X60-B

Safety Data Sheet

According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date: 12/13/2024 Revision date: 7/11/2025 Supersedes: 12/13/2024 Version: 1.1

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : X60-B
Product code : 1-X60

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Adhesive

1.4. Supplier's details

Hottinger Brüel & Kjaer
19 Bartlett St.
Marlborough, MA 01590
USA
T 1-508-804-3268
support.@hbm.com

1.5. Emergency phone number

Emergency number : For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night: 1-800-424-9300 (Toll Free, USA) / 703-527-3887 (Virginia, USA)
CCN 1015295
Back-up Emergency Number: +1 703-741-5970 (Washington, DC)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquid, Category 2	H225	Highly flammable liquid and vapor.
Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Skin sensitization, Category 1	H317	May cause an allergic skin reaction.
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : H225 - Highly flammable liquid and vapor
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H335 - May cause respiratory irritation

Precautionary statements (GHS US) : Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use explosion-proof electrical, lighting, ventilating equipment.
Avoid breathing mist, spray, vapors.
Wash hands, forearms and face thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves, protective clothing, eye and face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation or rash occurs: Get medical advice or attention.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center or doctor if you feel unwell.
In case of fire: Use Dry chemical, CO2, alcohol-resistant foam or waterspray to extinguish.
Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Store locked up.
Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Methyl methacrylate	CAS-No.: 80-62-6	45 – 70	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Triethylene glycol dimethacrylate	CAS-No.: 109-16-0	5 – 10	Skin Sens. 1B, H317 Aquatic Acute 3, H402 Aquatic Chronic 3, H412

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell. First aider: Pay attention to self-protection. Never give anything by mouth to an unconscious person. Give artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device but not mouth-to-mouth.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If the victim is unconscious : Lay in a stable manner on victim's side. Induce artificial respiration with mask fitted with one-way valve or other suitable device; not mouth-to-mouth. Call a physician immediately.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin areas with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

First-aid measures after eye contact : Rinse eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : May cause slight irritation.

Symptoms/effects after ingestion : May cause irritation to the digestive tract.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : IF exposed or concerned: Get medical advice/attention.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Dry chemical, CO2, alcohol-resistant foam or waterspray.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor.

Explosion hazard : Containers may rupture or explode if exposed to heat. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Low flash point. Use of water spray when fighting fire may be inefficient. Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Move containers from fire area if it can be done without personal risk. Cool affected containers with flooding quantities of water. For a massive fire, use unmanned hose holders or monitor nozzles, or withdraw from the area and allow fire to burn. Withdraw immediately in case of rising sound from venting devices or discoloration from tank. ALWAYS stay away from tanks engulfed in fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid all personal contact including breathing in the mist, spray, vapors. Do not take actions involving personal risks. Absorb spillage to prevent material-damage. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Evacuate the danger area. If outdoors, move to an area upwind of the danger area. Avoid breathing mist, spray, vapors. Avoid contact with skin and eyes. If possible without taking personal risks, Remove ignition sources, ventilate area. Prevent other non-emergency personnel from entering the danger area. No open flames, no sparks, and no smoking.

For emergency responders

Protective equipment : Wear the recommended personal protective equipment. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Do not touch spilled material. Use non-sparking tools. Stop leak if safe to do so.

Environmental precautions : Avoid release to the environment. Notify authorities if the product reaches soil, drains, sewers, surface waters or groundwater.

6.2. Methods and materials for containment and cleaning up

For containment : Contain with non-combustible inert absorbent. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Collect spillage. Stop leak, if possible without risk.

Methods for cleaning up : Take up in non-combustible inert absorbent and place into container for disposal. Contaminated absorbent material may pose the same hazard as the spilt product. Decontaminate surfaces and equipment with water. Until a sufficient level of dilution is achieved, the decontamination water may pose the same hazards as the product. Notify authorities if product enters sewers or public waters. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

For further information refer to section 8: "Exposure controls/personal protection",For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Avoid breathing mist, spray, vapors. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use explosion-proof equipment. Flammable vapors may accumulate in the container. Handle under inert gas. Open drum carefully as content may be under pressure.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

Additional hazards when processed : Vapor/air mixtures are explosive.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions	:	Store in a cool, dry and well-ventilated area away from incompatible substances. Keep container tightly closed. Protect from sunlight. Protect from moisture. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Store locked up. Fill the container by approximately 90 % only as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability.
Incompatible materials	:	Alkalis. Amines. Heavy metals. Peroxides. Strong oxidizing agents. Strong reducing agents. Sulfur compounds.
Storage temperature	:	≤ 25 °C / 77 °F
Packaging materials	:	Store always product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station. Use general ventilation, local exhaust ventilation, or process enclosure to keep the airborne concentrations below the permissible exposure limits. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Environmental exposure controls	:	Avoid release to the environment. Take measures to reduce or limit air emissions and releases to soil and the aquatic environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Personal protective equipment should be chosen according to national standards and in discussion with the supplier of the protective equipment. Wear recommended personal protective equipment.

Hand protection:
Wear protective gloves. Chemically impervious gloves as described by OSHA's hand protection regulations in 29 CFR 1910.138. Butyl rubber protective gloves with a permeation time of >60 minutes for each ingredient of this mixture. The following materials are unsuitable for protective gloves because of degradation, severe swelling or low permeation time: Chloroprene rubber, Natural rubber, Fluorocarbon rubber, Nitrile rubber, Polyvinylchloride (PVC)

Eye protection:
Chemical goggles or face shield

Skin and body protection:
Wear suitable protective clothing. Body protection should be chosen depending on activity and possible exposure. Body protection may include: Chemical resistant apron, Chemical resistant safety shoes.

Respiratory protection:
An approved organic vapor respirator/supplied-air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	Yellow
Odor	:	Ester-like
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	< 15 °C / 59 °F
Boiling point	:	100 °C / 212 °F
Flash point	:	10 °C / 50 °F (methyl methacylate)
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	40 hPa @ 20 °C / 68 °F
Relative vapor density at 20°C	:	> 1
Relative density	:	No data available
Density	:	1 g/cm³ @ 23 °C / 73.4 °F
Solubility	:	Soluble in ethylacetate. Water: 20 g/l @ 20 °C / 68 °F
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	90 mm²/s
Viscosity, dynamic	:	90 mPa·s @ 23 °C / 73.4 °F
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor. Vapors may form explosive mixture with air. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.

10.2. Chemical stability

Material is normally stable but can become unstable (self-react) at high temperatures and pressures. May undergo hazardous polymerization in the absence of inhibitors.

10.3. Possibility of hazardous reactions

Polymerization can be catalyzed by: heat, peroxides, Reducing agents, Heavy metals.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Direct sunlight. Incompatible materials.

10.5. Incompatible materials

Alkalis. Amines. Heavy metals. Peroxides. Strong oxidizing agents. Strong reducing agents. Sulfur compounds.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Carbon dioxide. Carbon monoxide.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Methyl methacrylate	
LD50 dermal rabbit	> 5000 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Methyl methacrylate	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.

Methyl methacrylate	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Triethylene glycol dimethacrylate	
LOAEC (inhalation,rat,gas,90 days)	350 ppm
NOAEL (oral,rat,90 days)	1000 mg/kg body weight
NOAEC (inhalation,rat,gas,90 days)	100 ppm

Aspiration hazard : Not classified

X60-B	
Viscosity, kinematic	90 mm²/s

Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : May cause slight irritation.
Symptoms/effects after ingestion : May cause irritation to the digestive tract.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short–term (acute) : Harmful to aquatic life
Hazardous to the aquatic environment, long–term (chronic) : Harmful to aquatic life with long lasting effects

Methyl methacrylate	
LC50 - Fish [1]	> 79 mg/l

Methyl methacrylate	
EC50 - Crustacea [1]	69 mg/l
EC50 72h - Algae [1]	> 110 mg/l
LOEC (chronic)	68 mg/l
NOEC (chronic)	37 mg/l
NOEC chronic fish	9.4 mg/l
Triethylene glycol dimethacrylate	
LC50 - Fish [1]	16.4 mg/l
EC50 72h - Algae [1]	> 100 mg/l
EC50 72h - Algae [2]	72.8 mg/l
LOEC (chronic)	100 mg/l
NOEC (chronic)	32 mg/l

12.2. Persistence and degradability

X60-B	
Persistence and degradability	Not rapidly degradable
Methyl methacrylate	
Persistence and degradability	Not rapidly degradable
Triethylene glycol dimethacrylate	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations. Dispose of this material and its container at hazardous or special waste collection point. Refer to all applicable national, international and local regulations or provisions.
Additional information : Flammable vapors may accumulate in the container. Do not re-use empty containers.
Ecological waste information : Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / IMDG / IATA

DOT	IMDG	IATA
14.1. UN number		
UN1866	1866	1866
14.2. Proper Shipping Name		
Resin solution	RESIN SOLUTION	Resin solution
14.3. Transport hazard class(es)		
3	3	3
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
	Dangerous for the environment: No Marine pollutant: No	
No supplementary information available		

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No. (DOT)	:	UN1866
DOT Packaging Exceptions (49 CFR 173.xxx)	:	150
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	173
DOT Packaging Bulk (49 CFR 173.xxx)	:	242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60 L
DOT Vessel Stowage Location	:	B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

IMDG

Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P001
Packing provisions (IMDG)	:	PP1
IBC packing instructions (IMDG)	:	IBC02
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	TP1, TP8
EmS-No. (Fire)	:	F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	:	S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER
Stowage category (IMDG)	:	B
Properties and observations (IMDG)	:	Miscibility with water depends upon the composition.

IATA

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y341
PCA limited quantity max net quantity (IATA)	:	1L
PCA packing instructions (IATA)	:	353
PCA max net quantity (IATA)	:	5L
CAO packing instructions (IATA)	:	364
CAO max net quantity (IATA)	:	60L
ERG code (IATA)	:	3L

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Methyl methacrylate	CAS-No. 80-62-6	45 – 70%

Methyl methacrylate (80-62-6)

Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb

15.2. International regulations

CANADA

Methyl methacrylate (80-62-6)

Listed on the Canadian DSL (Domestic Substances List)

Triethylene glycol dimethacrylate (109-16-0)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Methyl methacrylate (80-62-6)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Triethylene glycol dimethacrylate (109-16-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Methyl methacrylate(80-62-6)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date : 7/11/2025

Issue date : 12/13/2024

Full text of hazard classes and H-statements	
H225	Highly flammable liquid and vapor
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H335	May cause respiratory irritation
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

Indication of changes:
HazCom 2024.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.