

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.12.2019

Version number 10

Revision: 02.12.2019

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

### 1.1 Product identifier

Trade name: **MMA Adhesive 6 min, Part B**

Article number: 87554B

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

No further relevant information available.

Application of the substance / the mixture

Adhesives  
Activator

### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH  
Lechstrasse 28  
D 90451 Nürnberg

Tel. +49(0)911-642960  
Fax. +49(0)911-644456  
e-mail info@akemi.de

Further information obtainable from:

Laboratory

### 1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH  
Tel. +49(0)911-64296-59  
Reachable during the following office hours:  
Monday – Thursday from 07:30 a.m. to 16:30 p.m.  
Friday from 07:30 a.m. to 13:30 p.m.  
+44 (171) 635 91 91  
National Poison Inform. Centre  
Medical Toxicology Unit  
Avalonley Road  
London SE14 5ER

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS02 GHS07

Signal word

Danger

Hazard-determining components of labelling:

methyl methacrylate

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- Hazard statements
  - H225 Highly flammable liquid and vapour.
  - H315 Causes skin irritation.
  - H317 May cause an allergic skin reaction.
  - H335 May cause respiratory irritation.
  - H412 Harmful to aquatic life with long lasting effects.
- Precautionary statements
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read label before use.
  - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P271 Use only outdoors or in a well-ventilated area.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P302+P352 IF ON SKIN: Wash with plenty of water.
  - P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
  - P405 Store locked up.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

### SECTION 3: Composition/information on ingredients

#### · 3.2 Chemical characterisation: Mixtures

- Description: Mixture: consisting of the following components.

#### · Dangerous components:

CAS: 80-62-6 EINECS: 201-297-1 Index number: 607-035-00-6 Reg.nr.: 01-2119452498-28	methyl methacrylate Flam. Liq. 2, H225 Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	50-100%
CAS: 34562-31-7 EINECS: 252-091-3	3,5-diethyl-1,2-dihydro-1-phenyl-2-propylpyridine Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	1-5%
CAS: 128-37-0 EINECS: 204-881-4 Reg.nr.: 01-2119565113-46-0000	Butylated hydroxytoluene Aquatic Acute 1, H400; Aquatic Chronic 1, H410	<1%

- Additional information: For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### · 4.1 Description of first aid measures

- After inhalation: Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Do not induce vomiting; call for medical help immediately.  
Rinse out mouth and then drink plenty of water.

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· **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· For safety reasons unsuitable extinguishing agents:

Water with full jet

· **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

· **5.3 Advice for firefighters**

· Protective equipment:

Do not inhale explosion gases or combustion gases.  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

· Additional information

Cool endangered receptacles with water spray.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

### SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.  
Keep away from ignition sources.

Particular danger of slipping on leaked/spilled product.

· **6.2 Environmental precautions:**

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

Prevent seepage into sewage system, workpits and cellars.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.  
Keep away from heat and direct sunlight.  
Extractor required at the object.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.

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**7.2 Conditions for safe storage, including any incompatibilities**

## Storage:

## Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.  
Store in a cool location.

## Information about storage in one common storage facility:

Store away from foodstuffs.  
Store away from oxidising agents.

## Further information about storage conditions:

Protect from frost.  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.

## Storage class:

3

**7.3 Specific end use(s)**

No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

## Additional information about design of technical facilities:

No further data; see item 7.

**8.1 Control parameters**

## Ingredients with limit values that require monitoring at the workplace:

**80-62-6 methyl methacrylate**

WEL Short-term value: 416 mg/m<sup>3</sup>, 100 ppm  
Long-term value: 208 mg/m<sup>3</sup>, 50 ppm

**128-37-0 Butylated hydroxytoluene**

WEL Long-term value: 10 mg/m<sup>3</sup>

## DNELs

**80-62-6 methyl methacrylate**

Oral	DNEL (Kurzzeit-akut)	0.25 mg/kg bw/day (BEV)
Dermal	DNEL (Kurzzeit-akut)	1.5 mg/kg bw/day (ARB)
		1.5 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	1.5-13.67 mg/kg bw/day (ARB)
Inhalative		1.5-8.2 mg/kg bw/day (BEV)
	DNEL (Kurzzeit-akut)	29.6-416 mg/m <sup>3</sup> Air (ARB)
		6.3-104 mg/m <sup>3</sup> Air (BEV)
	DNEL (Langzeit-wiederholt)	208 mg/m <sup>3</sup> Air (ARB)
		74.3-104 mg/m <sup>3</sup> Air (BEV)

**128-37-0 Butylated hydroxytoluene**

Oral	DNEL (Langzeit-wiederholt)	0.25 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	8.3 mg/kg bw/day (ARB)
		5 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	5.8 mg/m <sup>3</sup> Air (ARB)
		1.74 mg/m <sup>3</sup> Air (BEV)

## PNECs

**80-62-6 methyl methacrylate**

PNEC (wässrig) 10 mg/l (KA)  
0.94 mg/l (MW)  
0.94 mg/l (SW)  
0.15-0.94 mg/l (WAS)

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PNEC (fest)	1.47 mg/kg Trockengew (BO) 0.73-45.38 mg/kg Trockengew (MWS) 5.74 mg/kg Trockengew (SWS)
<b>128-37-0 Butylated hydroxytoluene</b>	
PNEC (wässrig)	100 mg/l (KA) 0.0004 mg/l (MW) 0.004 mg/l (SW) 0.00199 mg/l (WAS)
PNEC (fest)	1.04 mg/kg Trockengew (BO) 0.00996 mg/kg Trockengew (MWS) 1.29 mg/kg Trockengew (SWS)

· Additional information: The lists valid during the making were used as basis.

## · 8.2 Exposure controls

- 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.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the skin.  
Avoid contact with the eyes and skin.

- Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.  
Filter AX

- Protection of hands:



Protective gloves

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

The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times' data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.

This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- Value for the permeation: Level  $\leq$  480 min
- For the permanent contact gloves made of the following materials are suitable: Butyl rubber, BR
  - As protection from splashes gloves made of the following materials are suitable: Butyl rubber, BR  
Nitrile rubber, NBR
  - Not suitable are gloves made of the following materials: Leather gloves  
Strong material gloves
  - Eye protection:  Tightly sealed goggles
  - Body protection: Protective work clothing

### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

Form:

Gel

Colour:

Black

##### · Odour:

Specific type

##### · Odour threshold:

Not determined.

##### · pH-value:

Not determined.

##### · Change in condition

Melting point/freezing point:

Undetermined.

Initial boiling point and boiling range: 101 °C

##### · Flash point:

12 °C

##### · Flammability (solid, gas):

Not applicable.

##### · Ignition temperature:

430 °C

##### · Decomposition temperature:

Not determined.

##### · Auto-ignition temperature:

Product is not selfigniting.

##### · Explosive properties:

Product does not present an explosion hazard.

##### · Explosion limits:

Lower:

2.1 Vol %

Upper:

12.5 Vol %

##### · Vapour pressure:

Not determined.

##### · Density at 20 °C:

0.95 g/cm<sup>3</sup>

##### · Relative density

Not determined.

##### · Vapour density

Not determined.

##### · Evaporation rate

Not determined.

##### · Solubility in / Miscibility with water:

Not miscible or difficult to mix.

##### · Partition coefficient: n-octanol/water:

Not determined.

##### · Viscosity:

Dynamic at 20 °C:

150,000-200,000 mPas

Kinematic:

Not determined.

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· **9.2 Other information** No further relevant information available.

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** Stable under recommended transport or storage conditions
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with strong acids and oxidising agents. Polymerisation.
- **10.4 Conditions to avoid** Heat, flames and other sources of ignition
- **10.5 Incompatible materials:** strong oxidizing agents  
Acids  
bases
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide  
Poisonous gases/vapours

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

### ATE (Acute Toxicity Estimates)

Oral	LD50	>10,000 mg/kg (rat)
Dermal	LD50	>20,000 mg/kg (rabbit)

### 80-62-6 methyl methacrylate

Oral	LD50	7,872 mg/kg (rat) (OECD 401)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4h	4,632 mg/m <sup>3</sup> (rat)
	LC50/4 h	29.8 mg/l (rat)

### 34562-31-7 3,5-diethyl-1,2-dihydro-1-phenyl-2-propylpyridine

Oral	LD50	>500 mg/kg (rat)
Dermal	LD50	>1,000 mg/kg (rabbit)

### 128-37-0 Butylated hydroxytoluene

Oral	LD50	>2,930 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

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**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:****80-62-6 methyl methacrylate**

EC50/96h	170 mg/l (Pseudokirchneriella subcapitata)
EC50/48h	69 mg/l (daphnia magna) (OECD 202)
EC0	100 mg/l (pseudomonas putida)
NOEC	9.4 mg/kg (Danio rerio.) (OECD 210)
NOEC	>100 mg/l (Selenastrum capricornutum)
NOEC/21d	37 mg/l (daphnia magna) (OECD 202)
EC50/72h	>110 mg/l (Selenastrum capricornutum)
LC50/96h	153.9-341.8 mg/l (lem)
	>79 mg/l (Oncorhynchus mykiss) (OECD 203)
	125-275 mg/l (pimephales promelas)
	326.4-426.9 mg/l (poecilia reticulata)

**128-37-0 Butylated hydroxytoluene**

IC50/72h	>0.1-1 mg/l (green alge)
EC50/48h	0.48 mg/l (daphnia magna)
ErC50/72h	>0.4 mg/l (Desmodesmus subspicatus)
LL0/96h	>0.1-1 mg/l (piscis)
NOEC/21d	0.07 mg/l (daphnia magna)
EC50/72h	0.42 mg/l (Desmodesmus subspicatus) ((EC) Nr. 440/2008, Anhang C.3)
LC50/96h	>0.57 mg/l (Brachydanio rerio)
	199 mg/l (piscis)

**12.2 Persistence and****degradability**

biodegradable

**12.3 Bioaccumulative potential**

Does not accumulate in organisms

**12.4 Mobility in soil**

No further relevant information available.

**Additional ecological information:****General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

**12.5 Results of PBT and vPvB assessment****PBT:**

Not applicable.

**vPvB:**

Not applicable.

**12.6 Other adverse effects**

No further relevant information available.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 04 00	wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances
15 00 00	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED

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15 01 00	packaging (including separately collected municipal packaging waste)
15 01 10*	packaging containing residues of or contaminated by hazardous substances

- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

**SECTION 14: Transport information**

- **14.1 UN-Number**
- ADR, IMDG, IATA

UN1133

- **14.2 UN proper shipping name**

- ADR 1133 ADHESIVES, special provision 640D
- IMDG, IATA ADHESIVES

- **14.3 Transport hazard class(es)**

- ADR



- Class 3 (F1) Flammable liquids.
- Label 3

- IMDG, IATA



- Class 3 Flammable liquids.
- Label 3

- **14.4 Packing group**

- ADR, IMDG, IATA II

- **14.5 Environmental hazards:**

- Marine pollutant: No

- **14.6 Special precautions for user**

- Danger code (Kemler): Warning: Flammable liquids.
- EMS Number: 33
- Stowage Category F-E,S-D
- Stowage Category B

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

- Transport/Additional information:

- ADR
- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml
- Transport category 2
- Tunnel restriction code D/E

- IMDG
- Limited quantities (LQ) 5L

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· <u>Excepted quantities (EQ)</u>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <u>UN "Model Regulation":</u>	UN 1133 ADHESIVES, SPECIAL PROVISION 640D, 3, II

**SECTION 15: Regulatory information****· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- National regulations:
- Information about limitation of use: Employment restrictions concerning juveniles must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.
- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- VOC EU 863.6 g/l
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 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.

- Relevant phrases H225 Highly flammable liquid and vapour.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.
- Department issuing SDS: Laboratory
- Contact: Dieter Zimmermann
- Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

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PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 2: Flammable liquids – Category 2  
Acute Tox. 4: Acute toxicity - oral – Category 4  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Skin Sens. 1: Skin sensitisation – Category 1  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1  
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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