

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## VA50 Liquid

Print date: 22.11.2017

Product code: 1211500

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

#### 1.1. Product identifier

VA50 Liquid

Product group: Liquid component

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

##### Use of the substance/mixture

Embedding material (liquid component) for material testing.

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

Company name: Demotec Demel e.K.  
Street: Brentanostraße 22  
Place: D-61130 Nidderau  
Telephone: +49 (0)6187-905670  
e-mail: [demotec@demotec.de](mailto:demotec@demotec.de)  
Contact person: Alexander Demel  
e-mail: demotec@demotec.de  
Internet: [www.demotec.de](http://www.demotec.de)

Product supplied by:  
Unit 4, The Sidings  
Station Road  
Guiseley  
LS20 8BX

#### 1.4. Emergency telephone number:

Germany / Berlin +49 (0)30 - 19240

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Indications of danger: F - Highly flammable, Xi - Irritant  
R phrases:  
Highly flammable.  
Irritating to respiratory system and skin.  
May cause sensitisation by skin contact.

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

Hazard categories:  
Flammable liquid: Flam. Liq. 2  
Skin corrosion/irritation: Skin Irrit. 2  
Respiratory/skin sensitization: Skin Sens. 1  
Specific target organ toxicity - single exposure: STOT SE 3  
Hazard Statements:  
Highly flammable liquid and vapour.  
Causes skin irritation.  
May cause an allergic skin reaction.  
May cause respiratory irritation.

#### 2.2. Label elements

##### Hazardous components which must be listed on the label

methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate  
1,4-Butandiol dimethacrylate

Signal word: Danger  
Pictograms: GHS02-GHS07

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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.

### Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240	Ground/bond container and receiving equipment.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Mixture on the basis of methyl methacrylate.

#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
201-297-1 80-62-6	methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate F - Highly flammable, Xi - Irritant R11-37/38-43 Flam. Liq. 1, Skin Irrit. 2, Skin Sens. 1, STOT SE 3; H224 H315 H317 H335	95 - < 100 %
01-2119452498-28		
218-218-1 2082-81-7	1,4-Butandiol dimethacrylate R43 Skin Sens. 1; H317	5 - < 10 %

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Remove contaminated, saturated clothing immediately. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.

#### After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

#### After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

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### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

### After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water.

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

No information available.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

#### Unsuitable extinguishing media

Water.

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

Flammable. Vapours can form explosive mixtures with air.

### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

### Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## SECTION 6: Accidental release measures

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

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

### 6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

### 6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

#### Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharge. Vapours can form explosive mixtures with air.

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code: 1211500 **7.2. Conditions for safe storage, including**

### **any**

**incompatibilities** Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### **Advice on storage compatibility**

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

### **7.3. Specific end use(s)**

Embedding material

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

### **8.1. Control parameters**

#### **Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
80-62-6	Methyl methacrylate	50	208		TWA (8 h)	WEL
		100	416		STEL (15 min)	WEL

#### **DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
80-62-6	methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate			
Worker DNEL, long-term		inhalation		208 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal		17 mg/kg bw/day

### **8.2. Exposure controls**

#### **Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

#### **Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

#### **Eye/face protection**

Wear eye/face protection.

#### **Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### **Skin protection**

Flame-retardant protective clothing. Wear anti-static footwear and clothing

#### **Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

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### 1211500 SECTION 9: Physical and chemical properties

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

Physical state: liquid  
Colour: colourless  
Odour: characteristic

#### Test method

pH-Value: not determined

#### Changes in the physical state

Melting point: -48 °C  
Initial boiling point and boiling range: 100,5 °C  
Flash point: 10 °C

#### Flammability

Solid: not applicable  
Gas: not applicable  
Lower explosion limits: 2,1 vol. %  
Upper explosion limits: 12,5 vol. %  
Ignition temperature: 421 °C

#### Auto-ignition temperature

Solid: not applicable  
Gas: not applicable  
Decomposition temperature: not determined

#### Oxidizing properties

Not oxidizing.

Vapour pressure: 36 hPa  
(at 20 °C)

Density (at 15,5 °C): 0,949 g/cm<sup>3</sup>

Water solubility: 12,5 g/L  
(at 20 °C)

#### Solubility in other solvents

not determined

Partition coefficient: 1,38

Viscosity / dynamic: 0,53 mPa·s  
(at 20 °C)

Vapour density: 3,5  
(at 20 °C)

Evaporation rate: not determined

#### 9.2. Other information

Solid content: not determined

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

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Flammable, Ignition hazard.

### **10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

### **10.3. Possibility of hazardous reactions**

No known hazardous reactions.

### **10.4. Conditions to avoid**

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

### **10.5. Incompatible materials**

No information available.

### **10.6. Hazardous decomposition products**

No known hazardous decomposition products.

## **SECTION 11: Toxicological information**

### **11.1. Information on toxicological effects**

#### **Acute toxicity**

Based on available data, the classification criteria are not met.

#### **ATEmix tested**

	Dose	Species	Source
LD50, oral	7870 mg/kg	Rat	
LD50, dermal	> 5000 mg/kg	Rabbit	
LC50, inhalative (vapour) (4 h)	78 mg/l	Rat	

#### **Acute toxicity**

CAS No	Chemical name	Exposure routes	Method	Dose	Species	Source
80-62-6	methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate	oral	LD50	>5000 mg/kg	Rat	OECD 401
		dermal	LD50	>5000 mg/kg	Rabbit	
		inhalative vapour	LC50	29,8 mg/l	Rat	
2082-81-7	1,4-Butandiol dimethacrylate	oral	LD50	> 10000 mg/kg	Rat	
		dermal	LD50	> 3000 mg/kg	Rabbit	

#### **Irritation and corrosivity**

Causes skin irritation.

#### **Sensitising effects**

May cause an allergic skin reaction. (methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate), (1,4-Butandiol dimethacrylate)

#### **STOT-single exposure**

May cause respiratory irritation. (methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate)

#### **Severe effects after repeated or prolonged exposure**

Based on available data, the classification criteria are not met.

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### Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

### Aspiration hazard

Based on available data, the classification criteria are not met.

### Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

## SECTION 12: Ecological information

### 12.1. Toxicity

Acute (short-term) fish toxicity

CAS No	Chemical name	Method	Dose	[h]   [d]	Species	Source
80-62-6	methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate					
	Acute fish toxicity	LC50	> 79 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	OECD 203
	Acute algae toxicity	ErC50	> 110 mg/l	72 h	Selenastrum capricornutum	OECD 201
	Acute crustacea toxicity	EC50	69 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202
	Crustacea toxicity	NOEC	37 mg/l	21 d	Daphnia magna (Big water flea)	OECD 202
2082-81-7	1,4-Butandiol dimethacrylate					
	Acute fish toxicity	LC50	32,5 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute crustacea toxicity	EC50	7,51 mg/l	48 h	Daphnia magna (Big water flea)	OECD 211
	Crustacea toxicity	NOEC	7,51 mg/l		Selenastrum capricornutum	

### 12.2. Persistence and degradability

Biodegradable.

### 12.3. Bioaccumulative potential

On the basis of existing data about the elimination/degradation and bioaccumulation potential longer term damage to the environment is unlikely.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
80-62-6	methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate	1,38
2082-81-7	1,4-Butandiol dimethacrylate	3,1

### 12.4. Mobility in soil

Mobility in soil: No adsorption in soil or sediment.

### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

### 12.6. Other adverse effects

No information available.

### Further information

Avoid release to the environment.

## SECTION 13: Disposal considerations

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### 13.1. Waste treatment methods

#### **Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

#### **Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

## **SECTION 14: Transport information**

### **Land transport (ADR/RID)**

<b><u>14.1. UN number:</u></b>	UN 1247
<b><u>14.2. UN proper shipping name:</u></b>	METHYL METHACRYLATE MONOMER, STABILIZED
<b><u>14.3. Transport hazard class(es):</u></b>	3
<b><u>14.4. Packing group:</u></b>	II
Hazard label:	3
Classification code:	F1
Limited quantity:	1 L
Transport category:	2
Hazard No:	339
Tunnel restriction code:	D/E
<b>Other applicable information (land transport)</b>	
E2	

### **Inland waterways transport (ADN)**

<b><u>14.1. UN number:</u></b>	UN 1247
<b><u>14.2. UN proper shipping name:</u></b>	METHYL METHACRYLATE MONOMER, STABILIZED
<b><u>14.3. Transport hazard class(es):</u></b>	3
<b><u>14.4. Packing group:</u></b>	II
Hazard label:	3
Classification code:	F1
Limited quantity:	1 L
<b>Other applicable information (inland waterways transport)</b>	
E2	

### **Marine transport (IMDG)**

<b><u>14.1. UN number:</u></b>	UN 1247
<b><u>14.2. UN proper shipping name:</u></b>	METHYL METHACRYLATE MONOMER, STABILIZED
<b><u>14.3. Transport hazard class(es):</u></b>	3
<b><u>14.4. Packing group:</u></b>	II
Hazard label:	3
Special Provisions:	
Limited quantity:	1 L
EmS:	F-E, S-D
<b>Other applicable information (marine transport)</b>	
E2	

### **Air transport (ICAO)**

<b><u>14.1. UN number:</u></b>	UN 1247
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**14.2. UN proper shipping name:** METHYL METHACRYLATE MONOMER, STABILIZED

**14.3. Transport hazard class(es):** 3

**14.4. Packing group:** II

Hazard label: 3

Limited quantity Passenger: 1 L

IATA-packing instructions - Passenger: 353

IATA-max. quantity - Passenger: 5 L

IATA-packing instructions - Cargo: 364

IATA-max. quantity - Cargo: 60 L

**Other applicable information (air transport)**

E2

Passenger-LQ: Y341

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**14.6. Special precautions for user**

Warning: Combustible liquids.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

not applicable

## SECTION 15: Regulatory information

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

**EU regulatory information**

**Additional information**

To follow: 850/2004/EC , 79/117/EEC , 689/2008/EC

**National regulatory information**

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 1 - slightly water contaminating

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

**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 Harmonized 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

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Relevant R-phrases (Number and full text)**

11 Highly flammable.

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37/38 Irritating to respiratory system and skin.

43 May cause sensitisation by skin contact.

### Relevant H- and EUH-phrases (Number and full text)

H224 Extremely flammable liquid and vapour.

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*