SAFETY DATA SHEET

Version #: 09
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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® MA8110/8120 Adhesive
Registration number	-
Synonyms	None.
SKU#	0807

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

Greece Poison Information Centre	(0030) 2107793777 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Hungary National Emergency Phone Number	+36-80-201-199 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Iceland Poison Center	(+354) 543 2222 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Latvia Emergency medical aid	113
Latvia Poison and Drug Information Center	+371 67042473 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Lithuania Neatidėliotina informacija apsinuodijus	+370 5 236 20 52 or +37068753378 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Malta Accident and Emergency Department	2545 4030 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Netherlands National Poisons Information Center (NVIC)	NVIC: +31 (0)88 755 8000 (Only for the purpose of informing medical personnel in cases of acute intoxications)
Norway Norwegian Poison Information Center	22 59 13 00 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Portugal Poison Center	800 250 250 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Romania Biroul RSI si Informare Toxicologica	021.318.36.06 (Available 8:00AM-3:00PM. SDS/Product information may not be available for the Emergency Service.)
Slovakia National Toxicological Information Center	+421 2 5477 4166 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Spain Toxicology Information Service	+ 34 91 562 04 20 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Sweden National Poison Information Center	112 - and ask for Poison Information (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Switzerland Tox Info Suisse	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.
Health hazards		
Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.
Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Skin sensitization	Category 1	H317 - May cause an allergic skin reaction.
Environmental hazards		
Hazardous to the aquatic environment, long-term aquatic hazard	Category 3	H412 - Harmful to aquatic life with long lasting effects.

2.2. Label elements

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

UFI:

EU: EWA0-40FX-F00M-U43V

Contains: methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate, Styrene/butadiene Copolymer, dodecyl methacrylate, methacrylic acid; 2-methylpropenoic acid, maleic acid, Paraffin Wax, Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-, phosphoric acid … %, orthophosphoric acid … %

Hazard pictograms

Signal word Danger

Hazard statements

H225	Highly flammable liquid and vapor.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
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.
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

P302 + P352	IF ON SKIN: Wash with plenty of water.
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.
P312	Call a POISON CENTER/doctor if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use appropriate media to extinguish.

Storage

P403 + P235	Store in a well-ventilated place. Keep cool.

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 - 60	80-62-6 201-297-1	01-2119452498-28-0000	607-035-00-6	#

Classification: Flam. Liq. 2;H225, Skin Irrit. 2;H315, Skin Sens. 1;H317, STOT SE 3;H335

Specific Concentration Limits: STOT SE 3;H335: C ≥ 10 %

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Styrene/butadiene Copolymer	10 - 20	9003-55-8 -	-	-	
Classification: -					
dodecyl methacrylate	2,5 - 10	142-90-5 205-570-6	-	607-247-00-9	
Classification: Skin Irrit. 2;H315, STOT SE 3;H335					
Specific Concentration Limits: STOT SE 3;H335: C ≥ 10 %					
methacrylic acid; 2-methylpropenoic acid	2,5 - 10	79-41-4 201-204-4	01-2119463884-26-0000	607-088-00-5	
Classification: Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Acute Tox. 4;H312;(ATE: 1100 mg/kg bw), Acute Tox. 3;H331;(ATE: 7,1 mg/l), Skin Corr. 1A;H314, Eye Dam. 1;H318, STOT SE 3;H335					
Specific Concentration Limits: STOT SE 3;H335: C ≥ 1 %					
maleic acid	1 - 2,5	110-16-7 203-742-5	-	607-095-00-3	
Classification: Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Acute Tox. 4;H312;(ATE: 1560 mg/kg bw), Skin Irrit. 2;H315, Eye Irrit. 2;H319, Skin Sens. 1;H317, STOT SE 3;H335, Aquatic Chronic 2;H411					
Specific Concentration Limits: Skin Sens. 1;H317: C ≥ 0.1 %					
monoalkyl or monoaryl or monoalkyaryl esters of methacrylic acid with the exception of those specified elsewhere in this Annex	1 - 2,5	2495-27-4 219-672-3	-	607-134-00-4	
Classification: Skin Irrit. 2;H315, Eye Irrit. 2;H319, STOT SE 3;H335					
Specific Concentration Limits: STOT SE 3;H335: C ≥ 10 %					
Paraffin Wax	1 - 2,5	8002-74-2 232-315-6	-	-	
Classification: -					
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-	1 - 2,5	128-37-0 204-881-4	-	-	
Classification: Acute Tox. 4;H302;(ATE: 890 mg/kg bw), Aquatic Acute 1;H400, Aquatic Chronic 2;H411					
phosphoric acid … %, orthophosphoric acid … %	< 1	7664-38-2 231-633-2	-	015-011-00-6	#
Classification: 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					
Specific Concentration Limits: 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 %					
1,4-dihydroxybenzene; hydroquinone; quinol	< 0,1	123-31-9 204-617-8	-	604-005-00-4	
Classification: Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Acute Tox. 3;H311;(ATE: 900 mg/kg bw), Eye Dam. 1;H318, Skin Sens. 1;H317, Muta. 2;H341, Carc. 2;H351, Aquatic Acute 1;H400(M=10), Aquatic Chronic 1;H410(M=10)					
Other components below reportable levels	20 - 40				

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. 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

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a poison center or doctor/physician if you feel unwell.

Skin contact 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.

Eye contact 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 if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

4.3. Indication of any immediate medical attention and special treatment needed 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 warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Highly flammable liquid and vapor.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture 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.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel 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.

For emergency responders 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.

6.2. Environmental precautions 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.

6.3. Methods and material for containment and cleaning up 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.

6.4. Reference to other sections 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. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

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
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	Ceiling	4 mg/m3	Inhalable fraction.
	MAK	2 mg/m3	Inhalable fraction.
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	
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	MAK	10 mg/m3	
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	MAK	1 mg/m3	
	STEL	2 mg/m3	

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
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	TWA	1 mg/m3	
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	

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
	TWA	208 mg/m3	
		50 ppm	
Paraffin Wax (CAS 8002-74-2)	TWA	2 mg/m3	Fume.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	TWA	2 mg/m3	Vapor and aerosol.
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

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

Components	Type	Value
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	TWA	2 mg/m3
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
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	STEL	50 mg/m3
	TWA	10 mg/m3
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3
POLY(METHYL METHACRYLATE) (CAS 9011-14-7)	TWA	20 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
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	MAC	0,5 mg/m3	
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	MAC	72 mg/m3	
		20 ppm	
	STEL	143 mg/m3	
		40 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	MAC	50 ppm	
	STEL	100 ppm	
Paraffin Wax (CAS 8002-74-2)	MAC	2 mg/m3	Fume.
	STEL	6 mg/m3	Fume.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	MAC	10 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
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	MAC	1 mg/m3	
	STEL	2 mg/m3	

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
	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
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	Ceiling	4 mg/m3
	TWA	2 mg/m3
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	Ceiling	150 mg/m3
	TWA	50 mg/m3
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	Ceiling	2 mg/m3
	TWA	1 mg/m3

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

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	Ceiling	2 mg/m3	
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	140 mg/m3	
		40 ppm	
	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)	STEL	4 mg/m3	Fume.
	TLV	2 mg/m3	Fume.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	STEL	20 mg/m3	
	TLV	10 mg/m3	
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3	

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

Components	Type	Value	Form
	TLV	1 mg/m3	

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

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	STEL	1,5 mg/m3	
	TWA	0,5 mg/m3	
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.
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3	Vapor.
	TWA	1 mg/m3	Vapor.

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

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	STEL	2 mg/m3	
	TWA	0,5 mg/m3	
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.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	STEL	20 mg/m3	
	TWA	10 mg/m3	
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

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

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

Components	Type	Value
	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

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	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	TWA	210 mg/m3	
		50 ppm	
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	TWA	10 mg/m3	Vapor and aerosol, inhalable fraction.
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	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	AGW	210 mg/m3	
		50 ppm	
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	AGW	10 mg/m3	Inhalable fraction.
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	AGW	2 mg/m3	Inhalable fraction.

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

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	STEL	4 mg/m3	
	TWA	2 mg/m3	
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	140 mg/m3	
		40 ppm	
	TWA	70 mg/m3	
		20 ppm	

Greece. OELs, Presidential Decree No. 307/1986, 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/m3	Fume.
	TWA	2 mg/m3	Fume.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	TWA	10 mg/m3	
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	

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

Components	Type	Value
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	415 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

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

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	STEL	2 mg/m3	
	TWA	0,5 mg/m3	
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.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	TWA	10 mg/m3	
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

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

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	TWA	0,5 mg/m3	

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	
	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.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	TWA	2 mg/m3	
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

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

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	TWA	1 mg/m3	
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.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapor.
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

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

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
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	STEL	1,5 mg/m3
	TWA	0,5 mg/m3
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	400 mg/m3
		100 ppm
	TWA	200 mg/m3
		50 ppm
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 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
		100 ppm
	TWA	205 mg/m3
		50 ppm

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

Components	Type	Value
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
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)	STEL	400 mg/m3
		100 ppm
	TLV	100 mg/m3
		25 ppm

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

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	STEL	2 mg/m3	
	TWA	1 mg/m3	
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.
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

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
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	TWA	1 mg/m3	
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.

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

Components	Type	Value	Form
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapor.
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	

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
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	STEL	2 mg/m3	
	TWA	1 mg/m3	
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	45 mg/m3	
		13 ppm	
	TWA	30 mg/m3	
		8,5 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	410 mg/m3	
		100 ppm	
	TWA	205 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	

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
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	TWA	2 mg/m3	
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	

Slovenia. OELs. Occupational Exposure Limits of Chemicals at Workplace (Reg. on Protection of Workers from Risks due to Exp. to Chemicals at Work, Ann. I 100/2001), as amended

Components	Type	Value	Form
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	KTV	360 mg/m3	

Slovenia. OELs. Occupational Exposure Limits of Chemicals at Workplace (Reg. on Protection of Workers from Risks due to Exp. to Chemicals at Work, Ann. I 100/2001), as amended

Components	Type	Value	Form
		100 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	KTV	420 mg/m3	
		100 ppm	
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	KTV	40 mg/m3	Inhalable fraction.
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	KTV	2 mg/m3	

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/m3	
		50 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	TWA	210 mg/m3	
		50 ppm	
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	TWA	10 mg/m3	Inhalable fraction.
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	TWA	1 mg/m3	

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

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	TWA	2 mg/m3	
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.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	TWA	10 mg/m3	
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

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

Components	Type	Value
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	STEL	1,5 mg/m3

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

Components	Type	Value
	TWA	0,5 mg/m3
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)	Ceiling	400 mg/m3
		100 ppm
	TWA	200 mg/m3
		50 ppm
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	Ceiling	2 mg/m3
	TWA	1 mg/m3

Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle MAK-Werte

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	STEL	2 mg/m3	Vapor and aerosol, inhalable.
	TWA	2 mg/m3	Vapor and aerosol, inhalable.
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	360 mg/m3	
		100 ppm	
	TWA	180 mg/m3	
		50 ppm	
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	STEL	420 mg/m3	
		100 ppm	
	TWA	210 mg/m3	
		50 ppm	
Paraffin Wax (CAS 8002-74-2)	TWA	2 mg/m3	Respirable fume.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	STEL	40 mg/m3	Vapor and aerosol, inhalable.
	TWA	10 mg/m3	Vapor and aerosol, inhalable.
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	4 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.

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

Components	Type	Value	Form
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	TWA	0,5 mg/m3	
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)	STEL	143 mg/m3	

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

Components	Type	Value	Form
		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.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	TWA	10 mg/m3	
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	STEL	2 mg/m3	
	TWA	1 mg/m3	

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

Croatia ELVs: Skin designation

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

Czech Republic PELs: Skin designation

1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9) — 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

1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9) — Can be absorbed through the skin.

Hungary OELs: Skin designation

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

Iceland OELs: Skin designation

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

Slovakia OELs: Skin designation

1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	Can be absorbed through the skin.

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.

Switzerland SUVA Limit Values at the Workplace: Skin designation

1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	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 Wear safety glasses with side shields (or goggles). Face shield is recommended.

Skin protection

- Hand protection Wear appropriate chemical resistant gloves.

- Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

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

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

SECTION 10: Stability and reactivity

10.1. Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability Material is stable under normal conditions.

10.3. Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

10.5. Incompatible materials Strong oxidizing agents. Nitrates. Peroxides.

10.6. Hazardous decomposition products 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

Inhalation Harmful if inhaled.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes serious eye irritation.

Ingestion 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. 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 Harmful if inhaled.

Components	Species	Test Results
1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)		
Acute		
Dermal		
LD50	Rat	> 900 mg/kg
dodecyl methacrylate (CAS 142-90-5)		
Acute		
Dermal		
LD50	Rabbit	> 3 g/kg
Oral		
LD50	Rat	> 5 g/kg
maleic acid (CAS 110-16-7)		
Acute		
Dermal		
LD50	Rabbit	1560 mg/kg
methacrylic acid; 2-methylpropenoic acid (CAS 79-41-4)		
Acute		
Inhalation		
LC50	Rat	7,1 mg/l, 4 Hours

Components	Species	Test Results
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)		
Acute		
Oral		
LD50	Rat	7800 mg/kg
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Oral		
LD50	Rat	890 mg/kg
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)		
Acute		
Dermal		
LD50	Rabbit	2740 mg/kg
Inhalation		
LC50	Rabbit	1,689 mg/l, 1 Hours
Oral		
LD50	Rat	1530 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory sensitization Due to partial or complete lack of data the classification is not possible.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Due to partial or complete lack of data the classification is not possible.

Carcinogenicity Due to partial or complete lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	3 Not classifiable as to carcinogenicity to humans.
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	3 Not classifiable as to carcinogenicity to humans.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	3 Not classifiable as to carcinogenicity to humans.
Styrene/butadiene Copolymer (CAS 9003-55-8)	3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity Due to partial or complete lack of data the classification is not possible.

Specific target organ toxicity - single exposure Not applicable.

Specific target organ toxicity - repeated exposure Not applicable.

Aspiration hazard Due to partial or complete lack of data the classification is not possible.

Mixture versus substance information No information available.

11.2. Information on other hazards

Endocrine disrupting properties 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.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity 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.

12.2. Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

1,4-dihydroxybenzene; hydroquinone; quinol	0,59

dodecyl methacrylate	6,45
maleic acid	-0,48
methacrylic acid; 2-methylpropenoic acid	0,93
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate	1,38
monoalkyl or monoaryl or monoalkyaryl esters of methacrylic acid with the exception of those specified elsewhere in this Annex	8,64
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-	5,1

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

12.6. Endocrine disrupting properties 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.

12.7. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

12.8. Additional information

Estonia Dangerous substances in soil Data

1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	Hydroquinone (As the sum of Phenols) 0,1 MG/KG
	Hydroquinone (As the sum of Phenols) 1 MG/KG
	Hydroquinone (As the sum of Phenols) 10 MG/KG
phosphoric acid … %, orthophosphoric acid … % (CAS 7664-38-2)	Chemical pesticides (As the total sum of the active substances) 0,5 MG/KG
	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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste 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).

Contaminated packaging 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.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information 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.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number UN1133

14.2. UN proper shipping name ADHESIVES containing flammable liquid (vapour pressure at 50 °C more than 110 kPa), Limited Quantity

14.3. Transport hazard class(es)

Class 3

Subsidiary hazard -

Label(s) 3

Hazard No. (ADR) 33

Tunnel restriction code D/E

14.4. Packing group II

14.5. Environmental hazards No.

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

RID

14.1. UN number UN1133

14.2. UN proper shipping name	ADHESIVES containing flammable liquid (vapour pressure at 50 °C not more than 110 kPa)
14.3. Transport hazard class(es)	
Class	3
Subsidiary hazard	-
Label(s)	3
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

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

IATA

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 hazard	-
14.4. Packing group	II
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.

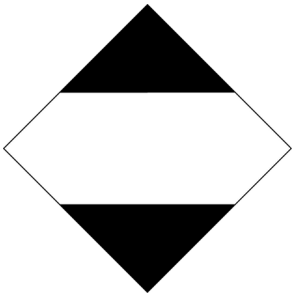
IMDG

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 hazard	-
14.4. Packing group	II
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; RID

ADR; IMDG



IATA

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

Not listed.

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

Not listed.

UFI:

EU: EWA0-40FX-F00M-U43V

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

Not listed.

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.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex I, as amended

Not listed.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex II, 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. Use of this product by young persons under the age of 18 is not allowed in accordance with the Management of Health and Safety at Work Regulations 1999 [SI 1999/3242], as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

France regulations

France INRS Table of Occupational Diseases

1,4-dihydroxybenzene; hydroquinone; quinol (CAS 123-31-9)	Lésions eczématiformes de mécanisme allergique 65
dodecyl methacrylate (CAS 142-90-5)	Lésions eczématiformes de mécanisme allergique 65
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (CAS 80-62-6)	Affections provoquées par le méthacrylate de méthyle 82
monoalkyl or monoaryl or monoalkyaryl esters of methacrylic acid with the exception of those specified elsewhere in this Annex (CAS 2495-27-4)	Lésions eczématiformes de mécanisme allergique 65
Paraffin Wax (CAS 8002-74-2)	Affections provoquées par les huiles et graisses d'origine minérale ou de synthèse 36

Product registration number

Austria	UFI: EWA0-40FX-F00M-U43V
Belgium	UFI: EWA0-40FX-F00M-U43V
Czech Republic	UFI: EWA0-40FX-F00M-U43V
Denmark	UFI: EWA0-40FX-F00M-U43V
European Union	UFI: EWA0-40FX-F00M-U43V
Finland	UFI: EWA0-40FX-F00M-U43V
France	UFI: EWA0-40FX-F00M-U43V
Germany	UFI: EWA0-40FX-F00M-U43V
Greece	UFI: EWA0-40FX-F00M-U43V
Hungary	UFI: EWA0-40FX-F00M-U43V
Italy	UFI: EWA0-40FX-F00M-U43V
Netherlands	UFI: EWA0-40FX-F00M-U43V
Norway	UFI: EWA0-40FX-F00M-U43V
Poland	UFI: EWA0-40FX-F00M-U43V
Portugal	UFI: EWA0-40FX-F00M-U43V
Slovakia	UFI: EWA0-40FX-F00M-U43V
Slovenia	UFI: EWA0-40FX-F00M-U43V
Spain	UFI: EWA0-40FX-F00M-U43V
Sweden	UFI: EWA0-40FX-F00M-U43V
Switzerland	UFI: EWA0-40FX-F00M-U43V

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. 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. H319 Causes serious eye irritation. H330 Fatal if inhaled. H331 Toxic if inhaled. H335 May cause respiratory irritation. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects.
Revision information	SECTION 2: Hazards identification: Prevention SECTION 2: Hazards identification: Response Composition / Information on Ingredients: Ingredient Classification SECTION 8: Exposure controls/personal protection: Eye/face protection SECTION 8: Exposure controls/personal protection: Respiratory protection SECTION 8: Exposure controls/personal protection: PPE Symbols SECTION 11: Toxicological information: Acute toxicity
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.