

**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.

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**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.

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### 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), ignitable 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

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## 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 51704)
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/cm <sup>3</sup> 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

source: literature

> 5.000 mg/kg

### Acute Inhalational toxicity

LC50 rat, 4 h

source: literature

29,8 mg/l

### Acute dermal toxicity

LD50 rabbit

source: literature

> 5.000 mg/kg

### Irritant effect on the skin

not irritating

rabbit, 24 h, occlusive, FDA Draize

### Irritant effect on the eyes

not irritating

rabbit, Draize

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## 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, A d  
source: literature 37 mg/l

EC50 salinastrum capricornutum, OECD 201, 96 h  
source: literature 170 mg/l

#### Bacteria toxicity

EC0 pseudomonas putida  
source: literature 100 mg/l

### Further information on ecology

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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/GGVS**

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

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## R-phrase(s)

11  
36/37/38  
43

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

## S-phrase(s)

9  
16  
29  
33

Keep container in a well-ventilated place.  
Keep away from sources of ignition — No smoking.  
Do not empty into drains.  
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.