

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form	:	Substance
Trade name	:	SA20-21: PART A LIQUID
IUPAC name	:	methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate
EC index no	:	607-035-00-6
EC no	:	201-297-1
CAS No	:	80-62-6
REACH registration No	:	01-2119452498-28

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Use of the substance/mixture : Hardener (Crosslinker)

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet****Manufacturer:**

Mix 14 Ltd  
Aerospace Logistics Centre  
SG6 2TS Herts - United Kingdom  
T +44(0)1462 686300

**Supplier:**

SATTO Solutions Ltd.  
Aerospace Logistisc Centre  
SG6 2TS Herts - United Kingdom  
T +44(0)1462 686300  
email: [info@satto.aero](mailto:info@satto.aero)

**1.4. Emergency telephone number**

Emergency number : +44(0)1462 686300  
(business hours)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Flam. Liq. 2 H225  
STOT SE 3 H335  
Skin Irrit. 2 H315  
Skin Sens. 1 H317

Full text of H-phrases: see section 16

**Classification according to Directive 67/548/EEC or 1999/45/EC**

F; R11  
Xi; R37/38  
R43

Full text of R-phrases: see section 16

**Adverse physicochemical, human health and environmental effects**

No additional information available

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according to Regulation (EC) No. 453/2010

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour  
H335 - May cause respiratory irritation  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction

Precautionary statements (CLP) :

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical/ventilating/lighting/... equipment  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
P264 - Wash ... thoroughly after handling

### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name : methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate  
CAS No : 80-62-6  
EC no : 201-297-1  
EC index no : 607-035-00-6

Name	Product identifier	%	Classification according to Directive 67/548/EEC
methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate (Main constituent)	(CAS No) 80-62-6 (EC no) 201-297-1 (EC index no) 607-035-00-6 (REACH-no) 01-2119452498-28	100	F; R11 Xi; R37/38 R43
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate (Main constituent)	(CAS No) 80-62-6 (EC no) 201-297-1 (EC index no) 607-035-00-6 (REACH-no) 01-2119452498-28	100	Flam. Liq. 2, H225 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317

Full text of R- and H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. In all cases of doubt, or if victim feels unwell seek medical attention.

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. Remove/Take off immediately all contaminated clothing.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately and plentifully with water, also under the eyelids, for at least 20 minutes. If eye irritation persists: get medical advice/attention.

First-aid measures after ingestion : Do NOT induce vomiting. Rinse mouth thoroughly with water. In all cases of doubt, or when symptoms persist, seek medical advice.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : In high concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. May cause respiratory irritation.

Symptoms/injuries after skin contact : Effects of skin contact may include : redness. Skin irritation.

Symptoms/injuries after eye contact : May cause slight temporary irritation.

Symptoms/injuries after ingestion : Can occur: Gastrointestinal disturbance.

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### 4.3. Indication of any immediate medical attention and special treatment needed

None known. Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>), water spray, sand, earth.  
Unsuitable extinguishing media : None known.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour.  
Explosion hazard : Vapours can form explosive mixtures with air. In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.  
Hazardous decomposition products in case of fire : Toxic gases and fumes may be released in a fire. Carbon monoxide. Carbon dioxide.

### 5.3. Advice for firefighters

Firefighting instructions : Move undamaged containers from immediate hazard area if it can be done safely. Cool down the containers exposed to heat with a water spray.  
Protective equipment for firefighters : Wear proper protective equipment. In case of fire: Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing.  
Emergency procedures : Spilled material may present a slipping hazard. Avoid contact with skin and eyes. Avoid breathing mist or vapor. Ventilate affected area.

#### 6.1.2. For emergency responders

Protective equipment : Wear protective gloves/protective clothing/eye protection/face protection. In case of fire: Wear self-contained breathing apparatus.  
Emergency procedures : Evacuate area. Avoid inhalation of vapours. Avoid contact with skin and eyes. Ventilate affected area.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).  
Methods for cleaning up : Flush residue with large amounts of water. Collect all waste in suitable and labelled containers and dispose according to local legislation.

### 6.4. Reference to other sections

For disposal of residues refer to section 13 : Disposal considerations. For further information refer to section 8 : Exposure-controls/personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. In use, may form flammable vapour-air mixture.  
Precautions for safe handling : Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use explosion-proof electrical/ventilating/lighting/.../ equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Take care for general good hygiene and housekeeping.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground equipment electrically. Use explosion-proof electrical equipment.  
Storage conditions : Protect against direct sunlight. Store tightly closed in a dry, cool and well-ventilated place.  
Incompatible materials : Acids. Strong alkalis. chemically active metals.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

methyl methacrylate (80-62-6)		
EU	IOELV TWA (ppm)	50 ppm

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methyl methacrylate (80-62-6)		
EU	IOELV STEL (ppm)	100 ppm
Austria	MAK (mg/m <sup>3</sup> )	210 mg/m <sup>3</sup>
Austria	MAK (ppm)	50 ppm
Austria	OEL - Ceilings (mg/m <sup>3</sup> )	420 mg/m <sup>3</sup>
Austria	OEL - Ceilings (ppm)	100 ppm
Belgium	Limit value (mg/m <sup>3</sup> )	208 mg/m <sup>3</sup>
Belgium	Limit value (ppm)	50 ppm
Belgium	Short time value (mg/m <sup>3</sup> )	416 mg/m <sup>3</sup>
Belgium	Short time value (ppm)	100 ppm
Bulgaria	OEL TWA (ppm)	50 ppm
Bulgaria	OEL STEL (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
Croatia	GVI (granična vrijednost izloženosti) (ppm)	50 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	100 ppm
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	150 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	102 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	25 ppm
Estonia	OEL TWA (ppm)	50 ppm
Estonia	OEL STEL (ppm)	100 ppm
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	42 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	10 ppm
Finland	HTP-arvo (15 min)	210 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	50 ppm
France	VME (mg/m <sup>3</sup> )	205 mg/m <sup>3</sup>
France	VME (ppm)	50 ppm
France	VLE (mg/m <sup>3</sup> )	410 mg/m <sup>3</sup>
France	VLE (ppm)	100 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	210 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (ppm)	50 ppm
Greece	OEL TWA (ppm)	50 ppm
Greece	OEL STEL (ppm)	100 ppm
Hungary	CK-érték	208 mg/m <sup>3</sup>
Hungary	MK-érték	415 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (ppm)	50 ppm
Italy	OEL TWA (ppm)	50 ppm
Italy	OEL STEL (ppm)	100 ppm
Latvia	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Lithuania	IPRV (mg/m <sup>3</sup> )	200 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m <sup>3</sup> )	400 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	100 ppm
Luxembourg	OEL TWA (ppm)	50 ppm
Luxembourg	OEL STEL (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
Malta	OEL TWA (ppm)	50 ppm
Malta	OEL STEL (ppm)	100 ppm
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	205 mg/m <sup>3</sup>
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	410 mg/m <sup>3</sup>
Poland	NDS (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
Poland	NDSch (mg/m <sup>3</sup> )	300 mg/m <sup>3</sup>
Portugal	OEL TWA (ppm)	50 ppm
Portugal	OEL STEL (ppm)	100 ppm

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methyl methacrylate (80-62-6)		
Romania	OEL TWA (mg/m <sup>3</sup> )	205 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	50 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	205 mg/m <sup>3</sup>
Romania	OEL STEL (ppm)	100 ppm
Slovakia	NPHV (priemerná) (ppm)	50 ppm
Slovakia	NPHV (Hraničná) (ppm)	100 ppm
Spain	VLA-ED (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
Spain	VLA-ED (ppm)	50 ppm
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	200 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m <sup>3</sup> )	600 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	150 ppm
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	208 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	416 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	100 ppm
Switzerland	VME (mg/m <sup>3</sup> )	210 mg/m <sup>3</sup>
Switzerland	VME (ppm)	50 ppm
Switzerland	VLE (mg/m <sup>3</sup> )	420 mg/m <sup>3</sup>
Switzerland	VLE (ppm)	100 ppm
USA - ACGIH	ACGIH TWA (ppm)	50 ppm
USA - ACGIH	ACGIH STEL (ppm)	100 ppm

methyl methacrylate (80-62-6)	
DNEL/DMEL (Workers)	
Acute - local effects, dermal	1,5
Long-term - systemic effects, dermal	13,67 mg/kg bodyweight/day
Long-term - local effects, dermal	1,5
Long-term - systemic effects, inhalation	208 mg/m <sup>3</sup>
Long-term - local effects, inhalation	208 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Acute - local effects, dermal	1,5
Long-term - systemic effects, inhalation	74,3 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	8,2 mg/kg bodyweight/day
Long-term - local effects, dermal	1,5
Long-term - local effects, inhalation	104 mg/m <sup>3</sup>
PNEC (Water)	
PNEC aqua (freshwater)	0,94 mg/l
PNEC aqua (marine water)	0,94 mg/l
PNEC aqua (intermittent, freshwater)	0,94 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	5,74 mg/kg dwt
PNEC (Soil)	
PNEC soil	1,47 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l

### 8.2. Exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Colourless liquid.
Colour	: Clear. colourless.
odour	: pungent.
Odour threshold	: 0.049
pH	: No data available

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Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -48 °C
Freezing point	: No data available
Boiling point	: 100,36 °C 1013 hPa
Flash point	: 10 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 27,75 mm Hg @ 20°C
Relative vapour density at 20 °C	: 3,45
Relative density	: 0,94 g/cm <sup>3</sup> @ 20°C
Solubility	: Slightly soluble in water.
Log Pow	: 1,38
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0,6 mPa.s @ 20°C
Explosive properties	: Non explosive.
Oxidising properties	: Non oxidizing.
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions.

### 10.2. Chemical stability

Stable at normal conditions.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization may occur under certain conditions of storage or use.

### 10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

### 10.5. Incompatible materials

Strong acid. Strong alkalis.

### 10.6. Hazardous decomposition products

During fire toxic gases (CO, CO<sub>2</sub>) are formed.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

methyl methacrylate (80-62-6)	
LD50 oral rat	8500 mg/m <sup>3</sup>
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (mg/l)	29,8 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

methyl methacrylate (80-62-6)	
NOAEL (chronic, oral, animal/male, 2 years)	>= 4,1 mg/kg bodyweight

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

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### SECTION 12: Ecological information

#### 12.1. Toxicity

methyl methacrylate (80-62-6)	
LC50 fishes 1	> 79 mg/l 96h - Onchorhynchus mykiss (Rainbow trout)
EC50 Daphnia 1	69 mg/l 48h
EC50 other aquatic organisms 1	> 110 72h - Selenastrum capricornutum

#### 12.2. Persistence and degradability

methyl methacrylate (80-62-6)	
Persistence and degradability	Readily biodegradable in water.

#### 12.3. Bioaccumulative potential

methyl methacrylate (80-62-6)	
BCF fish 1	6,59
Log Pow	1,38
Bioaccumulative potential	not bioaccumulable.

#### 12.4. Mobility in soil

methyl methacrylate (80-62-6)	
Log Koc	> 0,94 @23°C

#### 12.5. Results of PBT and vPvB assessment

methyl methacrylate (80-62-6)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Regional legislation (waste)	: Dispose of this material and its container to hazardous or special waste collection point.
Waste treatment methods	: Avoid release to the environment.
Waste disposal recommendations	: This material and its container must be disposed of in a safe manner. Consult the appropriate authorities about waste disposal.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. : 1247

#### 14.2. UN proper shipping name

Proper Shipping Name : METHYL METHACRYLATE MONOMER, STABILIZED

#### 14.3. Transport hazard class(es)

##### ADR

Transport hazard class(es) (ADR) : 3

Hazard labels (ADR) : 3



#### 14.4. Packing group

Packing group : II

#### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

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### 14.6. Special precautions for user

#### 14.6.1. Overland transport

Classification code (ADR) : F1  
Limited quantities (ADR) : 1L  
Excepted quantities (ADR) : E2  
Transport category (ADR) : 2  
Hazard identification number (Kemler No.) : 339  
Orange plates :



Tunnel restriction code (ADR) : D/E  
EAC code : 3YE

#### 14.6.2. Transport by sea

Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2  
EmS-No (IMDG) : F-E, S-D

#### 14.6.3. Air transport

PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y341  
PCA packing instructions (IATA) : 353  
CAO packing instructions (IATA) : 364

#### 14.6.4. Inland waterway transport

Transport regulations (ADN) : Subject to the provisions  
Dangers (ADN) : 3+unst.+N3

#### 14.6.5. Rail transport

Classification code (RID) : F1  
Special provision (RID) : n/a  
Limited quantities (RID) : 1L  
Excepted quantities (RID) : E2  
Carriage prohibited (RID) : No

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Seveso Information : Main Seveso Category: 7b. Highly Flammable Liquids (Note 3b2)

#### 15.1.2. National regulations

##### France

Occupational diseases : RG 65 - Lésions eczématiformes de mécanisme allergique  
RG 82 - Affections provoquées par le méthacrylate de méthyle

##### Germany

Water hazard class (WGK) : 1 - slightly hazardous to water

### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out

## SECTION 16: Other information

Sources of Key data : SDS - Safety Data Sheet . REACH registration.

Other information : It is the user's responsibility to take the mentioned precautionary measures and to ensure that this information is complete and sufficient for the use of this product. Such information is actually to be best of our knowledge and believes accurate as reliable.



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Full text of R-, H- and EUH-phrases:

Flam. Liq. 2	flammable liquids Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
Skin Sens. 1	Sensitisation — Skin, category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapour
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H335	May cause respiratory irritation
R11	Highly flammable
R37/38	Irritating to respiratory system and skin
R43	May cause sensitisation by skin contact
F	Highly flammable
Xi	Irritant

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*