

1 Identification of substance:

- . **Product details:**
- . **Trade name:** **Schnellklebstoff X 60 Komponente B**
- . **Application of the substance / the preparation** Monomer mixture for preparation of adhesives
- . **Manufacturer/Supplier:** Hottinger Baldwin Messtechnik GmbH
Im Tiefen See 45
D-64293 Darmstadt

Tel.: +49 (0)6151 803-0
- . **Information department:** AGU: +49(0)6151/ 803 434 or +49(0)170/7743003 Eberhard Parthey
e-mail: eberhard_parthey@web.de
- . **Emergency information:** Advice centre for poisoning university Mainz phone +49(0)6131/19240
or poison information:+49(0)700/GIFTINFO

2 Composition/Data on components:

- . **Chemical characterization**
- . **Description:** Monomer mixture based on methyl acryloester
- . **Dangerous components:**

80-62-6 methyl methacrylate	Xi, F; R 11-37/38-43	50-100%
868-77-9 2-hydroxyethyl methacrylate	Xi; R 36/38-43	25-50%
99-97-8 N,N-dimethyl-p-toluidine	T; R 23/24/25-33-52/53	< 2.5%

3 Hazards identification

- . **Hazard description:** Xn Harmful
F Highly flammable
- . **Information pertaining to particular dangers for man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 11 Highly flammable.
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R 33 Danger of cumulative effects.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 43 May cause sensitization by skin contact.
- . **Classification system** The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
- . **NFPA ratings (scale 0-4)** Health = 2
Fire = 4
Reactivity = 0

4 First aid measures

- . **General information** Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours. Remove soiled, soaked clothing immediately.
After inhalation
- . **After inhalation** Move subject to fresh air and keep him calm. See a physician.
Take affected persons into fresh air and keep quiet.
Seek medical treatment.
- . **After skin contact** Wash with polyethylene glycol and ethanol (2:1). Then wash thoroughly with water and soap.
Seek medical treatment.
- . **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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- . **After swallowing** Do not induce vomiting; immediately call for medical help.
- . **Information for doctor**
- . **Treatment** If blue colouring appears (lips, ear-lobes, finger-nails), give oxygen treatment as quickly as possible.

5 Fire fighting measures

- . **Suitable extinguishing agents** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- . **For safety reasons unsuitable extinguishing agents** Water with full jet.
- . **Protective equipment:** Mount respiratory protective device.

6 Accidental release measures

- . **Person-related safety precautions:** Ensure adequate ventilation
Wear protective clothing.
Keep away from ignition sources
Use respiratory protective device against the effects of fumes/dust/aerosol.
- . **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- . **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

7 Handling and storage

- . **Handling**
- . **Information for safe handling:** Keep receptacles tightly sealed.
- . **Information about protection against explosions and fires:** Keep away from ignition sources - Do not smoke.
Protect against electrostatic charges.
- . **Storage**
- . **Requirements to be met by storerooms and receptacles:** Only store in the original container at a temperature not exceeding 30°C.
Fill container only approx 90% full, as air oxygen is required for stabilization.
Protect against the effects of light
Store in a cool location.
- . **Information about storage in one common storage facility:** Store away from foodstuffs.
- . **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
Store receptacle in a well ventilated area.

8 Exposure controls and personal protection

- . **Additional information about design of technical systems:** No further data; see item 7.

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. Components with limit values that require monitoring at the workplace:

80-62-6 methyl methacrylate

PEL 410 mg/m³, 100 ppm
 REL 410 mg/m³, 100 ppm
 TLV Short-term value: 410 mg/m³, 100 ppm
 Long-term value: 205 mg/m³, 50 ppm
 SEN

. Additional information: The lists that were valid during the creation were used as basis.

. Personal protective equipment

. General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.

. Breathing equipment:

Use suitable respiratory protective device when high concentrations are present.

Short term filter device:
 Filter use "organic vapor" cartridges.

. Protection of hands:

Protective gloves.
 The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

. Material of gloves

Butyl rubber, BR
 Recommended thickness of the material: $\geq 0,7$ mm
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

. Penetration time of glove material

Value for the permeation: Level $\geq 0,7$ mm 480 min(8h) EN 374
 The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

. Eye protection:

Tightly sealed goggles.

9 Physical and chemical properties:

. General Information

Form: Fluid
Color: Yellowish
Odor: Ester-like

. Change in condition

Melting point/Melting range: environ -50 °C (environ -58 °F)
Boiling point/Boiling range: 101°C (214°F) (1013 hPa)

. Flash point: 10°C (50°F) (DIN 51755 (methyl methacrylate))

. Ignition temperature: Not determined

. Decomposition temperature: Not determined

. Auto igniting: Not determined

. Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

. Explosion limits:

Lower: 2.1 Vol % ((methyl methacrylate))
Upper: 12.5 Vol % ((methyl methacrylate))

. Vapor pressure at 20°C (68°F): environ. 40 hPa (environ. 104 mm Hg)

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- . Density at 20°C (68°F): 0.93 - 0.97 g/cm³
- . Vapour density at 20°C (68°F) > 1 (rapport l'air)
- . Solubility in / Miscibility with Water at 20°C (68°F): environ 295 g/l
- . pH-value: Not applicable
- . Viscosity:
dynamic at 20°C (68°F): environ 2 mPas (Brookfield))
- . Additional information Solubility (qualitative) soluble in acetone

10 Stability and reactivity

- . Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- . Dangerous reactions: Exothermic polymerization
Reacts with peroxides
Reacts with reducing agents
Reacts with heavy metal ions
- . Dangerous products of decomposition: No dangerous decomposition products known

11 Toxicological information

- . Acute toxicity:
- . LD/LC50 values that are relevant for classification: Acute Oral Toxicity LD50 rat, OECD 401 > 5,000 mg/kg
Related to substance: methyl methacrylate
LD50 rat, FDA-Guideline > 5,000 mg/kg
(own examinations)
Related to substance: 2-hydroxyethyl methacrylate
Acute Inhalational Toxicity LD50 rat, 4 h 29.8 mg/l
Related to substance: methyl methacrylate
Acute Dermal Toxicity LD50 rabbit > 5,000 mg/kg
Related to substance: methyl methacrylate

99-97-8 N,N-dimethyl-p-toluidine

Oral LD50 Oral LD50 147 mg/kg (rat)

- . Primary irritant effect:
. on the skin: Contact with skin may cause irritations. (analogy)
Related to substance: product
- . on the eye: Contact with the eyes may cause irritation. (analogy)
Related to substance: product
- . Additional toxicological information: The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

12 Ecological information:

- . Information about elimination (persistence and degradability):
- . Other information: The product is easily biodegradable.

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. Ecotoxicological effects:**. Aquatic toxicity:**

Fish toxicity

LC50 Oncorhynchus mykiss, rainbow trout, OECD 203, flow through, GLP, 96 h > 79 mg/l

Related to substance: methyl methacrylate

Daphnia toxicity EC50 Daphnia magna, OECD 202, flow through, 48 h 69 mg/l

Related to substance: methyl methacrylate

NOEC Daphnia magna, OECD 202 part 2, flow through, 21 d 37 mg/l

Related to substance: methyl methacrylate

Algae toxicity EC3 Scenedesmus quadricauda, DIN 38412 section 9, 8 d 37 mg/l

Related to substance: methyl methacrylate

Bacteria toxicity EC0 Pseudomonas putida 100 mg/l

Related to substance: methyl methacrylate

. General notes:General information Do not allow to enter soil, waterways or waste water
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

Do not allow product to reach ground water, water course or sewage system.

13 Disposal considerations**. Product:****. Recommendation**

Waste is hazardous. It must be disposed of in accordance with the regulations after consultation of the competent local authorities and the disposal company in a suitable and licensed facility.

. Uncleaned packagings:**. Recommendation:**

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

Non contaminated packagings can be treated like household garbage.

14 Transport Information**. DOT regulations:****. Hazard class:**

3

. Identification number:

UN1993

. Packing group:

II

. Proper shipping name (technical name): FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED)**. Label**

3

. Land transport ADR/RID (cross-border)**. ADR/RID class:**

3 (F1) Flammable liquids

. Danger code (Kemler):

33

. UN-Number:

1993

. Packaging group:

II

. Description of goods:

1993 FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED)

. Inland shipping ADN:**. ADN/R Class:**

3

. Item:

3b

. Maritime transport IMDG:**. IMDG Class:**

3

. UN Number:

1993

. Label

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. Packaging group:	II
. EMS Number:	F-E,S-E
. Marine pollutant:	No
. Proper shipping name:	FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED)
. Air transport ICAO-TI and IATA-DGR:	
. ICAO/IATA Class:	3
. UN/ID Number:	1993
. Label	3
. Packaging group:	II
. Proper shipping name:	FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED)

15 Regulations

. SARA Section 355 (extremely hazardous substances)	
None of the ingredients is listed.	
. SARA Section 313 (specific toxic chemical listings)	
80-62-6 methyl methacrylate	
. TSCA (Toxic Substances Control Act)	
All ingredients are listed.	
. Prop 65 - Chemicals known to cause cancer	
None of the ingredients is listed.	
. Carcinogenity categories	
. EPA (Environmental Protection Agency)	
80-62-6 methyl methacrylate	E;NL
. IARC (International Agency for Research on Cancer)	
80-62-6 methyl methacrylate	3
. NTP (National Toxicology Program)	
None of the ingredients is listed.	
. TLV (Threshold Limit Value established by ACGIH)	
80-62-6 methyl methacrylate	A4
. MAK (German Maximum Workplace Concentration)	
None of the ingredients is listed.	
. NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
. OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	
. Markings according to EU guidelines:	The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials
. Code letter and hazard designation of product:	Xn Harmful F Highly flammable
. Hazard-determining components of labelling:	methyl methacrylate 2-hydroxyethyl methacrylate N,N-dimethyl-p-toluidine
. Risk phrases:	11 Highly flammable. 20/21/22 Harmful by inhalation, in contact with skin and if swallowed. 33 Danger of cumulative effects. 36/37/38 Irritating to eyes, respiratory system and skin. 43 May cause sensitization by skin contact.

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- . Safety phrases:** 16 Keep away from sources of ignition - No smoking.
 23 Do not breathe gas/fumes/vapour/spray.
 24 Avoid contact with skin.
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 37 Wear suitable gloves.
- . National regulations**
- . Information about limitation of use:** Employment restrictions concerning young persons must be observed.
 Employment restrictions concerning pregnant and lactating women must be observed.
- . Technical instructions (air):**
- | Class | Share in % |
|-------|------------|
| I | < 2,5 |
| NK | 50-100 |
- . Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- . Other regulations, limitations and prohibitive regulations** Swiss toxic class: 4
 BAG T No.:40056

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- . Department issuing MSDS:** Department: AGU
- . Contact:** Mr. Eberhard Parthey
 e-mail: eberhard_parthey@web.de

USA