

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date: 04.06.2007

Revision: 04.06.2007

*** 1 Identification of substance:****• Product details:**

- **Trade name:** Glycidyl Methacrylate
- **Application of the substance / the preparation** Copolymer

• Supplier/Manufacturer:

ADAKEM KİMYA

Yeşilbağlar Mahallesi, Kaptan Sk. Metrowin Tower 17/1,
Kat:8 Daire:51 Pendik / İstanbul - TÜRKİYE

Tel: +90 216 330 92 00 FAX: +90 216 331 91 81

- **Email:** info@adakem.com

• Information department:

ADAKEM KİMYA

Tel: +90 216 330 92 00 FAX: +90 216 331 91 81

email: info@adakem.com

• Emergency information:

National Poisons Information Centre

Tel.: 112

2 Hazards identification

- **Hazard description:** Xn Harmful
- **Information pertaining to particular dangers for man and environment:**
 - R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
 - R 36/38 Irritating to eyes and skin.
 - R 43 May cause sensitisation by skin contact.

• Classification system:

The classification was made according to the latest editions of the EU-lists, and expanded using company data and specialized literature.

3 Composition/information on ingredients

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• Chemical characterization:**CAS No. Description:**

106-91-2 2,3-epoxypropyl methacrylate

• Identification number(s):

- **EINECS Number:** 2034419

- **EU Number:** 607-123-00-4

4 First aid measures**• General information:**

Symptoms of poisoning may occur even after several hours; therefore medical observation is suggested for at least 48 hours after the accident.

Remove contaminated clothing and wash before reuse.

• After inhalation:

Supply fresh air and be sure to call for a doctor.

In case of unconsciousness, place patients on their side in a stable

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position for transportation.

- **After skin contact:**
Take-off and remove wetted clothing, shoes and stocking immediately.
Rinse affected parts of the body with plenty of water.
Seek medical treatment.
- **After eye contact:**
Rinse the eyes with open eyelids for 10 - 15 minutes with water. Then consult a doctor or better an eye specialist.
- **After swallowing:**
Rinse mouth with water.
Drink plenty of water, but never give anything to an unconscious person.
Do not induce vomiting.
If vomiting occurs spontaneously:
Hold the head of the casualty low with the body in a prone position in order to avoid aspiration.
Call for a doctor immediately.
- **Information for doctor:**
- **Treatment:** Symptomatic treatment

5 Fire fighting measures

- **Suitable extinguishing agents:**
Use fire fighting measures that suit the environment.
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Direct jet water
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Dangerous decomposition product see chapter 10: stability and reactivity
- **Protective equipment:**
Wear self-contained respiratory protective device.
- **Additional information:**
Heating leads to pressure increase entailing danger of bursting and explosion. Immediately cool neighbouring packages and containers with sprayed water and, if possible, remove them out of the danger zone
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Person-related safety precautions:**
Wear protective clothing.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Keep unprotected persons away.
- **Measures for environmental protection:**
Do not allow to enter sewers/ surface or ground water.
Do not allow to penetrate the ground/soil.
- **Measures for cleaning/collecting:**
Pick up with lime or anhydrous sodium carbonate.
Ensure adequate ventilation.
Dispose contaminated material as waste according to item 13.
Send for recovery or disposal in suitable receptacles.

*** 7 Handling and storage**

- **Handling**

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- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Keep receptacles tightly sealed.
Avoid contact with eyes and skin.
Restrict the quantity stored at the work place.
Avoid inhalation of vapours.
Keep the working area dry and clean.
- **Information about protection against explosions and fires:**
Fumes can combine with air to form an explosive mixture.
Keep ignition sources away - Do not smoke.
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Store container tightly sealed at a cool and dry place with sufficient ventilation.
Prevent any seepage into the ground.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from feed.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.
Protect from exposure to the light.
Avoid contact with air / oxygen.
- **Storage class** 3B Flammable Liquids

* **8 Exposure controls and personal protection**

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

Components with limit values that require monitoring at the workplace:

Not required.

- **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.
Provide eye bath.
If larger quantities are handled provide emergency showers.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Short term filter device:
Filter A
- **Protection of hands:**
Chemical resistant gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Check the permeability prior to each renewed use of the glove.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.

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- **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.
Butyl rubber, BR
- **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.
480 min.(butyl rubber 0,5 mm)
- **Eye protection:**
Tightly sealed goggles.
If a splashing of the product is possible wear full face protection.
- **Body protection:** Protective work clothing.

9 Physical and chemical properties:• **General Information**

- **Form:** Fluid
- **Colour:** Clear
- **Odour:** Characteristic

	<u>Value/Range</u>	<u>Unit</u>	<u>Method</u>
• Change in condition:			
• Melting point/Melting range:	undetermined		
• Boiling point/Boiling range:		189 ° C	
• Flash point:		76 ° C	
• Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.			
• Vapour pressure:	at 82 ° C	13.3 hPa	
• Density:	at 20 ° C	1.042 g/cm ³	
• Solubility in / Miscibility with			
• Water:		Not miscible or difficult to mix	
• Segregation coefficient (n-octanol/water):	at 25 ° C	0.96 log POW	

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
Keep away from heat and direct sunlight.
- **Materials to be avoided:**
Oxidants
Acids
Peroxides
- **Dangerous reactions:** Danger of polymerization
- **Dangerous products of decomposition:**
In the case of fire or at high temperatures the formation of the following decomposition products is possible.
Carbon monoxide and carbon dioxide
Irritant gases/vapours
- **Additional information:** Polymerisation possible

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11 Toxicological information

- **Acute toxicity:**
LD/LC50 values that are relevant for classification:
Oral: LD50: 597 mg/kg (rat)
Dermal: LD50: 469 mg/kg (rabbit)
- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Experience with humans:**
It is reported that GMA may cause after short contact with the skin a sharp pain and 1st degree corrosions. After prolonged contact 2nd degree corrosions may be possible.
Vesiculation is likely, too.
- **Additional toxicological information:**
Test results of animal tests are describing moderate, strong irritating and even corrosive effects.
- **Sensitisation** May cause sensitisation by skin contact.

12 Ecological information

- **Information about elimination (persistence and degradability):**
- **Other information:**
The product is readily biodegradable.
Biodegradable after 28 days: 94 % (OECD 301C)
- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:**
Bioaccumulation is not to be expected (log P o/w < 1)
- **Ecotoxicological effects:**
Aquatic toxicity:
EC50/48h: 24.9 mg/l (daphnia magna)
LC50/96h: 3.7 mg/l (Oryzias latipes)
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
According to appendix 3 of VwVwS dated 17.05.1999 (German regulation) Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Code-no.: 3103

13 Disposal considerations

- **Product:**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Must be specially treated adhering to official regulations.
- **European waste catalogue:**
07 00 00: Wastes from organic chemical processes
07 01 00: waste from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals
07 01 99: wastes not otherwise specified
- **Uncleaned packagings:**
- **Recommendation:**
Disposal must be made according to official regulations.
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

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* **14 Transport information**

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 8 (CT1) Corrosive substances.
- **Danger code (Kemler):** 86
- **UN-Number:** 2922
- **Packaging group:** III
- **Label:** 8+6.1
- **Description of goods:** Toxic liquid, organic, n.o.s., 2,3-epoxypropyl methacrylate
- **Remarks:**
The assignment to class 8 was made deviating from paragraph 2.2.8.1.9 (Substances, which do not correspond to the criteria of directive 67/548/EEC in its current version and therefore are not classified as corrosive und which are not corrosive to aluminium and steel, can be regarded as substances not belonging to class 8). Please see also chapter 11.
Limited quantity: 5l per inner packaging, 30 kg gross per packaging unit
- **Maritime transport IMDG:**
- **IMDG Class:** 8
- **UN Number:** 2922
- **Label:** 8+6.1
- **Packaging group:** III
- **EMS Number:** F-A,S-B
- **Marine pollutant:** No
- **Proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (2,3-epoxypropyl methacrylate)
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 8
- **UN/ID Number:** 2922
- **Label:** 6.1
- **Proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (2,3-epoxypropyl methacrylate)
- **Remarks:**
Packing Instructions:
For Limited Quantities: Y818 (Max Net Qty/Pkg: 1,0 l)
Passenger and Cargo Aircraft: 818 (Max Net Qty/Pkg: 5 l)
Cargo Aircraft only: 820(Max Net Qty/Pkg: 60 l)

15 Regulations

- **Markings according to EC guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials "EC-labelling"
- **Code letter and hazard designation of product:** Xn Harmful
- **Risk phrases:**
20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
36/38 Irritating to eyes and skin.
43 May cause sensitisation by skin contact.
- **Safety phrases:**
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28 After contact with skin, wash immediately with plenty of soap and water.

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- **Special labelling of certain preparations:**

Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Annex I to this Directive.

However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the manufacturer or any person who places such a substance on the market must state on the label the name of the substance followed by the words "non-stabilised".

- **National regulations**

- **Information about limitation of use:**

Restrictions on juvenile employment must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

- **Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.
Code-no.: 3103

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.

- **Reasons for amendments:**

Information on transport
Regulation (EC) No. 1907/2006
General revision

- *** Data compared to the previous version altered.**

Changes have been made to chapters marked with a *, as compared to the previous version.