth, DO NOT induce vomiting.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

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lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER/doctor/.../if you feel unwell
P314 - Get medical advice and attention if you feel unwell
P321 - Specific treatment (see ... on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
P362 - Take off contaminated clothing
P362+P364 - Take off contaminated clothing and wash it before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container to comply with applicable local, national and international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

Name	Product identifier	EINECS Number	%	GHS-US Classification
Methylenediphenyl diisocyanate (MDI) mixed isomers	(CAS No) 26447-40-5	247-714-0	< 25	Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 STOT RE 2, H373 Carc. 2

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Suspected of causing cancer. Symptoms of poisoning may develop several hours following exposure. Victim should be under medical observation for at least 48 hours after exposure. Harmful by inhalation. Harmful: danger of serious damage to health by prolonged exposure through inhalation. May cause sensitization by inhalation.
First-aid measures after inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell. If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. In case of breathing difficulties administer oxygen. Keep victim warm and rested. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. In case of unconsciousness place patient stably in side for transportation.
First-aid measures after skin contact	: Wash with plenty of soap and water. In all cases of doubt, or when symptoms persist, seek medical advice.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Keep eye wide open while rinsing. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	: Rinse mouth. Product is not intended to be ingested or eaten. If this product is ingested, it may cause gastrointestinal blockage. If ingested, it may cause severe irritation of the gastrointestinal tract, and should be treated symptomatically. DO NOT induce the patient or animal to vomit. Call a physician or seek medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Can occur: eye irritation, irritation of mucous membranes and skin irritation.
Symptoms/injuries after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation. May cause sensitization by inhalation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Acute Ingestion: May cause irritation; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand. LARGE FIRES: Water spray, fog, foam.
Unsuitable extinguishing media : Do not use a heavy water stream. Full water jet.

5.2. Special hazards arising from the substance or mixture

Reactivity : An exothermic reaction may occur. Reacts with water to liberate CO₂ gas which may build pressure in closed containers.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.
Other information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide, NO_x. Hydrogen cyanide (hydrocyanic acid).

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Ensure adequate ventilation. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Use appropriate container to avoid environmental contamination. Store away from other materials. Keep the material damp and exposed to the air in a secure area (CO₂-formation!) until completely solidified. Dispose of contents/container to comply with applicable local, national and international regulations. In the event of a large spill, treat spill area with decontamination solution. Preparation of decontamination solution: Prepare a mixture of 0.2 - 0.5% liquid detergent and 3 - 8% concentrated ammonium hydroxide in water (5 - 10% sodium carbonate may be substituted for the ammonium hydroxide).

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Use only outdoors or in a well-ventilated area. Prevent formation of aerosol. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Exhaust ventilation required during spraying or when material is being used at temperatures above 100 °F (37.7 °C).

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Wash hands thoroughly after handling. Take care for general good hygiene and housekeeping.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ensure adequate ventilation of the storage area.

Storage conditions : Keep away from food, drink and animal feeding stuffs. Keep container tightly closed. Keep only in the original container in a cool well ventilated place. Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Store away from direct sunlight or other heat sources. Keep away from sources of ignition - No smoking. DO NOT store below 40 °F (4.4 °C) or above 110 °F (43.3 °C).

Incompatible materials : Keep away from strong acids, strong bases and oxidizing agents.

Storage temperature : 59 - 77 °F (15 - 25 °C)

Heat and ignition sources : Remove all sources of ignition.

Special rules on packaging : correctly labelled.

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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)		
OSHA	OSHA PEL (Ceiling) (mg/m ³)	0.2 mg/m ³
OSHA	OSHA PEL (Ceiling) (ppm)	0.02 ppm
Nunavut	OEL Ceiling (mg/m ³)	0.2 mg/m ³
Nunavut	OEL Ceiling (ppm)	0.02 ppm
Northwest Territories	OEL Ceiling (mg/m ³)	0.2 mg/m ³
Northwest Territories	OEL Ceiling (ppm)	0.02 ppm

8.2. Exposure controls

Appropriate engineering controls : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Avoid all unnecessary exposure. Protective clothing. Respiratory protection of the dependent type. Protective goggles. Insulated gloves.



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses. if necessary: tightly fitting safety goggles.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of inadequate ventilation wear respiratory protection. In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained apparatus.

Environmental exposure controls : Avoid release to the environment.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : light to dark amber.

Colour : Colourless.

odour : characteristic.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : > 200 °C (> 392°F)

Self ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Relative density : No data available

Density : 1.1 g/cm³ Density at 20°C (68°F): 1.1 g/cm³ (9.18 lbs/gal)

Solubility : insoluble in water.
Water: Insoluble. Reacts with water

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : No data available

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Viscosity, dynamic	: 7000 mPa.s Dynamic at 24°C (75°F)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

An exothermic reaction may occur. Reacts with water to liberate CO₂ gas which may build pressure in closed containers.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Exothermic reaction on contact with : water, amines and alcohol's. Reacts with water at the interface, producing CO₂ gas, and forming a solid and insoluble product, with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents), or by water-soluble solvents. Previous experience demonstrates that polyurea is inert and non-degradable. Water hazard class 1 (self-assessment): slightly hazardous for water.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

strong acids. Strong bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled.

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ATE (dust,mist)	1.500 mg/l/4h

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)	
LD50 oral rat	> 7400 mg/kg
LD50 dermal rabbit	> 6200 mg/kg
LC50 inhalation rat (mg/l)	0.369 mg/l (Exposure time: 4 h)
ATE (dust,mist)	0.369 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified. Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)	
IARC group	3

Reproductive toxicity	: Not classified. Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure. Based on available data, the classification criteria are not met

Aspiration hazard : Not classified. Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Harmful if inhaled.

Symptoms/injuries after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation. May cause sensitization by inhalation.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

Symptoms/injuries after ingestion

: Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

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SECTION 12: Ecological information

12.1. Toxicity

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)	
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 24 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	3230 mg/l (Exposure time: 96 h - Species: Skeletonema costatum)
NOEC (acute)	>= 1000 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida)

12.2. Persistence and degradability

Insert Iron	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Insert Iron	
Bioaccumulative potential	Not established.

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)	
BCF fish 1	3 - 14
Log Pow	4.5

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information : Information in this section pertains to the product as shipped in its intended composition as described in Section 2 of this MSDS. Contamination or processing may change waste characteristics and requirements. Regulations may also apply to empty containers, liners or rinsate. State/provincial and local regulations may be different from federal regulations. Empty containers may only be disposed of after neutralizing any product remaining on the walls of the containers with a mixture of isopropanol, ammonia and water and removal of the warning labels. For preparation of decontamination solution, refer to section 6.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

DOT NA no. NA3082

14.2. UN proper shipping name

DOT Proper Shipping Name : Other regulated substances, liquid, n.o.s.

Department of Transportation (DOT) Hazard Classes : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Hazard labels (DOT) : 9 - Miscellaneous dangerous substances and articles



DOT Symbols : D - Proper shipping name for domestic use only, or to and from Canada, G - Identifies PSN requiring a technical name

Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T2 - 1.5 178.274(d)(2) Normal 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 155

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DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241

14.2 Additional information

Other information : Single containers less than 5000 lbs are not regulated. Single containers with 5,000 lbs or more of methylenediphenyl diisocyanate are regarded as class 9, NA3082, PG III.

Overland transport

Packing group (ADR) : III
Class (ADR) : 9 - Miscellaneous dangerous substances and articles
Hazard identification number (Kemler No.) : 90
Classification code (ADR) : M6
Danger labels (ADR) : 9 - Miscellaneous dangerous substances and articles



Orange plates :



Tunnel restriction code : E
Excepted quantities (ADR) : E1

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : No limit

SECTION 15: Regulatory information

CANADA

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

15.2. International regulations

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EU-Regulations

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Inhalation:dust,mist) H332
Skin Irrit. 2 H315
Eye Irrit. 2 H319
Resp. Sens. 1 H334
Skin Sens. 1 H317
Carc. 2 H351
STOT SE 3 H335
STOT RE 2 H373

Full text of H-phrases: see section 16

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Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40

Xn; R20

Xn; R48/20

Xn; R42

Xi; R36/37/38

Xi; R43

Full text of R-phrases: see section 16

15.2.2. National regulations

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Single containers less than 5000 lbs are not regulated. Single containers with 5,000 lbs or more of methylenediphenyl diisocyanate are regarded as class 9, NA3082, PG III

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5)

Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Resp. Sens. 1	Sensitisation — Respiratory, category 1
Skin Irrit. 2	skin corrosion/irritation Category 2
Skin Sens. 1	Sensitisation — Skin, category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure

HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 1 Slight Hazard

Physical : 1 Slight Hazard

SDS Canada (GHS)

The conditions of handling, storage, use and disposal of the product covered by this SDS are beyond the control and knowledge of Bohning Archery. Therefore we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product. This SDS meets the requirements specified in 29 CFR 1910.1200. Customers are responsible for compliance with local, state, and federal regulations that may be pertinent in the storage, application, and disposal of this product

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