SAFETY DATA SHEETS

This SDS packet was issued with item:

078862145

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078347348 078351925 078352354 078366148 078916263

E.C. Safety Data Sheet
Status: 30-7-2002
Version: 0
Concert monomer

1. Identification of the Substance/Preparation and of the Company/Undertaking

Concert Monomer

EMCM B.V.

Middenkampweg 17
NL-6545 CH Nijmegen **Tel: +31 (0)24-3715252**
The Netherlands **Fax: +31 (0)24-3715253**

2. Composition/Information on Ingredients

Methacrylic acid methyl ester or methyl methacrylate

INDEX Number	607-035-00-6
EINECS Number	201-297-1
CAS No.	80-62-6

3. Hazards Identification

Highly flammable.
Irritating to eyes, respiratory system and skin.
May cause sensitization by skin contact.

4. First Aid Measures

General information
Remove soiled, soaked clothing immediately. 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.

After inhalation
Move subject to fresh air and keep him calm. See a physician.

After contact with eyes
Flush eyes thoroughly with a large amount of water and consult a physician.

After contact with skin
Wash off immediately with soap and water. If skin irritation occurs consult a physician.

After ingestion
Do not induce vomiting. Call a physician immediately.

5. Fire-fighting Measures

Suitable extinguishing media
foam, dry chemical, carbon dioxide

Unsuitable extinguishing media for safety reasons
water

Special protective equipment for fire fighting
Wear self-contained breathing apparatus.

6. Accidental Release Measures

Precautionary measures related to people
Take care for adequate ventilation. Use personal protective clothing. Keep away sources of ignition. Use breathing apparatus if exposed to vapours/dust/mist/aerosol.

Environmental protective measures
Prevent product from getting into drains/surface water/groundwater.

Methods of cleaning / adsorption
Larger quantities: Remove mechanically (by pumping). Use explosion-proof equipment! Smaller quantities and/or residues: Contain with absorbent material (e.g. sand, diatomaceous earth, acid absorbent, universal absorbent or sawdust). Dispose of in accordance with regulations.

7. Handling and Storage

Handling

Instructions on safe handling
Keep container tightly closed. Ensure the area is well ventilated.

Information on fire and explosion protection
Keep away from sources of ignition — No smoking. Take precautionary measures against static discharges In the event of fire, cool the endangered containers with water. When heated above the flash point and/or during spraying (atomizing), ignitible mixtures may form in air. Use explosion-proof equipment only.

Storage

Requirements for storage areas and containers
Keep only in the original container at a temperature not exceeding 30 °C. 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. Protect from light.

8. Exposure Controls/Personal Protection

Personal protective equipment

General protective measures
Do not inhale vapours. Avoid contact with eyes and skin.

Hygiene measures
Store work clothing separately. Remove soiled or soaked clothing immediately. Follow the usual good standards of occupational hygiene.

Respiratory protection
Breathing apparatus in case of high concentrations, short term: filter appliance, filter A

Hand protection
In permeation tests butyl and nitrile rubber gloves perform better than latex or natural rubber. Gloves should be replaced regularly, especially after extended contact with the product. For each work-place a suitable glove type has to be selected.

Eye protection
tightly fitting goggles

Body protection
on handling of larger quantities: face mask, chemical-resistant boots and apron

9. Physical and Chemical Properties

Appearance

Form : liquid
Colour : colourless
Odour : ester-like

Data relevant to safety	
Changes in physical state	
Melting temperature	-48,2 °C
Boiling Temperature	100,3 °C at 1.013 hPa
Flash point	10 °C (DIN 51755)
Ignition temperature	430 °C (DIN 51794)
Spontaneous ignition	not determined
Lower explosion limit	2,1 %(V)
Upper explosion limit	12,5 %(V)
Vapour pressure	38,7 hPa at 20 °C
Density	0,94 g/cm3 at 20 °C
Relative vapour density (related to air)	> 1 at 20 °C
Solubility in water	16,0 g/l at 20 °C
Solubility (qualitative)	Miscible with most organic solvents
pH-value	not applicable
n-Octanol/water partition coefficient	log Pow 1,38 (measured) source: literature
Viscosity (dynamic)	0,63 mPa.s at 20 °C (Brookfield)
Further information	none

10. Stability and Reactivity

Thermal decomposition
No decomposition when used as directed.

Hazardous reactions
Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

Hazardous decomposition products
None when used as directed.

11. Toxicological Information

Acute oral toxicity
LD50 rat, OECD 401 > 5.000 mg/kg
source: literature

Acute inhalational toxicity
LC50 rat, 4 h 29,6 mg/l
source: literature

Acute dermal toxicity
LD50 rabbit > 5,000 mg/kg
source: literature

Irritant effect on the skin
not irritating
rabbit, 24 h, occlusive, FDA Draize

Irritant effect on the eyes
not irritating
rabbit, Draize

Sensitization

In sensitisation tests on guinea pigs with and without adjuvant, both positive and negative results were found. source: literature

In humans various types of allergic reactions have been observed (symptoms: headache, eye irritations, skin affections). source: literature

Toxicity on repeated administration

rat, inhalational, 2 a, 6 h/d, 5 d/w, 25 - 400 ppm Findings: damage to the nasal mucosa source: literature	NOAEL	25 ppm
rat, in drinking water, 2 a, 7 d/w, 0 - 2000 ppm Findings: no toxic effects source: literature	NOAEL	2000 ppm

Mutagenicity

Positive as well as negative results in in vitro mutagenicity/ genotoxicity tests.
No experimental information on genotoxicity in vivo available.
In summary not mutagenic according to internationally accepted criteria.
source: literature

Carcinogenicity

Non-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs.
source: literature

Reprotoxicity / teratogenicity

No indications of toxic effects were observed in reproduction studies in animals.
source: literature

Further information on toxicology

Avoid contact with the skin and eyes and inhalation of the product vapours.

12. Ecological Information

Information on elimination (persistence and degradability)

Biodegradability

readily degradable, OECD 301 C, 14 d source: literature	94 %

Ecotoxicological effect

Fish toxicity

LC50 oncorhynchus mykiss, rainbow trout, OECD 203, GLP, 96 h source: literature	> 79 mg/l

Daphnia toxicity

EC50 daphnia magna, OECD 202, 48 h source: literature	69 mg/l
EC50 daphnia magna, OECD 202 part 2, flow through, 21 d source: literature	49 mg/l

Algae toxicity

EC3 scenedesmus quadricauda, DIN 38412 section 9, 8 d source: literature	37 mg/l
EC50 selenastrum capricornutum, OECD 201, 96 h source: literature	170 mg/l

Bacteria toxicity

EC0 pseudomonas putida source: literature	100 mg/l

Further information on ecology

Do not allow to enter soil, waterways or waste water

13. Disposal considerations

Product

Waste is hazardous and therefore particularly to be kept under surveillance. 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 packaging

Contaminated packaging should be emptied optimally and after appropriate professional cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of professionally. Uncontaminated packaging may be taken for recycling.

Code of waste EWC

07 02 08

waste from the manufacture, formulation, supply and use (MFSU) of plastics, synthetic rubber and man-made fibres - other still bottoms and reaction residues

Always check the given waste codes according to the actual conditions of manufacturing, formulation or use in your facilities.

14. Transport Information

Overland transport GGVS/ADR, GGVE/RID

Class 3 item 3b Hazard no. 339 UN number 1247

Technical dispatch name
1247 methyl methacrylate, monomer, inhibited

Inland waterway transport ADNR

Class 3 item 3b UN number 1247

Technical dispatch name
1247 methyl methacrylate, monomer, inhibited

Shipment by sea IMDG/GGVSee

Class 3.2 EmS 3-07 MFAG 330 UN number 1247
Marine pollutant Packed (+/0): 0
Packaging group II
Proper Shipping Name Methyl methacrylate, monomer, inhibited

Air transport ICAO/IATA

Class 3 UN number 1247
Packaging group II
Proper Shipping Name Methyl methacrylate, monomer, inhibited

DOT

Methyl methacrylate, monomer, inhibited UN number 1247

15. Regulatory Information

Labelling in accordance with EC directives

requires labelling

Hazardous component(s) for labelling

contains
methyl methacrylate

Hazard symbol(s)

F Highly flammable
Xi Irritant

R-phrase(s)

11	Highly flammable.
36/37/38	Irritating to eyes, respiratory system and skin.
43	May cause sensitization by skin contact.

S-phrase(s)

9	Keep container in a well-ventilated place.
16	Keep away from sources of ignition — No smoking.
29	Do not empty into drains.
33	Take precautionary measures against static discharges.

Status of Registration

EINECS/ELINCS : listed

16. Other Information

Miscellaneous information

The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerize with heat evolution.