

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

1.1. Product identifier

Trade name or designation of the mixture EPOXY PRIMER - GREY

Registration number -

Synonyms None.

Product code MP-480-QT

Issue date 24-April-2015

Version number 01

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

Identified uses Automotive Refinish Primer

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name Quest Automotive Products

Address 600 Nova Drive SE
Massillon, OH 44646
United States

Division Massillon

Telephone General Assistance (330) 830-6000

e-mail rpandrus@quest-ap.com

Contact person Not available.

1.4. Emergency telephone number CHEMTREC (800) 424-9300

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 Directive 67/548/EEC or 1999/45/EC as amended

Classification F;R11

The full text for all R-phrases is displayed in section 16.

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

Physical hazards

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

Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Carcinogenicity	Category 2	H351 - Suspected of causing cancer.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.

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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Hazard summary

Physical hazards Highly flammable.

Health hazards Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects.

Environmental hazards Not classified for hazards to the environment.

Specific hazards Prolonged exposure may cause chronic effects.

Main symptoms

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

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

Contains: 2-Butanone, Carbon Black, Ethyl benzene, Isobutyl acetate, Isopropanol, Titanium dioxide, Xylene

Hazard pictograms**Signal word**

Danger

Hazard statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements**Prevention**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing mist or vapour.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face 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.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER/doctor if you feel unwell.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use appropriate media to extinguish.

Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Supplemental label information 95,37 % of the mixture consists of component(s) of unknown acute inhalation toxicity. 94,94 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Titanium dioxide	20 - < 30	13463-67-7 236-675-5	-	-	

Classification: **DSD:** -
CLP: Carc. 2;H351

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Isobutyl acetate	10 - < 20	110-19-0 203-745-1	-	607-026-00-7	
Classification:	DSD: F;R11, R66-67				C
	CLP: -				C
2-Butanone	5 - < 10	78-93-3 201-159-0	-	606-002-00-3	#
Classification:	DSD: F;R11, Xi;R36, R66-67				
	CLP: -				
Isopropanol	5 - < 10	67-63-0 200-661-7	-	603-117-00-0	
Classification:	DSD: F;R11, Xi;R36, R67				
	CLP: -				
1-Methoxy-2-propyl acetate	3 - < 5	108-65-6 203-603-9	-	607-195-00-7	#
Classification:	DSD: R10				
	CLP: Flam. Liq. 3;H226				
Xylene	3 - < 5	1330-20-7 215-535-7	-	601-022-00-9	#
Classification:	DSD: R10, Xn;R20/21, Xi;R38				C
	CLP: Flam. Liq. 3;H226, Acute Tox. 4;H312, Skin Irrit. 2;H315, Acute Tox. 4;H332, Aquatic Chronic 2;H411				C
Ethyl benzene	< 1	100-41-4 202-849-4	-	601-023-00-4	#
Classification:	DSD: F;R11, Xn;R20				
	CLP: Flam. Liq. 2;H225, Asp. Tox. 1;H304, Acute Tox. 4;H332, Carc. 2;H351, STOT RE 2;H373, Aquatic Chronic 2;H411				
Carbon Black	< 0,2	1333-86-4 215-609-9	-	-	
Classification:	DSD: -				
	CLP: -				

Other components below reportable levels 30 - < 40

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

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

Composition comments The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General information Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. 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 CENTRE or doctor/physician if you feel unwell.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.

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	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
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 vapour.
5.1. Extinguishing media	
Suitable extinguishing media	Alcohol resistant foam. Water fog. 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	Vapours may form explosive mixtures with air. Vapours 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	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapours and spray mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.
For emergency responders	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.
6.3. Methods and material for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil etc) away from spilled material. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. 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. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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 inhalation of vapours and spray mists. Avoid contact with eyes. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
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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 original 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).

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

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

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	Ceiling	550 mg/m3	
		100 ppm	
	MAK	275 mg/m3	
2-Butanone (CAS 78-93-3)		50 ppm	
	MAK	295 mg/m3	
	STEL	100 ppm	
Ethyl benzene (CAS 100-41-4)		590 mg/m3	
	Ceiling	200 ppm	
		880 mg/m3	
Isobutyl acetate (CAS 110-19-0)		200 ppm	
	MAK	440 mg/m3	
		100 ppm	
Isopropanol (CAS 67-63-0)	Ceiling	480 mg/m3	
		100 ppm	
	MAK	480 mg/m3	
Silicon dioxide (CAS 7631-86-9)		100 ppm	
	MAK	500 mg/m3	
	STEL	200 ppm	
Titanium dioxide (CAS 13463-67-7)		2000 mg/m3	
	MAK	800 ppm	
		4 mg/m3	Inhalable fraction.
Xylene (CAS 1330-20-7)	MAK	5 mg/m3	Respirable dust.
	STEL	10 mg/m3	Respirable dust.
		221 mg/m3	
		50 ppm	
	STEL	442 mg/m3	
		100 ppm	

Belgium. Exposure Limit Values.

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3
		100 ppm
	TWA	275 mg/m3
2-Butanone (CAS 78-93-3)		50 ppm
	STEL	900 mg/m3
	TWA	300 ppm
Carbon Black (CAS 1333-86-4)		600 mg/m3
	TWA	200 ppm
		3,5 mg/m3
Ethyl benzene (CAS 100-41-4)	STEL	551 mg/m3
		125 ppm
	TWA	442 mg/m3
Isobutyl acetate (CAS 110-19-0)		100 ppm
	TWA	723 mg/m3
		150 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3 400 ppm
	TWA	500 mg/m3 200 ppm
Silicon dioxide (CAS 7631-86-9)	TWA	10 mg/m3
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3
Xylene (CAS 1330-20-7)	STEL	442 mg/m3 100 ppm
	TWA	221 mg/m3 50 ppm

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3	
	TWA	100 ppm 275 mg/m3 50 ppm	
2-Butanone (CAS 78-93-3)	STEL	885 mg/m3	
	TWA	590 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	545 mg/m3	
	TWA	435 mg/m3	
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m3	
	TWA	980 mg/m3	
Silicon dioxide (CAS 7631-86-9)	TWA	10 mg/m3	Inhalable fraction.
		0,07 mg/m3	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	Respirable dust.
Xylene (CAS 1330-20-7)	STEL	442 mg/m3 100 ppm	
	TWA	221 mg/m3 50 ppm	

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	MAC	275 mg/m3	
	STEL	50 ppm 550 mg/m3 100 ppm	
2-Butanone (CAS 78-93-3)	MAC	600 mg/m3 200 ppm	
	STEL	900 mg/m3 300 ppm	
Carbon Black (CAS 1333-86-4)	MAC	3,5 mg/m3	
	STEL	7 mg/m3	
Ethyl benzene (CAS 100-41-4)	MAC	442 mg/m3	
	STEL	100 ppm 884 mg/m3 200 ppm	
Isobutyl acetate (CAS 110-19-0)	MAC	724 mg/m3	
	STEL	150 ppm 903 mg/m3 187 ppm	
Isopropanol (CAS 67-63-0)	MAC	999 mg/m3 400 ppm	
	STEL	1250 mg/m3 500 ppm	

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	MAC	6 mg/m3	Total dust.
Titanium dioxide (CAS 13463-67-7)	STEL	2,4 mg/m3 4 mg/m3	Respirable dust. Respirable dust.
Xylene (CAS 1330-20-7)	MAC	10 mg/m3 221 mg/m3 50 ppm	Total dust.
	STEL	442 mg/m3 100 ppm	

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

Components	Type	Value	
Carbon Black (CAS 1333-86-4)	TWA	3,5 mg/m3	
Isopropanol (CAS 67-63-0)	TWA	980 mg/m3 400 ppm	
Silicon dioxide (CAS 7631-86-9)	TWA	2 mg/m3	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Czech Republic. OELs. Government Decree 361

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	Ceiling	550 mg/m3	
	TWA	270 mg/m3	
2-Butanone (CAS 78-93-3)	Ceiling	900 mg/m3	
	TWA	600 mg/m3	
Carbon Black (CAS 1333-86-4)	TWA	2 mg/m3	Dust.
Ethyl benzene (CAS 100-41-4)	Ceiling	500 mg/m3	
	TWA	200 mg/m3	
Isobutyl acetate (CAS 110-19-0)	Ceiling	1200 mg/m3	
	TWA	950 mg/m3	
Isopropanol (CAS 67-63-0)	Ceiling	1000 mg/m3	
	TWA	500 mg/m3	
Silicon dioxide (CAS 7631-86-9)	TWA	4 mg/m3	Dust.
Xylene (CAS 1330-20-7)	Ceiling	400 mg/m3	
	TWA	200 mg/m3	

Denmark. Exposure Limit Values

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	TLV	275 mg/m3	
		50 ppm	
2-Butanone (CAS 78-93-3)	TLV	145 mg/m3 50 ppm	
Calcium silicate, mineral form (CAS 13983-17-0)	TLV	1 fibers/cm3	Fiber.
Carbon Black (CAS 1333-86-4)	TLV	3,5 mg/m3	
Ethyl benzene (CAS 100-41-4)	TLV	217 mg/m3	
		50 ppm	
Isobutyl acetate (CAS 110-19-0)	TLV	710 mg/m3	
		150 ppm	
Isopropanol (CAS 67-63-0)	TLV	490 mg/m3 200 ppm	
Titanium dioxide (CAS 13463-67-7)	TLV	6 mg/m3	
Xylene (CAS 1330-20-7)	TLV	109 mg/m3	

**Denmark. Exposure Limit Values
Components**

Type

Value

Form

25 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components

Type

Value

Form

1-Methoxy-2-propyl acetate
(CAS 108-65-6)

STEL

550 mg/m3

TWA

100 ppm
275 mg/m3
50 ppm

2-Butanone (CAS 78-93-3)

STEL

900 mg/m3
300 ppm

TWA

600 mg/m3
200 ppm

Ethyl benzene (CAS
100-41-4)

STEL

884 mg/m3

TWA

200 ppm
442 mg/m3

Isobutyl acetate (CAS
110-19-0)

STEL

100 ppm
700 mg/m3

TWA

150 ppm
500 mg/m3

Isopropanol (CAS 67-63-0)

STEL

100 ppm
600 mg/m3

TWA

250 ppm
350 mg/m3

Silicon dioxide (CAS
7631-86-9)

TWA

150 ppm
2 mg/m3

Respirable dust.

Titanium dioxide (CAS
13463-67-7)

TWA

5 mg/m3

Xylene (CAS 1330-20-7)

STEL

450 mg/m3

TWA

100 ppm
200 mg/m3
50 ppm

**Finland. Workplace Exposure Limits
Components**

Type

Value

Form

1-Methoxy-2-propyl acetate
(CAS 108-65-6)

STEL

550 mg/m3

TWA

100 ppm
270 mg/m3

2-Butanone (CAS 78-93-3)

STEL

50 ppm
300 mg/m3

Carbon Black (CAS
1333-86-4)

STEL

100 ppm
7 mg/m3

diboron calcium tetraoxide
(CAS 13701-64-9)

TWA

3,5 mg/m3
0,5 mg/m3

Ethyl benzene (CAS
100-41-4)

STEL

880 mg/m3

TWA

200 ppm
220 mg/m3

Isobutyl acetate (CAS
110-19-0)

STEL

50 ppm
960 mg/m3

TWA

200 ppm
720 mg/m3

Isopropanol (CAS 67-63-0)

STEL

150 ppm
620 mg/m3

TWA

250 ppm
500 mg/m3
200 ppm

Finland. Workplace Exposure Limits

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	Dust.
Xylene (CAS 1330-20-7)	STEL	440 mg/m3	
		100 ppm	
	TWA	220 mg/m3	
		50 ppm	

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

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	VLE	550 mg/m3
		110 ppm
	VME	275 mg/m3
		50 ppm
2-Butanone (CAS 78-93-3)	VLE	900 mg/m3
		300 ppm
	VME	600 mg/m3
		200 ppm
Carbon Black (CAS 1333-86-4)	VME	3,5 mg/m3
Ethyl benzene (CAS 100-41-4)	VLE	442 mg/m3
		100 ppm
	VME	88,4 mg/m3
		20 ppm
Isobutyl acetate (CAS 110-19-0)	VLE	940 mg/m3
		200 ppm
	VME	710 mg/m3
		150 ppm
Isopropanol (CAS 67-63-0)	VLE	980 mg/m3
		400 ppm
Titanium dioxide (CAS 13463-67-7)	VME	10 mg/m3
Xylene (CAS 1330-20-7)	VLE	442 mg/m3
		100 ppm
	VME	221 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)

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	TWA	270 mg/m3
		50 ppm
2-Butanone (CAS 78-93-3)	TWA	600 mg/m3
		200 ppm
Ethyl benzene (CAS 100-41-4)	TWA	88 mg/m3
		20 ppm
Isobutyl acetate (CAS 110-19-0)	TWA	480 mg/m3
		100 ppm
Isopropanol (CAS 67-63-0)	TWA	500 mg/m3
		200 ppm
Xylene (CAS 1330-20-7)	TWA	440 mg/m3
		100 ppm

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

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	AGW	270 mg/m3	
		50 ppm	
2-Butanone (CAS 78-93-3)	AGW	600 mg/m3	
		200 ppm	

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

Components	Type	Value	Form
Ethyl benzene (CAS 100-41-4)	AGW	88 mg/m3	
		20 ppm	
Isobutyl acetate (CAS 110-19-0)	AGW	300 mg/m3	
		62 ppm	
Isopropanol (CAS 67-63-0)	AGW	500 mg/m3	
		200 ppm	
Silicon dioxide (CAS 7631-86-9)	AGW	4 mg/m3	Inhalable fraction.
Titanium dioxide (CAS 13463-67-7)	AGW	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.
Xylene (CAS 1330-20-7)	AGW	440 mg/m3	
		100 ppm	

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3	
		100 ppm	
	TWA	275 mg/m3	
		50 ppm	
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	600 mg/m3	
		200 ppm	
Carbon Black (CAS 1333-86-4)	STEL	7 mg/m3	
		3,5 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	545 mg/m3	
		125 ppm	
	TWA	435 mg/m3	
		100 ppm	
Isobutyl acetate (CAS 110-19-0)	STEL	950 mg/m3	
		200 ppm	
	TWA	950 mg/m3	
		200 ppm	
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m3	
		500 ppm	
	TWA	980 mg/m3	
		400 ppm	
Titanium dioxide (CAS 13463-67-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Inhalable
Xylene (CAS 1330-20-7)	STEL	650 mg/m3	
		150 ppm	
	TWA	435 mg/m3	
		100 ppm	

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3
	TWA	275 mg/m3
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3
	TWA	600 mg/m3
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	442 mg/m3
Isopropanol (CAS 67-63-0)	STEL	2000 mg/m3
	TWA	500 mg/m3
Xylene (CAS 1330-20-7)	STEL	442 mg/m3

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
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TWA 221 mg/m3

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3	
		100 ppm	
	TWA	275 mg/m3	
		50 ppm	
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	145 mg/m3	
		50 ppm	
Calcium silicate, mineral form (CAS 13983-17-0)	TWA	1 fibers/cm3	Particulate.
Carbon Black (CAS 1333-86-4)	TWA	3,5 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3	
		200 ppm	
	TWA	200 mg/m3	
		50 ppm	
Isobutyl acetate (CAS 110-19-0)	TWA	700 mg/m3	
		150 ppm	
Isopropanol (CAS 67-63-0)	TWA	490 mg/m3	
		200 ppm	
Titanium dioxide (CAS 13463-67-7)	TWA	6 mg/m3	
Xylene (CAS 1330-20-7)	STEL	442 mg/m3	
		100 ppm	
	TWA	109 mg/m3	
		25 ppm	

Ireland. Occupational Exposure Limits

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3	
		100 ppm	
	TWA	275 mg/m3	
		50 ppm	
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	600 mg/m3	
		200 ppm	
Carbon Black (CAS 1333-86-4)	STEL	7 mg/m3	
	TWA	3,5 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3	
		200 ppm	
	TWA	442 mg/m3	
		100 ppm	
Isobutyl acetate (CAS 110-19-0)	STEL	875 mg/m3	
		187 ppm	
	TWA	700 mg/m3	
		150 ppm	
Isopropanol (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	
Silicon dioxide (CAS 7631-86-9)	TWA	6 mg/m3	Total inhalable dust.
		2,4 mg/m3	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	TWA	4 mg/m3	Respirable dust.

Ireland. Occupational Exposure Limits Components

Components	Type	Value	Form
Xylene (CAS 1330-20-7)	STEL	10 mg/m3	Total inhalable dust.
		442 mg/m3	
	TWA	100 ppm	
		221 mg/m3 50 ppm	

Italy. Occupational Exposure Limits Components

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3	Inhalable fraction.
	TWA	100 ppm	
		275 mg/m3	
		50 ppm	
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3	
	TWA	300 ppm	
		600 mg/m3	
		200 ppm	
Carbon Black (CAS 1333-86-4)	TWA	3 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3	
	TWA	200 ppm	
		442 mg/m3	
		100 ppm	
Isobutyl acetate (CAS 110-19-0)	TWA	150 ppm	
Isopropanol (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	
Xylene (CAS 1330-20-7)	STEL	442 mg/m3	
	TWA	100 ppm	
		221 mg/m3 50 ppm	

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3
	TWA	100 ppm
		275 mg/m3
		50 ppm
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3
	TWA	300 ppm
		200 mg/m3
		67 ppm
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm
		442 mg/m3
		100 ppm
Isopropanol (CAS 67-63-0)	STEL	600 mg/m3
	TWA	350 mg/m3
Silicon dioxide (CAS 7631-86-9)	TWA	1 mg/m3
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3
Xylene (CAS 1330-20-7)	STEL	442 mg/m3
	TWA	100 ppm
		221 mg/m3 50 ppm

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	400 mg/m3
		75 ppm
	TWA	250 mg/m3
		50 ppm
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3
		300 ppm
	TWA	600 mg/m3
		200 ppm
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
Isobutyl acetate (CAS 110-19-0)	STEL	700 mg/m3
		150 ppm
	TWA	500 mg/m3
		100 ppm
Isopropanol (CAS 67-63-0)	STEL	600 mg/m3
		250 ppm
	TWA	350 mg/m3
		150 ppm
Titanium dioxide (CAS 13463-67-7)	TWA	5 mg/m3
Xylene (CAS 1330-20-7)	STEL	450 mg/m3
		100 ppm
	TWA	200 mg/m3
		50 ppm

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3
		100 ppm
	TWA	275 mg/m3
		50 ppm
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3
		300 ppm
	TWA	600 mg/m3
		200 ppm
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
Xylene (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3
		100 ppm
	TWA	275 mg/m3
		50 ppm
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3
		300 ppm
	TWA	600 mg/m3
		200 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Components	Type	Value
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
Xylene (CAS 1330-20-7)		100 ppm
	STEL	442 mg/m3
	TWA	221 mg/m3
		50 ppm

Netherlands. OELs (binding)

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	TWA	550 mg/m3
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3
	TWA	590 mg/m3
Ethyl benzene (CAS 100-41-4)	STEL	430 mg/m3
	TWA	215 mg/m3
Xylene (CAS 1330-20-7)	STEL	442 mg/m3
	TWA	210 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	TLV	270 mg/m3	
		50 ppm	
2-Butanone (CAS 78-93-3)	TLV	220 mg/m3	
		75 ppm	
Carbon Black (CAS 1333-86-4)	TLV	3,5 mg/m3	
Ethyl benzene (CAS 100-41-4)	TLV	20 mg/m3	
		5 ppm	
Isobutyl acetate (CAS 110-19-0)	TLV	355 mg/m3	
		75 ppm	
Isopropanol (CAS 67-63-0)	TLV	245 mg/m3	
		100 ppm	
Silicon dioxide (CAS 7631-86-9)	TLV	1,5 mg/m3	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	TLV	5 mg/m3	
Xylene (CAS 1330-20-7)	TLV	108 mg/m3	
		25 ppm	

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	520 mg/m3	
	TWA	260 mg/m3	
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3	
	TWA	450 mg/m3	
Carbon Black (CAS 1333-86-4)	TWA	4 mg/m3	Total dust.
Ethyl benzene (CAS 100-41-4)	STEL	400 mg/m3	
	TWA	200 mg/m3	
Isobutyl acetate (CAS 110-19-0)	STEL	400 mg/m3	
	TWA	200 mg/m3	
Isopropanol (CAS 67-63-0)	STEL	1200 mg/m3	
	TWA	900 mg/m3	

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	2 mg/m3	Respirable dust.
		10 mg/m3	Total dust.
Titanium dioxide (CAS 13463-67-7)	STEL	30 mg/m3	Total dust.
		10 mg/m3	Total dust.
Xylene (CAS 1330-20-7)	TWA	100 mg/m3	
	TWA	100 mg/m3	

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

Components	Type	Value	
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3	
		100 ppm	
2-Butanone (CAS 78-93-3)	TWA	275 mg/m3	
		50 ppm	
	STEL	900 mg/m3	
		300 ppm	
Ethyl benzene (CAS 100-41-4)	TWA	600 mg/m3	
		200 ppm	
	STEL	884 mg/m3	
		200 ppm	
Xylene (CAS 1330-20-7)	TWA	442 mg/m3	
		100 ppm	
	STEL	442 mg/m3	
		100 ppm	
	TWA	221 mg/m3	
		50 ppm	

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

Components	Type	Value	Form
2-Butanone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
Carbon Black (CAS 1333-86-4)	TWA	3,5 mg/m3	Fume.
Ethyl benzene (CAS 100-41-4)	STEL	125 ppm	
	TWA	100 ppm	
Isobutyl acetate (CAS 110-19-0)	TWA	150 ppm	
	TWA	150 ppm	
Isopropanol (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	
Xylene (CAS 1330-20-7)	STEL	150 ppm	
	TWA	100 ppm	

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value	
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3	
		100 ppm	
2-Butanone (CAS 78-93-3)	TWA	275 mg/m3	
		50 ppm	
	STEL	900 mg/m3	
		300 ppm	
Ethyl benzene (CAS 100-41-4)	TWA	600 mg/m3	
		200 ppm	
	STEL	884 mg/m3	
		200 ppm	
	TWA	442 mg/m3	
		100 ppm	
		100 ppm	

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
Isobutyl acetate (CAS 110-19-0)	STEL	950 mg/m3
		200 ppm
	TWA	715 mg/m3 150 ppm
Isopropanol (CAS 67-63-0)	STEL	500 mg/m3 203 ppm
	TWA	200 mg/m3 81 ppm
		15 mg/m3
Titanium dioxide (CAS 13463-67-7)	STEL	10 mg/m3
Xylene (CAS 1330-20-7)	STEL	442 mg/m3 100 ppm
		221 mg/m3 50 ppm
	TWA	

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3
		100 ppm
	TWA	275 mg/m3 50 ppm
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3 300 ppm
	TWA	600 mg/m3 200 ppm
		2 mg/m3
Carbon Black (CAS 1333-86-4)	TWA	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3 100 ppm
Isobutyl acetate (CAS 110-19-0)	STEL	700 mg/m3
		150 ppm
	TWA	500 mg/m3 100 ppm
Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3 400 ppm
	TWA	500 mg/m3 200 ppm
		0,3 mg/m3
Silicon dioxide (CAS 7631-86-9)	TWA	
Titanium dioxide (CAS 13463-67-7)	TWA	5 mg/m3
Xylene (CAS 1330-20-7)	STEL	442 mg/m3 100 ppm
		221 mg/m3 50 ppm
	TWA	

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

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	TWA	275 mg/m3	
		50 ppm	
2-Butanone (CAS 78-93-3)	TWA	600 mg/m3 200 ppm	
		442 mg/m3	
Ethyl benzene (CAS 100-41-4)	TWA	100 ppm	

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

Components	Type	Value	Form
Isobutyl acetate (CAS 110-19-0)	TWA	480 mg/m3	
		100 ppm	
Isopropanol (CAS 67-63-0)	TWA	500 mg/m3	
		200 ppm	
Silicon dioxide (CAS 7631-86-9)	TWA	4 mg/m3	Inhalable fraction.
Xylene (CAS 1330-20-7)	TWA	221 mg/m3	
		50 ppm	

Spain. Occupational Exposure Limits

Components	Type	Value	
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3	
		100 ppm	
	TWA	275 mg/m3	
		50 ppm	
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3	
		300 ppm	
	TWA	600 mg/m3	
		200 ppm	
Carbon Black (CAS 1333-86-4)	TWA	3,5 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3	
		200 ppm	
	TWA	441 mg/m3	
		100 ppm	
Isobutyl acetate (CAS 110-19-0)	TWA	724 mg/m3	
		150 ppm	
Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3	
		400 ppm	
	TWA	500 mg/m3	
		200 ppm	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	
Xylene (CAS 1330-20-7)	STEL	442 mg/m3	
		100 ppm	
	TWA	221 mg/m3	
		50 ppm	

Sweden. Occupational Exposure Limit Values

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	400 mg/m3	
		75 ppm	
	TWA	250 mg/m3	
		50 ppm	
2-Butanone (CAS 78-93-3)	STEL	300 mg/m3	
		100 ppm	
	TWA	150 mg/m3	
		50 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	450 mg/m3	
		100 ppm	
	TWA	200 mg/m3	
		50 ppm	
Isobutyl acetate (CAS 110-19-0)	STEL	700 mg/m3	
		150 ppm	
	TWA	500 mg/m3	
		100 ppm	
Isopropanol (CAS 67-63-0)	STEL	600 mg/m3	

Sweden. Occupational Exposure Limit Values

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7) Xylene (CAS 1330-20-7)	TWA	250 ppm 350 mg/m3 150 ppm	Total dust.
	TWA	5 mg/m3	
	STEL	442 mg/m3	
	TWA	100 ppm 221 mg/m3 50 ppm	

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	275 mg/m3	Respirable dust.
2-Butanone (CAS 78-93-3)	TWA	50 ppm 275 mg/m3 50 ppm	
	STEL	590 mg/m3 200 ppm	
	TWA	590 mg/m3 200 ppm	
	STEL	220 mg/m3	
Ethyl benzene (CAS 100-41-4)	TWA	50 ppm 220 mg/m3	
	STEL	50 ppm 960 mg/m3	
Isobutyl acetate (CAS 110-19-0)	TWA	200 ppm 480 mg/m3 100 ppm	
	STEL	1000 mg/m3 400 ppm	
	TWA	500 mg/m3 200 ppm	
	STEL	3 mg/m3	
Titanium dioxide (CAS 13463-67-7) Xylene (CAS 1330-20-7)	TWA	870 mg/m3 200 ppm 435 mg/m3 100 ppm	
	STEL		
	TWA		
	STEL		

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	548 mg/m3	Respirable dust.
2-Butanone (CAS 78-93-3)	TWA	100 ppm 274 mg/m3 50 ppm	
	STEL	899 mg/m3 300 ppm	
	TWA	600 mg/m3 200 ppm	
	STEL	7 mg/m3	
Carbon Black (CAS 1333-86-4)	TWA	3,5 mg/m3	
	STEL	552 mg/m3	
Ethyl benzene (CAS 100-41-4)	TWA	125 ppm 441 mg/m3 100 ppm	
	STEL	903 mg/m3	
	TWA	187 ppm	
	STEL		

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Isopropanol (CAS 67-63-0)	TWA	724 mg/m3	
		150 ppm	
	STEL	1250 mg/m3	
		500 ppm	
Silicon dioxide (CAS 7631-86-9)	TWA	999 mg/m3	
		400 ppm	
	TWA	6 mg/m3	Inhalable dust.
		2,4 mg/m3	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	TWA	4 mg/m3	Respirable.
		10 mg/m3	
	STEL	441 mg/m3	Inhalable
		100 ppm	
Xylene (CAS 1330-20-7)	TWA	220 mg/m3	
		50 ppm	

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

Components	Type	Value
1-Methoxy-2-propyl acetate (CAS 108-65-6)	STEL	550 mg/m3
		100 ppm
	TWA	275 mg/m3
		50 ppm
2-Butanone (CAS 78-93-3)	STEL	900 mg/m3
		300 ppm
	TWA	600 mg/m3
		200 ppm
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
Xylene (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Biological limit values
Czech Republic. Limit Values for Indicators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.

Components	Value	Determinant	Specimen	Sampling time
Ethyl benzene (CAS 100-41-4)	1100 µmol/mmol	Mandelic acid	Creatinine in urine	*
	1500 mg/g	Mandelic acid	Creatinine in urine	*
Xylene (CAS 1330-20-7)	820 µmol/mmol	Methylhippuric acids	Creatinine in urine	*
	1400 mg/g	Methylhippuric acids	Creatinine in urine	*

* - For sampling details, please see the source document.

Finland. HTP-arvot, App 2., Biological Limit Values, (BRA/BGV) , Social Affairs and Ministry of Health

Components	Value	Determinant	Specimen	Sampling time
Ethyl benzene (CAS 100-41-4)	5,2 mmol/l	Mandelic acid	Urine	*
Xylene (CAS 1330-20-7)	5 mmol/l	Methylhippuric acids	Urine	*

* - For sampling details, please see the source document.

France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)

Components	Value	Determinant	Specimen	Sampling time
2-Butanone (CAS 78-93-3)	2 mg/l	Méthyléthylcétone	Urine	*

France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065))

Components	Value	Determinant	Specimen	Sampling time
Ethyl benzene (CAS 100-41-4)	1500 mg/g	Acide mandélique	Creatinine in urine	*
Xylene (CAS 1330-20-7)	1500 mg/g	Acides méthylhippuriques	Creatinine in urine	*

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling time
2-Butanone (CAS 78-93-3)	5 mg/l	2-Butanon	Urine	*
Ethyl benzene (CAS 100-41-4)	300 mg/l	Mandelsäure plus Phenylglyoxylsäure	Urine	*
Isopropanol (CAS 67-63-0)	25 mg/l	Aceton	Blood	*
	25 mg/l	Aceton	Urine	*
Xylene (CAS 1330-20-7)	2000 mg/l	Methylhippur-(Tolur-) säure (alle Isomere)	Urine	*
	1,5 mg/l	Xylol	Blood	*

* - For sampling details, please see the source document.

Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices

Components	Value	Determinant	Specimen	Sampling time
Ethyl benzene (CAS 100-41-4)	1500 mg/g	mandelic acid	Creatinine in urine	*
	1110 µmol/mmol	mandelic acid	Creatinine in urine	*
Xylene (CAS 1330-20-7)	1500 mg/g	methyl hippuric acids	Creatinine in urine	*
	860 µmol/mmol	methyl hippuric acids	Creatinine in urine	*

* - For sampling details, please see the source document.

Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

Components	Value	Determinant	Specimen	Sampling time
Ethyl benzene (CAS 100-41-4)	8,03 mg/g	2-ethylphenol	Creatinine in urine	*
	12 mg/l	2-ethylphenol	Urine	*
Xylene (CAS 1330-20-7)	1334 mg/g	Methylhippuric acids	Creatinine in urine	*
	2000 mg/l	Methylhippuric acids	Urine	*
	1,5 mg/l	Xylene	Blood	*

* - For sampling details, please see the source document.

Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

Components	Value	Determinant	Specimen	Sampling time
2-Butanone (CAS 78-93-3)	2 mg/l	Metiletilcetona	Urine	*
Ethyl benzene (CAS 100-41-4)	700 mg/g	Suma del ácido mandélico y el ácido fenilgloxílico	Creatinine in urine	*
Isopropanol (CAS 67-63-0)	40 mg/l	Acetona	Urine	*
Xylene (CAS 1330-20-7)	1 g/g	Ácidos metilhipúricos	Creatinine in urine	*

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Determinant	Specimen	Sampling time
2-Butanone (CAS 78-93-3)	5 mg/l	2-Butanon (MEK)	Urine	*

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Determinant	Specimen	Sampling time
Ethyl benzene (CAS 100-41-4)	800 mg/l	Mandelsäure plus Phenylglyoxylsäure	Urine	*
Isopropanol (CAS 67-63-0)	25 mg/l	Aceton	Blood	*
	25 mg/l	Aceton	Urine	*
Xylene (CAS 1330-20-7)	1,5 g/g	Methyl-Hippursäure	Creatinine in urine	*
	1,5 mg/l	Xylol	Blood	*

* - For sampling details, please see the source document.

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Components	Value	Determinant	Specimen	Sampling time
2-Butanone (CAS 78-93-3)	70 umol/l	Butan-2-one	Urine	*
Xylene (CAS 1330-20-7)	650 mmol/mol	Methyl hippuric acid	Creatinine in urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

Exposure guidelines**EU Exposure Limit Values: Skin designation**

1-Methoxy-2-propyl acetate (CAS 108-65-6)	Can be absorbed through the skin.
Ethyl benzene (CAS 100-41-4)	Can be absorbed through the skin.
Xylene (CAS 1330-20-7)	Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) 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. Eye wash fountain and emergency showers are recommended.

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).

Skin protection

- Hand protection Wear protective gloves.

- Other Wear suitable protective 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.

Environmental exposure controls Inform appropriate managerial or supervisory personnel of all environmental releases.

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

Physical state	Liquid.
Form	Liquid.
Colour	Grey Opaque.

Odour Solvent.

Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	-98,8 °C (-145,84 °F) estimated
Initial boiling point and boiling range	79,59 °C (175,26 °F) estimated
Flash point	-9,0 °C (15,8 °F) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1,8 % estimated
Flammability limit - upper (%)	12 % estimated
Vapour pressure	1972,38 hPa estimated
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	399 °C (750,2 °F) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidizing properties	Not available.

9.2. Other information

Density	11,32 lbs/gal
Percent volatile	39,65 %
Specific gravity	1,36
VOC	4,5 lbs/gal Regulatory 4,5 lbs/gal Material 538 g/l Regulatory 538 g/l Material

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 acids. Acids. Strong oxidising agents. Nitrates. Halogens. Ammonia. Amines. Isocyanates. Caustics. Chlorine.
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. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	No adverse effects due to skin contact are expected.
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	Headache. May cause drowsiness and dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

11.1. Information on toxicological effects

Acute toxicity Harmful if inhaled. Narcotic effects.

Components	Species	Test results
2-Butanone (CAS 78-93-3)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 8000 mg/kg
Inhalation		
LC50	Mouse	11000 ppm, 45 Minutes
	Rat	11700 ppm, 4 Hours
Oral		
LD50	Mouse	670 mg/kg
	Rat	2300 - 3500 mg/kg
Carbon Black (CAS 1333-86-4)		
<u>Acute</u>		
Oral		
LD50	Rat	> 8000 mg/kg
Ethyl benzene (CAS 100-41-4)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	17800 mg/kg
Oral		
LD50	Rat	3500 mg/kg
Isobutyl acetate (CAS 110-19-0)		
<u>Acute</u>		
Oral		
LD50	Rabbit	4,8 g/kg
Isopropanol (CAS 67-63-0)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	12800 mg/kg
Oral		
LD50	Mouse	3600 mg/kg
	Rabbit	5,03 g/kg
	Rat	4,7 g/kg
Xylene (CAS 1330-20-7)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 43 g/kg
Inhalation		
LC50	Mouse	3907 mg/l, 6 Hours
	Rat	6350 mg/l, 4 Hours
Oral		
LD50	Mouse	1590 mg/kg
	Rat	3523 - 8600 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Due to partial or complete lack of data the classification is not possible.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitisation	Due to partial or complete lack of data the classification is not possible.
Skin sensitisation	Due to partial or complete lack of data the classification is not possible.
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon Black (CAS 1333-86-4)

2B Possibly carcinogenic to humans.

Ethyl benzene (CAS 100-41-4)

2B Possibly carcinogenic to humans.

Titanium dioxide (CAS 13463-67-7)

2B Possibly carcinogenic to humans.

Xylene (CAS 1330-20-7)

3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity

Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals.

Specific target organ toxicity - single exposure

May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

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

Mixture versus substance information

No information available.

Other information

Not available.

SECTION 12: Ecological information**12.1. Toxicity**

Harmful to aquatic life with long lasting effects.

Components	Species		Test results
2-Butanone (CAS 78-93-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	4025 - 6440 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	> 400 mg/l, 96 hours
Ethyl benzene (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1,37 - 4,4 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	7,5 - 11 mg/l, 96 hours
Isopropanol (CAS 67-63-0)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours
Titanium dioxide (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours
Xylene (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	7,711 - 9,591 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability

No data is available on the degradability of this product.

12.3. Bioaccumulative potential**Partition coefficient****n-octanol/water (log Kow)**

2-Butanone	0,29
Ethyl benzene	3,15
Isobutyl acetate	1,78
Isopropanol	0,05
Xylene	3,12 - 3,2

Bioconcentration factor (BCF)

Not available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

Not available.

12.6. 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.

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	UN1263
14.2. UN proper shipping name	Paint, Paint Related Material
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	-
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	UN1263
14.2. UN proper shipping name	Paint, Paint Related Material
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	-
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	UN1263
14.2. UN proper shipping name	Paint, Paint Related Material
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	-
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	UN1263
14.2. UN proper shipping name	Paint, Paint Related Material
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	-
14.4. Packing group	II
14.5. Environmental hazards	No.
ERG Code	3H

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

Other information

Passenger and cargo aircraft Allowed.

Cargo aircraft only Allowed.

IMDG

14.1. UN number UN1263

14.2. UN proper shipping name Paint, Paint Related Material

14.3. Transport hazard class(es)

Class 3

Subsidiary risk -

14.4. Packing group II

14.5. Environmental hazards

Marine pollutant No.

EmS F-E, S-E

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

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

ADN; ADR; IATA; IMDG; RID



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, as amended

Not listed.

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

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 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.

Authorisations

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

2-Butanone (CAS 78-93-3)
Ethyl benzene (CAS 100-41-4)
Isobutyl acetate (CAS 110-19-0)
Isopropanol (CAS 67-63-0)

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.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended

Not listed.

Other EU regulations

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

1-Methoxy-2-propyl acetate (CAS 108-65-6)
2-Butanone (CAS 78-93-3)
Ethyl benzene (CAS 100-41-4)
Isobutyl acetate (CAS 110-19-0)
Isopropanol (CAS 67-63-0)
Xylene (CAS 1330-20-7)

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended

1-Methoxy-2-propyl acetate (CAS 108-65-6)
2-Butanone (CAS 78-93-3)
Ethyl benzene (CAS 100-41-4)
Isobutyl acetate (CAS 110-19-0)
Isopropanol (CAS 67-63-0)
Xylene (CAS 1330-20-7)

Directive 94/33/EC on the protection of young people at work, as amended

Ethyl benzene (CAS 100-41-4)

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

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. Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

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 or R-phrases and H-statements under Sections 2 to 15

R10 Flammable.
R11 Highly flammable.
R20 Harmful by inhalation.
R20/21 Harmful by inhalation and in contact with skin.
R36 Irritating to eyes.
R38 Irritating to skin.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Revision information

None.

Training information

Follow training instructions when handling this material.

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