

# SAFETY DATA SHEET

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

### 1.1. Product identifier

**Trade name or designation of the mixture** PLEXUS® MA832 Adhesive

**Registration number** -

**Synonyms** None.

**SKU#** 0533

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

**Identified uses** Not available.

**Uses advised against** None known.

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

**Company Name** ITW Performance Polymers

**Address**  
Bay 150  
Shannon Industrial Estate  
Co. Clare  
Ireland  
V14 DF82

**Contact Person** Customer Service

**Telephone Number**  
353(61)771500  
353(61)471285

**Email** customerservice.shannon@itwpp.com

**Emergency Phone Number** 44(0) 1235 239 670 (24 hours)

### 1.4. Emergency telephone number

**General in EU** 112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Austria National Poisons Information Center** +431 406 4343 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Belgium National Poisons Control Center** 070 245 245 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Bulgaria National Toxicological Information Center** +359 2 9154 233 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Croatia Poisons Information Center** +385 1 2348 342 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)

**Cyprus Poison Center** 1401 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Czech Republic National Poisons Information Center** +420 224 919 293, or +420 224 915 402 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)

**Denmark National Poisons Control Center** +45 82 12 12 12 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Estonia National Poisons Information Center** 16662 or abroad: (+372) 626 9390 (Monday 9:00AM to Saturday 9:00AM (closed on Sundays and on national holidays). SDS/Product information may not be available for the Emergency Service.)

**Finland National Poison Information Center** (09) 471 977 (direct) or (09) 4711 (exchange) (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**France National Poisons Control Center** ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

#### 1.4. Emergency telephone number

<b>Greece Poison Information Centre</b>	(0030) 2107793777 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Hungary National Emergency Phone Number</b>	+36-80-201-199 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Iceland Poison Center</b>	(+354) 543 2222 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Latvia Emergency medical aid</b>	113
<b>Latvia Poison and Drug Information Center</b>	+371 67042473 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Lithuania Neatidēliotina informacija apsinuodijus</b>	+370 5 236 20 52 or +37068753378 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
<b>Malta Accident and Emergency Department</b>	2545 4030 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
<b>Netherlands National Poisons Information Center (NVIC)</b>	NVIC: +31 (0)88 755 8000 (Only for the purpose of informing medical personnel in cases of acute intoxications)
<b>Norway Norwegian Poison Information Center</b>	22 59 13 00 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Portugal Poison Center</b>	800 250 250 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Romania Biroul RSI si Informare Toxicologica</b>	021.318.36.06 (Available 8:00AM-3:00PM. SDS/Product information may not be available for the Emergency Service.)
<b>Slovakia National Toxicological Information Center</b>	+421 2 5477 4166 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Spain Toxicology Information Service</b>	+ 34 91 562 04 20 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Sweden National Poison Information Center</b>	112 - and ask for Poison Information (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Switzerland Tox Info Suisse</b>	145 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

## SECTION 2: Hazards identification

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

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Regulation (EC) No 1272/2008 as amended

##### Physical hazards

Flammable liquids	Category 2	H225 - Highly flammable liquid and vapor.
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##### Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.
Skin sensitization	Category 1	H317 - May cause an allergic skin reaction.
Specific target organ toxicity - single exposure	Category 3 respiratory tract irritation	H335 - May cause respiratory irritation.

##### Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 3	H412 - Harmful to aquatic life with long lasting effects.
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#### 2.2. Label elements

**Label according to Regulation (EC) No. 1272/2008 as amended**

**UFI:**

Austria: NV90-2065-S00P-W143  
Belgium: NV90-2065-S00P-W143  
Bulgaria: NV90-2065-S00P-W143  
Croatia: NV90-2065-S00P-W143  
Cyprus: NV90-2065-S00P-W143  
Czech Republic: NV90-2065-S00P-W143  
Denmark: NV90-2065-S00P-W143  
Estonia: NV90-2065-S00P-W143  
EU: NV90-2065-S00P-W143  
Finland: NV90-2065-S00P-W143  
France: NV90-2065-S00P-W143  
Germany: NV90-2065-S00P-W143  
Greece: NV90-2065-S00P-W143  
Hungary: NV90-2065-S00P-W143  
Iceland: NV90-2065-S00P-W143  
Ireland: NV90-2065-S00P-W143  
Italy: NV90-2065-S00P-W143  
Latvia: NV90-2065-S00P-W143  
Lithuania: NV90-2065-S00P-W143  
Luxembourg: NV90-2065-S00P-W143  
Malta: NV90-2065-S00P-W143  
Netherlands: NV90-2065-S00P-W143  
Norway: NV90-2065-S00P-W143  
Poland: NV90-2065-S00P-W143  
Portugal: NV90-2065-S00P-W143  
Romania: NV90-2065-S00P-W143  
Slovakia: NV90-2065-S00P-W143  
Slovenia: NV90-2065-S00P-W143  
Spain: NV90-2065-S00P-W143  
Sweden: NV90-2065-S00P-W143

**Contains:**

methacrylic acid; 2-methylpropenoic acid, methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate

**Hazard pictograms**



**Signal word**

Danger

**Hazard statements**

H225 Highly flammable liquid and vapor.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P235 Keep cool.  
P240 Ground and bond container and receiving equipment.  
P241 Use explosion-proof electrical/ventilating/lighting equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P261 Avoid breathing mist/vapors.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

**Response**

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P362 + P364  
P370 + P378

Take off contaminated clothing and wash it before reuse.  
In case of fire: Use appropriate media to extinguish.

#### Storage

P403 + P233  
P403 + P235  
P405

Store in a well-ventilated place. Keep container tightly closed.  
Store in a well-ventilated place. Keep cool.  
Store locked up.

#### Disposal

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Supplemental label information** None.

#### 2.3. Other hazards

This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate	40 - 70	80-62-6 201-297-1	01-2119452498-28-0000	607-035-00-6	#
<b>Classification:</b> Flam. Liq. 2;H225, Skin Irrit. 2;H315, Skin Sens. 1;H317, STOT SE 3;H335					
<b>Specific Concentration Limits:</b> STOT SE 3;H335: C ≥ 10 %					
methacrylic acid; 2-methylpropenoic acid	3 - < 5	79-41-4 201-204-4	01-2119463884-26-0000	607-088-00-5	
<b>Classification:</b> Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Acute Tox. 4;H312;(ATE: 1100 mg/kg bw), Acute Tox. 3;H331;(ATE: 7,1000000000000000 mg/l), Skin Corr. 1A;H314, Eye Dam. 1;H318, STOT SE 3;H335					
<b>Specific Concentration Limits:</b> STOT SE 3;H335: C ≥ 1 %					
zinc oxide	< 1	1314-13-2 215-222-5	-	030-013-00-7	
<b>Classification:</b> Aquatic Acute 1;H400, Aquatic Chronic 1;H410					
N,N-dimethyl-p-toluidine; [1] N,N-dimethyl-m-toluidine; [2] N,N-dimethyl-o-toluidine [3]	< 0,3	99-97-8 202-805-4	-	612-056-00-9	
<b>Classification:</b> Acute Tox. 3;H301;(ATE: 100 mg/kg bw), Acute Tox. 3;H311;(ATE: 300 mg/kg bw), Acute Tox. 3;H331;(ATE: 3 mg/l), Carc. 2;H351, STOT RE 2;H373, Aquatic Chronic 3;H412					
phosphoric acid ... %, orthophosphoric acid ... %	< 0,2	7664-38-2 231-633-2	-	015-011-00-6	#
<b>Classification:</b> Acute Tox. 4;H302;(ATE: 1530 mg/kg bw), Acute Tox. 2;H330;(ATE: 0,8445 mg/l), Skin Corr. 1B;H314, Eye Dam. 1;H318					
<b>Specific Concentration Limits:</b> Skin Corr. 1B;H314: C ≥ 25 %, Skin Irrit. 2;H315: 10 % ≤ C < 25 %, Eye Dam. 1;H314: C ≥ 25 %, Eye Irrit. 2;H319: 10 % ≤ C < 25 %					
Other components below reportable levels	30 - 60				

#### List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Union workplace exposure limit(s).

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### Composition comments

The full text for all H-statements is displayed in section 16.

### SECTION 4: First aid measures

#### General information

Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

#### 4.1. Description of first aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

### SECTION 5: Firefighting measures

<b>General fire hazards</b>	Highly flammable liquid and vapor.
<b>5.1. Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>5.2. Special hazards arising from the substance or mixture</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
<b>5.3. Advice for firefighters</b>	
<b>Special protective equipment for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Special fire fighting procedures</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

### SECTION 6: Accidental release measures

<b>6.1. Personal precautions, protective equipment and emergency procedures</b>	
<b>For non-emergency personnel</b>	Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.
<b>For emergency responders</b>	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Ventilate closed spaces before entering them. Avoid breathing mist/vapors. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
<b>6.2. Environmental precautions</b>	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
<b>6.3. Methods and material for containment and cleaning up</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent product from entering drains.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.  Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use.
<b>6.4. Reference to other sections</b>	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not get this material in contact with eyes. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

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

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

ANNEX 1, PART 1 Categories of dangerous substances

Hazard categories in accordance with Regulation (EC) No 1272/2008

- P5a, b or c FLAMMABLE LIQUIDS (Lower-tier requirements = 50 tons; Upper-tier requirements = 200 tons)

### 7.3. Specific end use(s)

Observe industrial sector guidance on best practices.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	MAK	70 mg/m3	
		20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	Ceiling	420 mg/m3	
		100 ppm	
	MAK	210 mg/m3	
		50 ppm	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	MAK	1 mg/m3	
	STEL	2 mg/m3	
zinc oxide (CAS 1314-13-2)	MAK	5 mg/m3	Fume and respirable dust.
	STEL	20 mg/m3	Inhalable fraction.
		10 mg/m3	Respirable fraction.

##### Belgium. OEL. Exposure Limit Values to Chemical Substances at Work, Code of Well-being at work, Book VI, Title 1 - Chemical agents, as amended

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	71 mg/m3	
		20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	416 mg/m3	
		100 ppm	
	TWA	208 mg/m3	
		50 ppm	
Paraffin Wax (CAS 8002-74-2)	TWA	2 mg/m3	Fume.

**Belgium. OEL. Exposure Limit Values to Chemical Substances at Work, Code of Well-being at work, Book VI, Title 1 - Chemical agents, as amended**

Components	Type	Value	Form
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	
zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

**Bulgaria. OELs. Ordinance No 13 on protection of workers against risks of exposure to chemical agents at work, as amended**

Components	Type	Value	
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	70 mg/m3	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	
zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	
	TWA	5 mg/m3	

**Croatia. OELs (GVI). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and Biological Limit Values, Annex I (NN 91/2018), as amended**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	MAC	72 mg/m3	
	STEL	20 ppm 143 mg/m3	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	MAC	40 ppm 50 ppm	
	STEL	100 ppm	
Paraffin Wax (CAS 8002-74-2)	MAC	2 mg/m3	Fume.
	STEL	6 mg/m3	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	MAC	1 mg/m3	
	STEL	2 mg/m3	
zinc oxide (CAS 1314-13-2)	MAC	2 mg/m3	Respirable dust.
	STEL	10 mg/m3	Respirable dust.

**Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended**

Components	Type	Value	Form
zinc oxide (CAS 1314-13-2)	TWA	5 mg/m3	Fume.

**Cyprus. OELs. Occupational Exposure Limit Values of Chemicals at Work (Safety and Health at Work (Chem. Agents) Reg., Ann. 1, R.A.A. 268/2001, as amended)**

Components	Type	Value	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm	

**Cyprus. OELs. Occupational Exposure Limit Values of Chemicals at Work (Safety and Health at Work (Chem. Agents) Reg., Ann. 1, R.A.A. 268/2001, as amended)**

Components	Type	Value
	TWA	50 ppm
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

**Czech Republic. Occupational exposure limit values of chemicals at work (Decree on protection of health at work, 361/2007, Annex 2, Part A & Annex 3, Part A, as amended)**

Components	Type	Value
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	Ceiling	150 mg/m3
	TWA	50 mg/m3
N,N-dimethyl-p-toluidine; [1] N,N-dimethyl-m-toluidine; [2] N,N-dimethyl-o-toluidine [3] (CAS 99-97-8)	Ceiling	10 mg/m3
	TWA	5 mg/m3
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	Ceiling	2 mg/m3
	TWA	1 mg/m3
zinc oxide (CAS 1314-13-2)	Ceiling	5 mg/m3
	TWA	2 mg/m3

**Denmark. Work Environment Authority. Exposure Limits for Substances & Materials, Annex 2**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TLV	70 mg/m3	
		20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	TLV	102 mg/m3	
		25 ppm	
Paraffin Wax (CAS 8002-74-2)	TLV	2 mg/m3	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	TLV	1 mg/m3	
zinc oxide (CAS 1314-13-2)	TLV	4 mg/m3	

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	100 mg/m3	
		30 ppm	
	TWA	70 mg/m3	
		20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Paraffin Wax (CAS 8002-74-2)	TWA	2 mg/m3	Vapor.



**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended**

Components	Type	Value	Form
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3	Vapor.
	TWA	1 mg/m3	Vapor.
zinc oxide (CAS 1314-13-2)	TWA	5 mg/m3	

**Finland. HTP-arvot, App 3., Binding Limit Values, Social Affairs and Ministry of Health**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	71 mg/m3	
		20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	210 mg/m3	
		50 ppm	
	TWA	42 mg/m3	
		10 ppm	
Paraffin Wax (CAS 8002-74-2)	TWA	1 mg/m3	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	
zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Fume.
	TWA	2 mg/m3	Fume.

**France. OELs. Indicative Occupational Exposure Limits as Prescribed by Order of 30 June 2004, as amended**

Components	Type	Value	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	VLE	2 mg/m3	
		0,5 ppm	
	VME	1 mg/m3	
		0,2 ppm	

**France. OELs. Occupational Exposure Limits as Prescribed by Art. R.4412-149 of Labor Code, as amended**

Components	Type	Value	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	VLE	410 mg/m3	
		100 ppm	
	VME	205 mg/m3	
		50 ppm	

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	VME	70 mg/m3	
<b>Regulatory status:</b> Indicative limit (VL)		20 ppm	
<b>Regulatory status:</b> Indicative limit (VL)			
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	VLE	410 mg/m3	
<b>Regulatory status:</b> Regulatory binding (VRC)			

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984**

Components	Type	Value	Form
		100 ppm	
<b>Regulatory status:</b> Regulatory binding (VRC)			
VME		205 mg/m3	
<b>Regulatory status:</b> Regulatory binding (VRC)			
		50 ppm	
<b>Regulatory status:</b> Regulatory binding (VRC)			
Paraffin Wax (CAS 8002-74-2)	VME	2 mg/m3	Fume.
<b>Regulatory status:</b> Indicative limit (VL)			
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	VLE	2 mg/m3	
<b>Regulatory status:</b> Regulatory indicative (VRI)			
		0,5 ppm	
<b>Regulatory status:</b> Regulatory indicative (VRI)			
VME		1 mg/m3	
<b>Regulatory status:</b> Regulatory indicative (VRI)			
		0,2 ppm	
<b>Regulatory status:</b> Regulatory indicative (VRI)			
zinc oxide (CAS 1314-13-2)	VME	5 mg/m3	Fume.
<b>Regulatory status:</b> Indicative limit (VL)			
		10 mg/m3	Dust.
<b>Regulatory status:</b> Indicative limit (VL)			

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG), as updated**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	180 mg/m3	
		50 ppm	
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	210 mg/m3	
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	50 ppm	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	TWA	2 mg/m3	Inhalable fraction.

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	AGW	180 mg/m3	
		50 ppm	
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	AGW	210 mg/m3	
		50 ppm	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	AGW	2 mg/m3	Inhalable fraction.
zinc oxide (CAS 1314-13-2)	AGW	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.

**Greece. OELs, Presidential Decree No. 307/1986, as amended**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	140 mg/m3	
	TWA	40 ppm 70 mg/m3 20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Paraffin Wax (CAS 8002-74-2)	STEL	6 mg/m3	Fume.
	TWA	2 mg/m3	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.

**Hungary. OELs. Decree on protection of workers exposed to chemical agents (5/2020. (II.6)), Annex 1&2, as amended**

Components	Type	Value	Form
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	415 mg/m3	
	TWA	208 mg/m3	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	
zinc oxide (CAS 1314-13-2)	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.

**Iceland. OELs. Regulation 390/2009 on Pollution Limits and Measures to Reduce Pollution at the Workplace, as amended**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	70 mg/m3	
		20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Paraffin Wax (CAS 8002-74-2)	TWA	2 mg/m3	Fume.
	STEL	2 mg/m3	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	TWA	1 mg/m3	
	TWA	4 mg/m3	Fume.

**Ireland. OELVs, Schedules 1 & 2, Code of Practice for Chemical Agents and Carcinogens Regulations**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	140 mg/m3	
		40 ppm	

**Ireland. OELVs, Schedules 1 & 2, Code of Practice for Chemical Agents and Carcinogens Regulations**

Components	Type	Value	Form
	TWA	70 mg/m3	
		20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Paraffin Wax (CAS 8002-74-2)	STEL	6 mg/m3	Fume.
	TWA	2 mg/m3	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	
zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction and fume.
	TWA	2 mg/m3	Respirable fraction and fume.

**Italy. OELs (Legislative Decree n.81, 9 April 2008), as amended**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Paraffin Wax (CAS 8002-74-2)	TWA	2 mg/m3	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	
zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

**Latvia. OELs. Occupational Exposure Limits of Chemical Substances at Workplace (Reg. No. 325/ 2007, L.V. 80, Annex 1), as amended**

Components	Type	Value
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	10 mg/m3
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	TWA	10 mg/m3
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3
zinc oxide (CAS 1314-13-2)	TWA	0,5 mg/m3

**Lithuania. OELs. Occupational Exposure Limit Values for Chemical Substances (Hygiene Norm HN 23:2011; Order No. V-824/A1-389), as amended**

Components	Type	Value
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	100 mg/m3
		30 ppm
	TWA	70 mg/m3

**Lithuania. OELs. Occupational Exposure Limit Values for Chemical Substances (Hygiene Norm HN 23:2011; Order No. V-824/A1-389), as amended**

Components	Type	Value
		20 ppm
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	416 mg/m3
		100 ppm
	TWA	208 mg/m3
		50 ppm
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3
zinc oxide (CAS 1314-13-2)	TWA	5 mg/m3

**Luxembourg. OELs. Binding Occupational Exposure Limit Values (Annex I), G.D.R. of 14 November 2016, OJ Memorial A, n ° 235/2016, as amended**

Components	Type	Value
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm
	TWA	50 ppm
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

**Malta. OELs. Protection of Health and Safety of Workers from Risks related to Chemical Agents at Work (L.N 227/2003 Schedules I and V), as amended**

Components	Type	Value
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm
	TWA	50 ppm
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

**Netherlands. OELs per Annex XIII of Working Conditions Regulation (Staatscourant no. 252, 29 December 2006), as amended**

Components	Type	Value
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	410 mg/m3
	TWA	205 mg/m3
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

**Norway. Regulation No. 1358 on Measures and Limit Values for Physical and Chemical Factors in Work Environment and Infection Groups for Biological Factors, as amended**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TLV	70 mg/m3	
		20 ppm	

**Norway. Regulation No. 1358 on Measures and Limit Values for Physical and Chemical Factors in Work Environment and Infection Groups for Biological Factors, as amended**

Components	Type	Value	Form
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	400 mg/m3	
		100 ppm	
	TLV	100 mg/m3 25 ppm	
Paraffin Wax (CAS 8002-74-2)	TLV	2 mg/m3	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	TLV	1 mg/m3	
zinc oxide (CAS 1314-13-2)	TLV	5 mg/m3	Respirable dust.
		5 mg/m3	Dust.
		10 mg/m3	Total dust.

**Poland. Maximum permissible concentrations and intensities of harmful factors in the work environment (Dz.U.Poz. 1286/2018, Annex 1)**

Components	Type	Value	Form
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	300 mg/m3	
	TWA	100 mg/m3	
Paraffin Wax (CAS 8002-74-2)	TWA	2 mg/m3	Inhalable fraction.
	STEL	2 mg/m3	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	TWA	1 mg/m3	
	zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3
TWA		5 mg/m3	Inhalable fraction.

**Portugal. Decree-Law No. 24/2012, Occupational Exposure Limit Values, Annex II, as amended**

Components	Type	Value
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796-2014)**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	20 ppm	
	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm
TWA		50 ppm	
Paraffin Wax (CAS 8002-74-2)	TWA	2 mg/m3	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

**Romania. OELs. Limit Values of Chemical Agents at Workplace (Regulation 1.218/2006, M.O 845, Annex 1, 3&4, as amended)**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	45 mg/m <sup>3</sup>	
		13 ppm	
	TWA	30 mg/m <sup>3</sup>	
		8,5 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	410 mg/m <sup>3</sup>	
		100 ppm	
	TWA	205 mg/m <sup>3</sup>	
		50 ppm	
Paraffin Wax (CAS 8002-74-2)	STEL	6 mg/m <sup>3</sup>	Fume.
	TWA	2 mg/m <sup>3</sup>	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	
zinc oxide (CAS 1314-13-2)	STEL	10 mg/m <sup>3</sup>	Fume.
	TWA	5 mg/m <sup>3</sup>	Fume.

**Slovakia. OELs. Maximum permissible exposure limits for chemical factors in workplace air (Regulation No 355/2006, Annex 1, Table 1, as amended)**

Components	Type	Value	Form
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Paraffin Wax (CAS 8002-74-2)	STEL	6 mg/m <sup>3</sup>	Fume.
	TWA	2 mg/m <sup>3</sup>	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	
zinc oxide (CAS 1314-13-2)	STEL	1 mg/m <sup>3</sup>	Respirable fume.
	TWA	1 mg/m <sup>3</sup>	Respirable fume.

**Slovenia. OELs. Occupational Exposure Limits of Chemicals at Workplace (Reg. on Protection of Workers from Risks due to Exp. to Chemicals at Work, Annex I), as amended**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	180 mg/m <sup>3</sup>	
		50 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	TWA	210 mg/m <sup>3</sup>	
		50 ppm	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	TWA	1 mg/m <sup>3</sup>	
zinc oxide (CAS 1314-13-2)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.
		1,25 mg/m <sup>3</sup>	Respirable fraction.

**Spain. OELs. INSST, Límites de Exposición Profesional Para Agentes Químicos, Table 1-Valores Límites Ambientales (VLAs)**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	TWA	72 mg/m3	
		20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Paraffin Wax (CAS 8002-74-2)	TWA	2 mg/m3	Fume.
	STEL	2 mg/m3	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	TWA	1 mg/m3	
	STEL	10 mg/m3	Respirable fraction.
zinc oxide (CAS 1314-13-2)	TWA	2 mg/m3	Respirable fraction.

**Sweden. OELs (Annex 1). Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1), as amended**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	100 mg/m3	
		30 ppm	
	TWA	70 mg/m3	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	Ceiling	20 ppm	
		400 mg/m3	
	TWA	100 ppm	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)		200 mg/m3	
	Ceiling	50 ppm	
		2 mg/m3	
zinc oxide (CAS 1314-13-2)	TWA	1 mg/m3	
	TWA	5 mg/m3	Total dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle MAK-Werte**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	360 mg/m3	
		100 ppm	
	TWA	180 mg/m3	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	50 ppm	
		420 mg/m3	
	TWA	100 ppm	
Paraffin Wax (CAS 8002-74-2)		210 mg/m3	
		50 ppm	
	TWA	2 mg/m3	Respirable fume.



**Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle MAK-Werte**

Components	Type	Value	Form
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	4 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.
zinc oxide (CAS 1314-13-2)	STEL	3 mg/m3	Respirable fume.
	TWA	3 mg/m3	Respirable fume.

**UK. OELs. Workplace Exposure Limits (WELs) (EH40/2005 (Fourth Edition 2020)), Table 1**

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	143 mg/m3	
		40 ppm	
	TWA	72 mg/m3	
		20 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	416 mg/m3	
		100 ppm	
	TWA	208 mg/m3	
		50 ppm	
Paraffin Wax (CAS 8002-74-2)	STEL	6 mg/m3	Fume.
	TWA	2 mg/m3	Fume.
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	
zinc oxide (CAS 1314-13-2)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Inhalable dust.

**EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU**

Components	Type	Value	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Recommended monitoring procedures**

Follow standard monitoring procedures.

**Derived no effect levels (DNELs)**

Not available.

**Predicted no effect concentrations (PNECs)**

Not available.

**Exposure guidelines**

Occupational Exposure Limits are not relevant to the current physical form of the product.

**Croatia ELVs: Skin designation**

methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)

Can be absorbed through the skin.

**Denmark GV: Skin designation**

methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)

Can be absorbed through the skin.

**Germany DFG MAK (advisory): Skin designation**

N,N-dimethyl-p-toluidine; [1] N,N-dimethyl-m-toluidine; [2] Can be absorbed through the skin.  
 N,N-dimethyl-o-toluidine [3] (CAS 99-97-8)

**Hungary OELs: Skin designation**

methyl methacrylate; methyl 2-methylprop-2-enoate; Can be absorbed through the skin.  
 methyl 2-methylpropenoate (CAS 80-62-6)

**Iceland OELs: Skin designation**

methyl methacrylate; methyl 2-methylprop-2-enoate; Can be absorbed through the skin.  
 methyl 2-methylpropenoate (CAS 80-62-6)

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4) Can be absorbed through the skin.

**8.2. Exposure controls****Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment****General information**

Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection**

Chemical respirator with organic vapor cartridge and full facepiece.

**Skin protection****- Hand protection**

Wear appropriate chemical resistant gloves.

**- Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**Hygiene measures**

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**Environmental exposure controls**

Inform appropriate managerial or supervisory personnel of all environmental releases. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid. Paste.
<b>Color</b>	Off-white
<b>Odor</b>	Fragrant
<b>Melting point/freezing point</b>	-54,4 °F (-48 °C) estimated
<b>Boiling point or initial boiling point and boiling range</b>	212,9 °F (100,5 °C) estimated
<b>Flammability</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	2,1 % estimated
<b>Explosive limit - upper (%)</b>	8,2 % estimated
<b>Flash point</b>	50,0 °F (10,0 °C) estimated
<b>Auto-ignition temperature</b>	815 °F (435 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>pH</b>	Not available.
<b>Kinematic viscosity</b>	Not available.
<b>Solubility</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water) (log value)</b>	Not available.

Vapor pressure	51,33 hPa estimated
Density and/or relative density	
Density	0,94 g/cm3 estimated
Vapor density	Not available.
Particle characteristics	Not available.

## 9.2. Other information

**9.2.1. Information with regard to physical hazard classes** No relevant additional information available.

### 9.2.2. Other safety characteristics

Specific gravity	0,94 estimated
VOC	63,94 % estimated <50 g/l Mixed

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>10.2. Chemical stability</b>	Material is stable under normal conditions.
<b>10.3. Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>10.4. Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>10.5. Incompatible materials</b>	Strong oxidizing agents. Nitrates. Peroxides.
<b>10.6. Hazardous decomposition products</b>	No hazardous decomposition products are known.

## SECTION 11: Toxicological information

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

### Information on likely routes of exposure

<b>Inhalation</b>	May cause irritation to the respiratory system.
<b>Skin contact</b>	Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Acute toxicity** Not known.

Components	Species	Test Results
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Rat	7,100000000000005 mg/l, 4 Hours
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	7800 mg/kg
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	2740 mg/kg
<b>Inhalation</b>		
LC50	Rabbit	1,689000000000001 mg/l, 1 Hours
<b>Oral</b>		
LD50	Rat	1530 mg/kg

Components	Species	Test Results
zinc oxide (CAS 1314-13-2)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Mouse	> 5,7000000000000002 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	> 5 g/kg
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	May cause an allergic skin reaction.	
<b>Germ cell mutagenicity</b>	Due to partial or complete lack of data the classification is not possible.	
<b>Carcinogenicity</b>	Risk of cancer cannot be excluded with prolonged exposure.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	3	Not classifiable as to carcinogenicity to humans.
N,N-dimethyl-p-toluidine; [1] N,N-dimethyl-m-toluidine; [2] N,N-dimethyl-o-toluidine [3] (CAS 99-97-8)	2B	Possibly carcinogenic to humans.
<b>Reproductive toxicity</b>	Due to partial or complete lack of data the classification is not possible.	
<b>Specific target organ toxicity - single exposure</b>	May cause respiratory irritation.	
<b>Specific target organ toxicity - repeated exposure</b>	Due to partial or complete lack of data the classification is not possible.	
<b>Aspiration hazard</b>	Due to partial or complete lack of data the classification is not possible.	
<b>Mixture versus substance information</b>	No information available.	
<b>11.2. Information on other hazards</b>		
<b>Endocrine disrupting properties</b>	This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.	
<b>Other information</b>	Not available.	

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	Harmful to aquatic life with long lasting effects. Based on available data, the classification criteria are not met for hazardous to the aquatic environment, acute hazard.	
<b>12.2. Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.	
<b>12.3. Bioaccumulative potential</b>		
<b>Partition coefficient n-octanol/water (log Kow)</b>		
methacrylic acid; 2-methylpropenoic acid	0,93	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate	1,38	
<b>Bioconcentration factor (BCF)</b>	Not available.	
<b>12.4. Mobility in soil</b>	No data available.	
<b>12.5. Results of PBT and vPvB assessment</b>	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.	
<b>12.6. Endocrine disrupting properties</b>	This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.	
<b>12.7. Other adverse effects</b>	The product contains volatile organic compounds which have a photochemical ozone creation potential.	
<b>12.8. Additional information</b>		
<b>Estonia Dangerous substances in soil Data</b>		
phosphoric acid ... %, orthophosphoric acid ... % (CAS 7664-38-2)		Chemical pesticides (As the total sum of the active substances) 0,5 MG/KG

zinc oxide (CAS 1314-13-2)

Chemical pesticides (As the total sum of the active substances) 20  
MG/KG

Chemical pesticides (As the total sum of the active substances) 5  
MG/KG

Zinc (Zn) 1000 MG/KG

Zinc (Zn) 200 MG/KG

Zinc (Zn) 500 MG/KG

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Residual waste</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>EU waste code</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal methods/information</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Special precautions</b>	Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

<b>14.1. UN number</b>	UN1133
<b>14.2. UN proper shipping name</b>	ADHESIVES containing flammable liquid
<b>14.3. Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
Label(s)	3
Hazard No. (ADR)	30
Tunnel restriction code	D/E
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### RID

<b>14.1. UN number</b>	UN1133
<b>14.2. UN proper shipping name</b>	ADHESIVES containing flammable liquid
<b>14.3. Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
Label(s)	3
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### ADN

<b>14.1. UN number</b>	UN1133
<b>14.2. UN proper shipping name</b>	ADHESIVES containing flammable liquid
<b>14.3. Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
Label(s)	3
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IATA

<b>14.1. UN number</b>	UN1133
------------------------	--------

14.2. UN proper shipping name Adhesives containing flammable liquid, Limited Quantity

14.3. Transport hazard class(es)  
 Class 3  
 Subsidiary risk -

14.4. Packing group III

14.5. Environmental hazards No.

ERG Code 3L

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information  
 Passenger and cargo aircraft Allowed with restrictions.  
 Cargo aircraft only Allowed with restrictions.

**IMDG**

14.1. UN number UN1133

14.2. UN proper shipping name ADHESIVES containing flammable liquid, Limited Quantity

14.3. Transport hazard class(es)  
 Class 3  
 Subsidiary risk -

14.4. Packing group III

14.5. Environmental hazards  
 Marine pollutant No.

EmS F-E, S-D

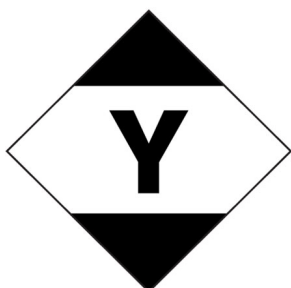
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

14.7. Maritime transport in bulk according to IMO instruments Not established.

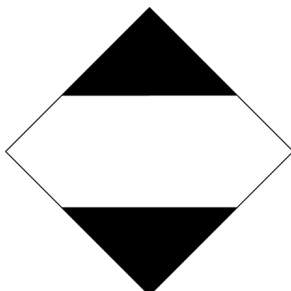
**ADN; ADR; RID**



**IATA**



**IMDG**



**SECTION 15: Regulatory information**

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

## EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

zinc oxide (CAS 1314-13-2)

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

## UFI:

Austria: NV90-2065-S00P-W143  
Belgium: NV90-2065-S00P-W143  
Bulgaria: NV90-2065-S00P-W143  
Croatia: NV90-2065-S00P-W143  
Cyprus: NV90-2065-S00P-W143  
Czech Republic: NV90-2065-S00P-W143  
Denmark: NV90-2065-S00P-W143  
Estonia: NV90-2065-S00P-W143  
EU: NV90-2065-S00P-W143  
Finland: NV90-2065-S00P-W143  
France: NV90-2065-S00P-W143  
Germany: NV90-2065-S00P-W143  
Greece: NV90-2065-S00P-W143  
Hungary: NV90-2065-S00P-W143  
Iceland: NV90-2065-S00P-W143  
Ireland: NV90-2065-S00P-W143  
Italy: NV90-2065-S00P-W143  
Latvia: NV90-2065-S00P-W143  
Lithuania: NV90-2065-S00P-W143  
Luxembourg: NV90-2065-S00P-W143  
Malta: NV90-2065-S00P-W143  
Netherlands: NV90-2065-S00P-W143  
Norway: NV90-2065-S00P-W143  
Poland: NV90-2065-S00P-W143  
Portugal: NV90-2065-S00P-W143  
Romania: NV90-2065-S00P-W143  
Slovakia: NV90-2065-S00P-W143  
Slovenia: NV90-2065-S00P-W143  
Spain: NV90-2065-S00P-W143  
Sweden: NV90-2065-S00P-W143

## Authorizations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

## Restrictions on use

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended**

**- Conditions of restriction given for the associated entry number should be considered**

methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4) 75  
phosphoric acid ... %, orthophosphoric acid ... % 75  
(CAS 7664-38-2)

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended**

Not listed.

## Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

ANNEX 1, PART 1 Categories of dangerous substances  
Hazard categories in accordance with Regulation (EC) No 1272/2008  
- P5a, b or c FLAMMABLE LIQUIDS

**Other regulations** The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

**National regulations** Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

**Contains a substance which is included on the TRGS 905 list of carcinogenic, germ cell mutagenic and reproductive toxic substances**

zinc oxide (CAS 1314-13-2)

Anorganische Faserstäube, soweit nicht erwähnt (ausgenommen Gipsfasern und Wollastonitfasern)

#### France regulations

##### France INRS Table of Occupational Diseases

methyl methacrylate; methyl 2-methylprop-2-enoate;  
methyl 2-methylpropenoate (CAS 80-62-6)

Affections provoquées par le méthacrylate de méthyle 82

#### Product registration number

**Austria** UFI: NV90-2065-S00P-W143  
**Belgium** UFI: NV90-2065-S00P-W143  
**Czech Republic** UFI: NV90-2065-S00P-W143  
**Denmark** UFI: NV90-2065-S00P-W143  
**European Union** UFI: NV90-2065-S00P-W143  
**Finland** UFI: NV90-2065-S00P-W143  
**France** UFI: NV90-2065-S00P-W143  
**Germany** UFI: NV90-2065-S00P-W143  
**Greece** UFI: NV90-2065-S00P-W143  
**Hungary** UFI: NV90-2065-S00P-W143  
**Italy** UFI: NV90-2065-S00P-W143  
**Netherlands** UFI: NV90-2065-S00P-W143  
**Norway** UFI: NV90-2065-S00P-W143  
**Poland** UFI: NV90-2065-S00P-W143  
**Portugal** UFI: NV90-2065-S00P-W143  
**Slovakia** UFI: NV90-2065-S00P-W143  
**Slovenia** UFI: NV90-2065-S00P-W143  
**Spain** UFI: NV90-2065-S00P-W143  
**Sweden** UFI: NV90-2065-S00P-W143  
**Switzerland** UFI: NV90-2065-S00P-W143

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

#### List of abbreviations

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.  
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.  
AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).  
CAS: Chemical Abstract Service.  
CEN: European Committee for Standardization.  
IATA: International Air Transport Association.  
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.  
IMDG: International Maritime Dangerous Goods.  
MAC: Maximum Allowed Concentration.  
MARPOL: International Convention for the Prevention of Pollution from Ships.  
PBT: Persistent, bioaccumulative and toxic.  
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.  
STEL: Short term exposure limit.  
TLV: Threshold Limit Value.  
TWA: Time Weighted Average.  
VLE: Exposure Limit Value.  
VME: Exposure Average Value.  
vPvB: Very persistent and very bioaccumulative.

#### References

Not available.

#### Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.



**Full text of any statements,  
which are not written out in full  
under sections 2 to 15**

H225 Highly flammable liquid and vapor.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H330 Fatal if inhaled.  
H331 Toxic if inhaled.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

**Revision information**

None.

**Training information**

Follow training instructions when handling this material.

**Disclaimer**

ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.