

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

### 1.1. Product identifier

Trade name or designation of the mixture	2K URE PRIMER-SURFACER GRAY
Registration number	-
Synonyms	None.
Product code	2820-1
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
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## 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, Xn;R20/21

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, dermal	Category 4	H312 - Harmful in contact with skin.
Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.
Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Carcinogenicity	Category 2	H351 - Suspected of causing cancer.

##### 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

<b>Physical hazards</b>	Highly flammable.
<b>Health hazards</b>	Harmful by inhalation and in contact with skin. Occupational exposure to the substance or mixture may cause adverse health effects.
<b>Environmental hazards</b>	Not classified for hazards to the environment.
<b>Specific hazards</b>	Prolonged exposure may cause chronic effects.
<b>Main symptoms</b>	Skin irritation. May cause redness and pain.

## 2.2. Label elements

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

**Contains:** 4-Methyl-2-pentanone, Carbon Black, Cumene, Ethyl benzene, Styrene, monomer, Titanium dioxide, Xylene

#### Hazard pictograms



**Signal word** Danger

#### Hazard statements

H225 Highly flammable liquid and vapour.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H332 Harmful if inhaled.  
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 vapours.  
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.  
P308 + P313 IF exposed or concerned: Get medical advice/attention.  
P312 Call a POISON CENTER/doctor if you feel unwell.  
P332 + P313 If skin irritation occurs: 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.  
P405 Store locked up.

##### Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Supplemental label information** 61,65 % of the mixture consists of component(s) of unknown acute dermal toxicity. 75,97 % of the mixture consists of component(s) of unknown acute inhalation toxicity. 75,85 % 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	10 - < 20	13463-67-7 236-675-5	-	-	

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

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Xylene	10 - < 20	1330-20-7 215-535-7	-	601-022-00-9	#
<b>Classification:</b>	<b>DSD:</b> R10, Xn;R20/21, Xi;R38				C
	<b>CLP:</b> Flam. Liq. 3;H226, Acute Tox. 4;H312, Skin Irrit. 2;H315, Acute Tox. 4;H332, Aquatic Chronic 2;H411				C
Isobutyl acetate	5 - < 10	110-19-0 203-745-1	-	607-026-00-7	
<b>Classification:</b>	<b>DSD:</b> F;R11, R66-67				C
	<b>CLP:</b> -				C
acetone	3 - < 5	67-64-1 200-662-2	-	606-001-00-8	#
<b>Classification:</b>	<b>DSD:</b> F;R11, Xi;R36, R66-67				
	<b>CLP:</b> -				
Ethyl benzene	3 - < 5	100-41-4 202-849-4	-	601-023-00-4	#
<b>Classification:</b>	<b>DSD:</b> F;R11, Xn;R20				
	<b>CLP:</b> Flam. Liq. 2;H225, Asp. Tox. 1;H304, Acute Tox. 4;H332, Carc. 2;H351, STOT RE 2;H373, Aquatic Chronic 2;H411				
1,2-Dimethylbenzene	< 0,3	95-47-6 202-422-2	-	601-022-00-9	#
<b>Classification:</b>	<b>DSD:</b> R10, Xn;R20/21, Xi;R38				C
	<b>CLP:</b> Flam. Liq. 3;H226, Acute Tox. 4;H312, Skin Irrit. 2;H315, Acute Tox. 4;H332, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				C
4-Methyl-2-pentanone	< 0,2	108-10-1 203-550-1	-	606-004-00-4	#
<b>Classification:</b>	<b>DSD:</b> F;R11, Xn;R20, Xi;R36/37, R66				
	<b>CLP:</b> -				
Carbon Black	< 0,2	1333-86-4 215-609-9	-	-	
<b>Classification:</b>	<b>DSD:</b> -				
	<b>CLP:</b> -				
Cumene	< 0,2	98-82-8 202-704-5	-	601-024-00-X	#
<b>Classification:</b>	<b>DSD:</b> R10, Xn;R65, Xi;R37, N;R51/53				C
	<b>CLP:</b> -				C
Styrene, monomer	< 0,2	100-42-5 202-851-5	-	601-026-00-0	
<b>Classification:</b>	<b>DSD:</b> R10, Xn;R20-48/20, Xi;R36/38-36/37/38				D
	<b>CLP:</b> -				D

Other components below reportable levels 50 - < 60

#### 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. Show this safety data sheet to the doctor in attendance. 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 advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. 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 advice/attention if you feel unwell.

**4.2. Most important symptoms and effects, both acute and delayed** Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain.

**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** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**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. 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, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

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

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in 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
1,2-Dimethybenzene (CAS 95-47-6)	MAK	221 mg/m <sup>3</sup>	
		50 ppm	
	STEL	442 mg/m <sup>3</sup> 100 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	MAK	83 mg/m <sup>3</sup>	
		20 ppm	
	STEL	208 mg/m <sup>3</sup> 50 ppm	
acetone (CAS 67-64-1)	MAK	1200 mg/m <sup>3</sup> 500 ppm	
		4800 mg/m <sup>3</sup>	
	STEL	2000 ppm	
Cumene (CAS 98-82-8)	MAK	100 mg/m <sup>3</sup> 20 ppm	
		250 mg/m <sup>3</sup>	
	STEL	20 ppm	
Ethyl benzene (CAS 100-41-4)	Ceiling	880 mg/m <sup>3</sup>	
		200 ppm	
	MAK	440 mg/m <sup>3</sup> 100 ppm	
Isobutyl acetate (CAS 110-19-0)	Ceiling	480 mg/m <sup>3</sup>	
		100 ppm	
	MAK	480 mg/m <sup>3</sup> 100 ppm	
Styrene, monomer (CAS 100-42-5)	MAK	85 mg/m <sup>3</sup>	
		20 ppm	
	STEL	340 mg/m <sup>3</sup> 80 ppm	
Talc (CAS 14807-96-6)	MAK	2 mg/m <sup>3</sup>	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	MAK	5 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	
	STEL	10 mg/m <sup>3</sup>	Respirable dust.
Xylene (CAS 1330-20-7)	MAK	221 mg/m <sup>3</sup> 50 ppm	
		442 mg/m <sup>3</sup>	
	STEL	442 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
		100 ppm	
<b>Belgium. Exposure Limit Values.</b>			
Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3	
	TWA	100 ppm 221 mg/m3 50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3	
	TWA	50 ppm 83 mg/m3	
acetone (CAS 67-64-1)	STEL	20 ppm 2420 mg/m3 1000 ppm	
	TWA	1210 mg/m3	
Calcium carbonate (CAS 1317-65-3)	TWA	500 ppm 10 mg/m3	
Carbon Black (CAS 1333-86-4)	TWA	3,5 mg/m3	
Cumene (CAS 98-82-8)	STEL	250 mg/m3	
	TWA	50 ppm 100 mg/m3 20 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	551 mg/m3	
	TWA	125 ppm 442 mg/m3 100 ppm	
Isobutyl acetate (CAS 110-19-0)	TWA	723 mg/m3	
Kaolin (CAS 1332-58-7)	TWA	150 ppm 2 mg/m3	Respirable fraction.
Styrene, monomer (CAS 100-42-5)	STEL	216 mg/m3	
Talc (CAS 14807-96-6)	TWA	100 ppm 108 mg/m3 25 ppm	
	TWA	2 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	

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

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3	
	TWA	100 ppm 221 mg/m3 50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	200 mg/m3	
	TWA	50 mg/m3	
acetone (CAS 67-64-1)	STEL	1400 mg/m3	
	TWA	600 mg/m3	
Calcium carbonate (CAS 1317-65-3)	TWA	1 fibers/cm3	Respirable fraction.
		10 mg/m3 10 mg/m3	Inhalable fraction.

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

Components	Type	Value	Form
ceramic material (CAS 66402-68-4)	TWA	6 mg/m <sup>3</sup>	Inhalable fraction.
		3 mg/m <sup>3</sup>	Respirable fraction.
Cumene (CAS 98-82-8)	STEL	250 mg/m <sup>3</sup>	
	TWA	50 ppm 100 mg/m <sup>3</sup> 20 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	545 mg/m <sup>3</sup>	
	TWA	435 mg/m <sup>3</sup>	
Kaolin (CAS 1332-58-7)	TWA	6 mg/m <sup>3</sup>	Inhalable fraction.
		3 mg/m <sup>3</sup>	Respirable fraction.
Styrene, monomer (CAS 100-42-5)	STEL	215 mg/m <sup>3</sup>	
Talc (CAS 14807-96-6)	TWA	85 mg/m <sup>3</sup>	
	TWA	1 fibers/cm <sup>3</sup> 6 mg/m <sup>3</sup>	Respirable fraction. Inhalable fraction.
Titanium dioxide (CAS 13463-67-7)		3 mg/m <sup>3</sup>	Respirable fraction.
	TWA	10 mg/m <sup>3</sup>	Respirable dust.
Xylene (CAS 1330-20-7)	STEL	442 mg/m <sup>3</sup> 100 ppm	
	TWA	221 mg/m <sup>3</sup> 50 ppm	

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

Components	Type	Value	Form
1,2-Dimethylbenzene (CAS 95-47-6)	MAC	221 mg/m <sup>3</sup>	
	STEL	50 ppm 442 mg/m <sup>3</sup> 100 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	MAC	83 mg/m <sup>3</sup>	
	STEL	20 ppm 208 mg/m <sup>3</sup>	
acetone (CAS 67-64-1)	MAC	50 ppm 1210 mg/m <sup>3</sup>	
	STEL	500 ppm 3620 mg/m <sup>3</sup> 1500 ppm	
Calcium carbonate (CAS 1317-65-3)	MAC	4 mg/m <sup>3</sup>	Respirable dust.
Carbon Black (CAS 1333-86-4)		10 mg/m <sup>3</sup>	Total dust.
	MAC	3,5 mg/m <sup>3</sup>	
Cumene (CAS 98-82-8)	STEL	7 mg/m <sup>3</sup>	
	MAC	100 mg/m <sup>3</sup> 20 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	250 mg/m <sup>3</sup> 50 ppm	
	MAC	442 mg/m <sup>3</sup>	
Isobutyl acetate (CAS 110-19-0)		100 ppm	
	STEL	884 mg/m <sup>3</sup> 200 ppm	
Kaolin (CAS 1332-58-7)	MAC	724 mg/m <sup>3</sup>	
	STEL	150 ppm 903 mg/m <sup>3</sup> 187 ppm	
Styrene, monomer (CAS 100-42-5)	MAC	2 mg/m <sup>3</sup>	Respirable dust.
	MAC	430 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
	STEL	100 ppm 1080 mg/m3	
Talc (CAS 14807-96-6)	MAC	250 ppm 1 mg/m3	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	STEL	4 mg/m3	Respirable dust.
		10 mg/m3	Total dust.
Xylene (CAS 1330-20-7)	MAC	221 mg/m3	
	STEL	50 ppm 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	Form
Carbon Black (CAS 1333-86-4)	TWA	3,5 mg/m3	
Cumene (CAS 98-82-8)	TWA	245 mg/m3	
		50 ppm	
Styrene, monomer (CAS 100-42-5)	TWA	210 mg/m3	
		50 ppm	
Talc (CAS 14807-96-6)	TWA	706 part/cm3	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

**Czech Republic. OELs. Government Decree 361**

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	Ceiling	400 mg/m3	
	TWA	200 mg/m3	
4-Methyl-2-pentanone (CAS 108-10-1)	Ceiling	200 mg/m3	
	TWA	80 mg/m3	
acetone (CAS 67-64-1)	Ceiling	1500 mg/m3	
	TWA	800 mg/m3	
Calcium carbonate (CAS 1317-65-3)	TWA	10 mg/m3	Dust.
Carbon Black (CAS 1333-86-4)	TWA	2 mg/m3	Dust.
Cumene (CAS 98-82-8)	Ceiling	250 mg/m3	
	TWA	100 mg/m3	
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	
Styrene, monomer (CAS 100-42-5)	Ceiling	400 mg/m3	
	TWA	100 mg/m3	
Talc (CAS 14807-96-6)	TWA	10 mg/m3	Total dust.
	TWA	10 mg/m3	Respirable dust.
Xylene (CAS 1330-20-7)	Ceiling	400 mg/m3	
	TWA	200 mg/m3	

**Denmark. Exposure Limit Values**

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	TLV	109 mg/m3	
		25 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	TLV	83 mg/m3	
		20 ppm	
acetone (CAS 67-64-1)	TLV	600 mg/m3	
		250 ppm	



**Denmark. Exposure Limit Values**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Carbon Black (CAS 1333-86-4)	TLV	3,5 mg/m3	
Cumene (CAS 98-82-8)	TLV	100 mg/m3 20 ppm	
Ethyl benzene (CAS 100-41-4)	TLV	217 mg/m3 50 ppm	
Isobutyl acetate (CAS 110-19-0)	TLV	710 mg/m3 150 ppm	
Kaolin (CAS 1332-58-7)	TLV	2 mg/m3	Respirable.
Styrene, monomer (CAS 100-42-5)	Ceiling	105 mg/m3 25 ppm	
Titanium dioxide (CAS 13463-67-7)	TLV	6 mg/m3	
Xylene (CAS 1330-20-7)	TLV	109 mg/m3 25 ppm	

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

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
1,2-Dimethylbenzene (CAS 95-47-6)	STEL	450 mg/m3 100 ppm	
	TWA	200 mg/m3 50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3 50 ppm	
	TWA	83 mg/m3 20 ppm	
acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm	
Calcium carbonate (CAS 1317-65-3)	TWA	5 mg/m3	Respirable dust.
Cumene (CAS 98-82-8)	STEL	10 mg/m3 250 mg/m3 50 ppm	
	TWA	100 mg/m3 20 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 100 ppm	
Styrene, monomer (CAS 100-42-5)	STEL	200 mg/m3	
	TWA	50 ppm 90 mg/m3 20 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	

**Finland. Workplace Exposure Limits**

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	440 mg/m3	
	TWA	110 ppm 220 mg/m3 50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	210 mg/m3	
	TWA	50 ppm 80 mg/m3 20 ppm	
acetone (CAS 67-64-1)	STEL	1500 mg/m3 630 ppm	
	TWA	1200 mg/m3 500 ppm	
Calcium carbonate (CAS 1317-65-3)	TWA	10 mg/m3	Dust.
Carbon Black (CAS 1333-86-4)	STEL	7 mg/m3	
Cumene (CAS 98-82-8)	TWA	3,5 mg/m3	
	STEL	250 mg/m3 50 ppm	
Ethyl benzene (CAS 100-41-4)	TWA	100 mg/m3 20 ppm	
	STEL	880 mg/m3	
Isobutyl acetate (CAS 110-19-0)	TWA	200 ppm 220 mg/m3 50 ppm	
	STEL	960 mg/m3	
Kaolin (CAS 1332-58-7)	TWA	200 ppm 720 mg/m3 150 ppm	Respirable.
	STEL	2 mg/m3 430 mg/m3	
Styrene, monomer (CAS 100-42-5)	TWA	100 ppm 86 mg/m3 20 ppm	
	STEL	2 ppm 1 ppm	Inhalable dust. Respirable.
Talc (CAS 14807-96-6)	TWA	10 mg/m3	Dust.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	
	STEL	440 mg/m3 100 ppm	
Xylene (CAS 1330-20-7)	TWA	220 mg/m3 50 ppm	

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

Components	Type	Value
1,2-Dimethybenzene (CAS 95-47-6)	VLE	442 mg/m3
	VME	100 ppm 221 mg/m3 50 ppm
4-Methyl-2-pentanone (CAS 108-10-1)	VLE	208 mg/m3
	VME	50 ppm 83 mg/m3 20 ppm
acetone (CAS 67-64-1)	VLE	2420 mg/m3 1000 ppm
	VME	1210 mg/m3 500 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
Calcium carbonate (CAS 1317-65-3)	VME	10 mg/m3
Carbon Black (CAS 1333-86-4)	VME	3,5 mg/m3
Cumene (CAS 98-82-8)	VLE	250 mg/m3
		50 ppm
	VME	100 mg/m3
Ethyl benzene (CAS 100-41-4)		20 ppm
	VLE	442 mg/m3
		100 ppm
Isobutyl acetate (CAS 110-19-0)	VME	88,4 mg/m3
		20 ppm
	VLE	940 mg/m3
Kaolin (CAS 1332-58-7)		200 ppm
	VME	710 mg/m3
		150 ppm
Styrene, monomer (CAS 100-42-5)	VME	10 mg/m3
	VME	215 mg/m3
		50 ppm
Titanium dioxide (CAS 13463-67-7)	VME	10 mg/m3
	VLE	442 mg/m3
Xylene (CAS 1330-20-7)		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)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
1,2-Dimethybenzene (CAS 95-47-6)	TWA	440 mg/m3
		100 ppm
4-Methyl-2-pentanone (CAS 108-10-1)	TWA	83 mg/m3
		20 ppm
acetone (CAS 67-64-1)	TWA	1200 mg/m3
		500 ppm
Cumene (CAS 98-82-8)	TWA	50 mg/m3
		10 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
Styrene, monomer (CAS 100-42-5)	TWA	86 mg/m3
		20 ppm
Xylene (CAS 1330-20-7)	TWA	440 mg/m3
		100 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
1,2-Dimethybenzene (CAS 95-47-6)	AGW	440 mg/m3	
		100 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	AGW	83 mg/m3	
		20 ppm	
acetone (CAS 67-64-1)	AGW	1200 mg/m3	
		500 ppm	
Cumene (CAS 98-82-8)	AGW	100 mg/m3	

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

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Ethyl benzene (CAS 100-41-4)	AGW	20 ppm	
		88 mg/m3	
Isobutyl acetate (CAS 110-19-0)	AGW	20 ppm	
		300 mg/m3	
Styrene, monomer (CAS 100-42-5)	AGW	62 ppm	
		86 mg/m3	
Talc (CAS 14807-96-6)	AGW	20 ppm	
		10 mg/m3	Inhalable fraction.
Titanium dioxide (CAS 13463-67-7)	AGW	1,25 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.
Xylene (CAS 1330-20-7)	AGW	1,25 mg/m3	Respirable fraction.
		440 mg/m3	
		100 ppm	
<b>Greece. OELs (Decree No. 90/1999, as amended)</b>			
<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
1,2-Dimethylbenzene (CAS 95-47-6)	STEL	650 mg/m3	
		150 ppm	
		435 mg/m3	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	100 ppm	
		410 mg/m3	
		100 ppm	
acetone (CAS 67-64-1)	STEL	3560 mg/m3	
		1780 mg/m3	
		100 ppm	
Calcium carbonate (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Inhalable
Carbon Black (CAS 1333-86-4)	STEL	7 mg/m3	
		3,5 mg/m3	
Cumene (CAS 98-82-8)	STEL	370 mg/m3	
		75 ppm	
		245 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	50 ppm	
		545 mg/m3	
		125 ppm	
Isobutyl acetate (CAS 110-19-0)	TWA	435 mg/m3	
		100 ppm	
		950 mg/m3	
Styrene, monomer (CAS 100-42-5)	STEL	200 ppm	
		950 mg/m3	
		1050 mg/m3	
Talc (CAS 14807-96-6)	TWA	200 ppm	
		425 mg/m3	
		100 ppm	
Titanium dioxide (CAS 13463-67-7)	TWA	2 mg/m3	Respirable.
		10 mg/m3	Inhalable
Xylene (CAS 1330-20-7)	STEL	5 mg/m3	Respirable.
		10 mg/m3	Inhalable
	TWA	650 mg/m3	
		150 ppm	
	TWA	435 mg/m3	

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

Components	Type	Value	Form
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100 ppm

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3	
	TWA	221 mg/m3	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3	
	TWA	83 mg/m3	
acetone (CAS 67-64-1)	STEL	2420 mg/m3	
	TWA	1210 mg/m3	
Calcium carbonate (CAS 1317-65-3)	TWA	10 mg/m3	
Cumene (CAS 98-82-8)	STEL	250 mg/m3	
	TWA	100 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3	
	TWA	442 mg/m3	
Styrene, monomer (CAS 100-42-5)	STEL	50 mg/m3	
	TWA	50 mg/m3	
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable.
Xylene (CAS 1330-20-7)	STEL	442 mg/m3	
	TWA	221 mg/m3	

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

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3	
	TWA	100 ppm	
		109 mg/m3	
		25 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3	
	TWA	50 ppm	
		83 mg/m3	
		20 ppm	
acetone (CAS 67-64-1)	TWA	600 mg/m3	
		250 ppm	
Carbon Black (CAS 1333-86-4)	TWA	3,5 mg/m3	
Cumene (CAS 98-82-8)	STEL	250 mg/m3	
	TWA	50 ppm	
		100 mg/m3	
		20 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3	
	TWA	200 ppm	
		200 mg/m3	
		50 ppm	
Isobutyl acetate (CAS 110-19-0)	TWA	700 mg/m3	
		150 ppm	
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable dust.
Styrene, monomer (CAS 100-42-5)	STEL	105 mg/m3	
		25 ppm	
Titanium dioxide (CAS 13463-67-7)	TWA	6 mg/m3	
Xylene (CAS 1330-20-7)	STEL	442 mg/m3	
	TWA	100 ppm	
		109 mg/m3	
		25 ppm	

**Ireland. Occupational Exposure Limits**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3	
	TWA	100 ppm 221 mg/m3 50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3	
	TWA	50 ppm 83 mg/m3 20 ppm	
acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm	
Calcium carbonate (CAS 1317-65-3)	TWA	4 mg/m3	Respirable dust.
Carbon Black (CAS 1333-86-4)	STEL	10 mg/m3 7 mg/m3	Total inhalable dust.
	TWA	3,5 mg/m3	
Cumene (CAS 98-82-8)	STEL	250 mg/m3 50 ppm	
	TWA	100 mg/m3 20 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3	
	TWA	200 ppm 442 mg/m3 100 ppm	
Isobutyl acetate (CAS 110-19-0)	STEL	875 mg/m3	
	TWA	187 ppm 700 mg/m3 150 ppm	
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable dust.
	STEL	170 mg/m3	
Talc (CAS 14807-96-6)	TWA	40 ppm 85 mg/m3 20 ppm	Total inhalable dust.
	TWA	10 mg/m3 0,8 mg/m3	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	TWA	4 mg/m3	Respirable dust.
Xylene (CAS 1330-20-7)	STEL	10 mg/m3 442 mg/m3 100 ppm	Total inhalable dust.
	TWA	221 mg/m3 50 ppm	

**Italy. Occupational Exposure Limits**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3	
	TWA	100 ppm 221 mg/m3 50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3	
	TWA	50 ppm 83 mg/m3 20 ppm	
acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm	
Carbon Black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.

**Italy. Occupational Exposure Limits Components**

Components	Type	Value	Form
Cumene (CAS 98-82-8)	STEL	250 mg/m3 50 ppm	
	TWA	100 mg/m3 20 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3	
	TWA	200 ppm 442 mg/m3	
Isobutyl acetate (CAS 110-19-0)	TWA	100 ppm 150 ppm	
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.
Styrene, monomer (CAS 100-42-5)	STEL	40 ppm	
	TWA	20 ppm	
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable fraction.
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	

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

Components	Type	Value	Form
1,2-Dimethylbenzene (CAS 95-47-6)	STEL	442 mg/m3	
		100 ppm	
	TWA	221 mg/m3 50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3	
		50 ppm	
	TWA	83 mg/m3 20 ppm	
acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm	
Cumene (CAS 98-82-8)	STEL	250 mg/m3 50 ppm	
		100 mg/m3	
	TWA	20 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3	
		200 ppm	
	TWA	442 mg/m3 100 ppm	
Styrene, monomer (CAS 100-42-5)	STEL	30 mg/m3	
	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	
		221 mg/m3	
	TWA	50 ppm	

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

Components	Type	Value	Form
1,2-Dimethylbenzene (CAS 95-47-6)	STEL	450 mg/m3	
		100 ppm	
	TWA	200 mg/m3 50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3	

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

Components	Type	Value	Form
acetone (CAS 67-64-1)	TWA	50 ppm 83 mg/m <sup>3</sup>	
	STEL	20 ppm 2420 mg/m <sup>3</sup>	
	TWA	1000 ppm 1210 mg/m <sup>3</sup>	
Cumene (CAS 98-82-8)	STEL	500 ppm 170 mg/m <sup>3</sup>	
	TWA	35 ppm 120 mg/m <sup>3</sup>	
Ethyl benzene (CAS 100-41-4)	STEL	25 ppm 884 mg/m <sup>3</sup>	
	TWA	200 ppm 442 mg/m <sup>3</sup>	
Isobutyl acetate (CAS 110-19-0)	STEL	100 ppm 700 mg/m <sup>3</sup>	
	TWA	150 ppm 500 mg/m <sup>3</sup>	
Styrene, monomer (CAS 100-42-5)	STEL	100 ppm 200 mg/m <sup>3</sup>	
	TWA	50 ppm 90 mg/m <sup>3</sup>	
Talc (CAS 14807-96-6)	TWA	20 ppm 2 mg/m <sup>3</sup>	Inhalable fraction. Respirable fraction.
	TWA	1 mg/m <sup>3</sup>	
Titanium dioxide (CAS 13463-67-7)	TWA	5 mg/m <sup>3</sup>	
Xylene (CAS 1330-20-7)	STEL	450 mg/m <sup>3</sup>	
	TWA	100 ppm 200 mg/m <sup>3</sup> 50 ppm	

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

Components	Type	Value
1,2-Dimethylbenzene (CAS 95-47-6)	STEL	442 mg/m <sup>3</sup>
	TWA	100 ppm 221 mg/m <sup>3</sup>
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	50 ppm 208 mg/m <sup>3</sup>
	TWA	50 ppm 83 mg/m <sup>3</sup>
acetone (CAS 67-64-1)	TWA	20 ppm 1210 mg/m <sup>3</sup>
	TWA	500 ppm
Cumene (CAS 98-82-8)	STEL	250 mg/m <sup>3</sup>
	TWA	50 ppm 100 mg/m <sup>3</sup>
Ethyl benzene (CAS 100-41-4)	STEL	20 ppm 884 mg/m <sup>3</sup>
	TWA	200 ppm 442 mg/m <sup>3</sup>
Xylene (CAS 1330-20-7)	STEL	100 ppm 442 mg/m <sup>3</sup>
	TWA	100 ppm 221 mg/m <sup>3</sup> 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
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3
	TWA	100 ppm 221 mg/m3 50 ppm
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3
	TWA	50 ppm 83 mg/m3 20 ppm
acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Cumene (CAS 98-82-8)	STEL	250 mg/m3 50 ppm
	TWA	100 mg/m3 20 ppm
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm 442 mg/m3 100 ppm
Xylene (CAS 1330-20-7)	STEL	442 mg/m3 100 ppm
	TWA	221 mg/m3 50 ppm

**Netherlands. OELs (binding)**

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3	
	TWA	210 mg/m3	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3	
	TWA	104 mg/m3	
acetone (CAS 67-64-1)	STEL	2420 mg/m3	
	TWA	1210 mg/m3	
Cumene (CAS 98-82-8)	STEL	250 mg/m3	
	TWA	100 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	430 mg/m3	
	TWA	215 mg/m3	
Talc (CAS 14807-96-6)	TWA	0,25 mg/m3	Respirable dust.
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
1,2-Dimethybenzene (CAS 95-47-6)	TLV	108 mg/m3	
		25 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3	
	TLV	50 ppm 83 mg/m3 20 ppm	
acetone (CAS 67-64-1)	TLV	295 mg/m3 125 ppm	
		3,5 mg/m3	
Carbon Black (CAS 1333-86-4)	TLV	3,5 mg/m3	
		250 mg/m3 50 ppm	
Cumene (CAS 98-82-8)	STEL	250 mg/m3 50 ppm	
	TLV	100 mg/m3 20 ppm	

**Norway. Administrative Norms for Contaminants in the Workplace**

Components	Type	Value	Form
Ethyl benzene (CAS 100-41-4)	TLV	20 mg/m3	
		5 ppm	
Isobutyl acetate (CAS 110-19-0)	TLV	355 mg/m3	
		75 ppm	
Styrene, monomer (CAS 100-42-5)	TLV	105 mg/m3	
		25 ppm	
Talc (CAS 14807-96-6)	TLV	6 mg/m3	Total dust.
		2 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
1,2-Dimethylbenzene (CAS 95-47-6)	TWA	100 mg/m3	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	200 mg/m3	
	TWA	83 mg/m3	
acetone (CAS 67-64-1)	STEL	1800 mg/m3	
	TWA	600 mg/m3	
Carbon Black (CAS 1333-86-4)	TWA	4 mg/m3	Total dust.
Cumene (CAS 98-82-8)	STEL	250 mg/m3	
	TWA	100 mg/m3	
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	
Kaolin (CAS 1332-58-7)	TWA	10 mg/m3	Total dust.
Styrene, monomer (CAS 100-42-5)	STEL	200 mg/m3	
	TWA	50 mg/m3	
Talc (CAS 14807-96-6)	TWA	4 mg/m3	Total dust.
		1 mg/m3	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	STEL	30 mg/m3	
	TWA	10 mg/m3	Total dust.
Xylene (CAS 1330-20-7)	TWA	100 mg/m3	

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

Components	Type	Value
1,2-Dimethylbenzene (CAS 95-47-6)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3
		50 ppm
	TWA	83 mg/m3
		20 ppm
acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Cumene (CAS 98-82-8)	STEL	250 mg/m3
		50 ppm
	TWA	100 mg/m3
		20 ppm

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

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

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

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	150 ppm	
	TWA	100 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	75 ppm	
	TWA	50 ppm	
acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Carbon Black (CAS 1333-86-4)	TWA	3,5 mg/m3	Fume.
Cumene (CAS 98-82-8)	TWA	50 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	125 ppm	
	TWA	100 ppm	
Isobutyl acetate (CAS 110-19-0)	TWA	150 ppm	
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.
Styrene, monomer (CAS 100-42-5)	STEL	40 ppm	
	TWA	20 ppm	
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable fraction.
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	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3	
		100 ppm	
	TWA	221 mg/m3	
4-Methyl-2-pentanone (CAS 108-10-1)		50 ppm	
	STEL	208 mg/m3	
	TWA	200 mg/m3	
acetone (CAS 67-64-1)		20 ppm	
	TWA	1210 mg/m3	
		500 ppm	
Calcium carbonate (CAS 1317-65-3)	TWA	10 mg/m3	Inhalable fraction.
Cumene (CAS 98-82-8)	STEL	150 mg/m3	
		30 ppm	
	TWA	100 mg/m3	
Ethyl benzene (CAS 100-41-4)		20 ppm	
	STEL	884 mg/m3	
	TWA	200 ppm	
Isobutyl acetate (CAS 110-19-0)		442 mg/m3	
		100 ppm	
	STEL	950 mg/m3	

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

Components	Type	Value	Form
Kaolin (CAS 1332-58-7) Styrene, monomer (CAS 100-42-5)	TWA	200 ppm 715 mg/m3	Inhalable fraction.
	TWA	150 ppm 2 mg/m3	
	STEL	150 mg/m3	
	TWA	35 ppm 50 mg/m3	
Talc (CAS 14807-96-6) Titanium dioxide (CAS 13463-67-7)	TWA	12 ppm 2 mg/m3	Inhalable fraction.
	STEL	15 mg/m3	
Xylene (CAS 1330-20-7)	TWA	10 mg/m3	
	STEL	442 mg/m3 100 ppm	
	TWA	221 mg/m3 50 ppm	

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

Components	Type	Value	Form
1,2-Dimethylbenzene (CAS 95-47-6)	STEL	442 mg/m3	
	TWA	100 ppm 221 mg/m3 50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	166 mg/m3	
	TWA	40 ppm 83 mg/m3 20 ppm	
acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm	
	TWA	10 mg/m3	
Calcium carbonate (CAS 1317-65-3) Carbon Black (CAS 1333-86-4)	TWA	2 mg/m3	
	TWA	2 mg/m3	
Cumene (CAS 98-82-8)	STEL	250 mg/m3 50 ppm	
	TWA	100 mg/m3 20 ppm	
	STEL	884 mg/m3	
Ethyl benzene (CAS 100-41-4)	TWA	200 ppm 442 mg/m3 100 ppm	
	STEL	700 mg/m3	
Isobutyl acetate (CAS 110-19-0)	TWA	150 ppm 500 mg/m3 100 ppm	
	STEL	200 mg/m3	
Styrene, monomer (CAS 100-42-5)	TWA	50 ppm 90 mg/m3 20 ppm	
	STEL	2 mg/m3 2 mg/m3 10 mg/m3	
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable fraction. Respirable fraction. Total
	TWA	5 mg/m3	
Titanium dioxide (CAS 13463-67-7) Xylene (CAS 1330-20-7)	TWA	5 mg/m3	
	STEL	442 mg/m3 100 ppm	
	TWA	221 mg/m3 50 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
1,2-Dimethybenzene (CAS 95-47-6)	TWA	221 mg/m <sup>3</sup>	
		50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	TWA	83 mg/m <sup>3</sup>	
		20 ppm	
acetone (CAS 67-64-1)	TWA	1210 mg/m <sup>3</sup>	
		500 ppm	
Cumene (CAS 98-82-8)	TWA	100 mg/m <sup>3</sup>	
		20 ppm	
Ethyl benzene (CAS 100-41-4)	TWA	442 mg/m <sup>3</sup>	
		100 ppm	
Isobutyl acetate (CAS 110-19-0)	TWA	480 mg/m <sup>3</sup>	
		100 ppm	
Styrene, monomer (CAS 100-42-5)	TWA	86 mg/m <sup>3</sup>	
		20 ppm	
Talc (CAS 14807-96-6)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Xylene (CAS 1330-20-7)	TWA	221 mg/m <sup>3</sup>	
		50 ppm	

**Spain. Occupational Exposure Limits**

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m <sup>3</sup>	
		100 ppm	
	TWA	221 mg/m <sup>3</sup>	
		50 ppm	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m <sup>3</sup>	
		50 ppm	
	TWA	83 mg/m <sup>3</sup>	
		20 ppm	
acetone (CAS 67-64-1)	TWA	1210 mg/m <sup>3</sup>	
		500 ppm	
Carbon Black (CAS 1333-86-4)	TWA	3,5 mg/m <sup>3</sup>	
Cumene (CAS 98-82-8)	STEL	250 mg/m <sup>3</sup>	
		50 ppm	
	TWA	100 mg/m <sup>3</sup>	
		20 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m <sup>3</sup>	
		200 ppm	
	TWA	441 mg/m <sup>3</sup>	
		100 ppm	
Isobutyl acetate (CAS 110-19-0)	TWA	724 mg/m <sup>3</sup>	
		150 ppm	
Kaolin (CAS 1332-58-7)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Styrene, monomer (CAS 100-42-5)	STEL	172 mg/m <sup>3</sup>	
		40 ppm	
	TWA	86 mg/m <sup>3</sup>	
		20 ppm	
Talc (CAS 14807-96-6)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m <sup>3</sup>	
Xylene (CAS 1330-20-7)	STEL	442 mg/m <sup>3</sup>	
		100 ppm	
	TWA	221 mg/m <sup>3</sup>	
		50 ppm	

**Sweden. Occupational Exposure Limit Values**

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3	
	TWA	100 ppm 221 mg/m3	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	50 ppm 200 mg/m3	
	TWA	100 mg/m3 25 ppm	
acetone (CAS 67-64-1)	STEL	1200 mg/m3 500 ppm	
	TWA	600 mg/m3 250 ppm	
Cumene (CAS 98-82-8)	STEL	170 mg/m3 35 ppm	
	TWA	120 mg/m3 25 ppm	
Ethyl benzene (CAS 100-41-4)	STEL	450 mg/m3	
	TWA	100 ppm 200 mg/m3	
Isobutyl acetate (CAS 110-19-0)	STEL	50 ppm 700 mg/m3	
	TWA	500 mg/m3 100 ppm	
Styrene, monomer (CAS 100-42-5)	STEL	86 mg/m3	
	TWA	20 ppm 43 mg/m3	
Talc (CAS 14807-96-6)	TWA	10 ppm 2 mg/m3	Total dust.
	TWA	1 mg/m3	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	TWA	5 mg/m3	Total dust.
Xylene (CAS 1330-20-7)	STEL	442 mg/m3	
	TWA	100 ppm 221 mg/m3 50 ppm	

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	870 mg/m3	
	TWA	200 ppm 435 mg/m3	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	100 ppm 164 mg/m3	
	TWA	40 ppm 82 mg/m3	
acetone (CAS 67-64-1)	STEL	20 ppm 2400 mg/m3	
	TWA	1000 ppm 1200 mg/m3	
Cumene (CAS 98-82-8)	STEL	500 ppm 400 mg/m3	
	TWA	80 ppm 100 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	20 ppm 220 mg/m3	

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value	Form
Isobutyl acetate (CAS 110-19-0)	TWA	50 ppm 220 mg/m3	
	STEL	50 ppm 960 mg/m3	
Kaolin (CAS 1332-58-7)	TWA	200 ppm 480 mg/m3	Respirable dust.
	STEL	100 ppm 3 mg/m3	
Styrene, monomer (CAS 100-42-5)	TWA	170 mg/m3	
	STEL	40 ppm 85 mg/m3	
Talc (CAS 14807-96-6)	TWA	20 ppm 2 mg/m3	Respirable dust.
	TWA	3 mg/m3	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	TWA	3 mg/m3	
	STEL	870 mg/m3	
Xylene (CAS 1330-20-7)	TWA	200 ppm 435 mg/m3	
	STEL	100 ppm	

**UK. EH40 Workplace Exposure Limits (WELs)**

Components	Type	Value	Form
1,2-Dimethybenzene (CAS 95-47-6)	STEL	441 mg/m3	
	TWA	100 ppm 220 mg/m3	
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	50 ppm 416 mg/m3	
	TWA	100 ppm 208 mg/m3	
acetone (CAS 67-64-1)	STEL	50 ppm 3620 mg/m3	
	TWA	1500 ppm 1210 mg/m3	
Calcium carbonate (CAS 1317-65-3)	TWA	500 ppm 4 mg/m3	Respirable.
	STEL	4 mg/m3 10 mg/m3 10 mg/m3	Respirable dust. Inhalable dust. Inhalable
Carbon Black (CAS 1333-86-4)	STEL	7 mg/m3	
	TWA	3,5 mg/m3	
Cumene (CAS 98-82-8)	STEL	250 mg/m3	
	TWA	50 ppm 125 mg/m3	
Ethyl benzene (CAS 100-41-4)	STEL	25 ppm 552 mg/m3	
	TWA	125 ppm 441 mg/m3	
Isobutyl acetate (CAS 110-19-0)	STEL	100 ppm 903 mg/m3	
	TWA	187 ppm 724 mg/m3	
Kaolin (CAS 1332-58-7)	TWA	150 ppm 2 mg/m3	Respirable dust.
	STEL	1080 mg/m3	
Styrene, monomer (CAS 100-42-5)	TWA	250 ppm	
	STEL		

**UK. EH40 Workplace Exposure Limits (WELs)**

Components	Type	Value	Form
	TWA	430 mg/m3 100 ppm	
Talc (CAS 14807-96-6)	TWA	1 mg/m3	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	TWA	4 mg/m3	Respirable.
		10 mg/m3	Inhalable
Xylene (CAS 1330-20-7)	STEL	441 mg/m3	
	TWA	100 ppm 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
1,2-Dimethybenzene (CAS 95-47-6)	STEL	442 mg/m3
	TWA	100 ppm 221 mg/m3 50 ppm
4-Methyl-2-pentanone (CAS 108-10-1)	STEL	208 mg/m3
	TWA	50 ppm 83 mg/m3 20 ppm
acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Cumene (CAS 98-82-8)	STEL	250 mg/m3
	TWA	50 ppm 100 mg/m3 20 ppm
Ethyl benzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm 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
1,2-Dimethybenzene (CAS 95-47-6)	820 µmol/mmol	Methylhippuric acids	Creatinine in urine	*
	1400 mg/g	Methylhippuric acids	Creatinine in urine	*
Ethyl benzene (CAS 100-41-4)	1100 µmol/mmol	Mandelic acid	Creatinine in urine	*
	1500 mg/g	Mandelic acid	Creatinine in urine	*
Styrene, monomer (CAS 100-42-5)	300 µmol/mmol	Mandelic acid	Creatinine in urine	*
	400 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
1,2-Dimethybenzene (CAS 95-47-6)	5 mmol/l	Methylhippuric acids	Urine	*



**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	*
Styrene, monomer (CAS 100-42-5)	1,2 mmol/l	MAPGA (mandelic acid plus phenylglyoxylic 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
1,2-Dimethylbenzene (CAS 95-47-6)	1500 mg/g	Acides méthylhippuriques	Creatinine in urine	*
4-Methyl-2-pentanone (CAS 108-10-1)	2 mg/l	Méthylisobutylic étone	Urine	*
acetone (CAS 67-64-1)	100 mg/l	Acétone	Urine	*
Ethyl benzene (CAS 100-41-4)	1500 mg/g	Acide mandélique	Creatinine in urine	*
Styrene, monomer (CAS 100-42-5)	800 mg/g	Acide mandélique	Creatinine in urine	*
	300 mg/g	Acide mandélique	Creatinine in urine	*
	0,55 mg/l	Styrène	Venous blood	*
	0,02 mg/l	Styrène	Venous blood	*
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
1,2-Dimethylbenzene (CAS 95-47-6)	2000 mg/l	Methylhippur-(Tolur-) säure (alle Isomere)	Urine	*
	1,5 mg/l	Xylol	Blood	*
4-Methyl-2-pentanone (CAS 108-10-1)	3,5 mg/l	4-Methylpentan-2-on	Urine	*
acetone (CAS 67-64-1)	80 mg/l	Aceton	Urine	*
Ethyl benzene (CAS 100-41-4)	300 mg/l	Mandelsäure plus Phenylglyoxylsäure	Urine	*
Styrene, monomer (CAS 100-42-5)	600 mg/g	Mandelsäure plus Phenylglyoxylsäure	Creatinine in 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
1,2-Dimethylbenzene (CAS 95-47-6)	1500 mg/g	methyl hippuric acids	Creatinine in urine	*
	860 µmol/mmol	methyl hippuric acids	Creatinine in urine	*
Ethyl benzene (CAS 100-41-4)	1500 mg/g	mandelic acid	Creatinine in urine	*
	1110 µmol/mmol	mandelic acid	Creatinine in urine	*

**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
Styrene, monomer (CAS 100-42-5)	1000 mg/g	mandelic acid	Creatinine in urine	*
	740 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
1,2-Dimethylbenzene (CAS 95-47-6)	1334 mg/g	Methylhippuric acids	Creatinine in urine	*
	2000 mg/l	Methylhippuric acids	Urine	*
	1,5 mg/l	Xylene	Blood	*
4-Methyl-2-pentanone (CAS 108-10-1)	2,36 mg/g	Methyl isobutyl ketone	Creatinine in urine	*
	3,5 mg/l	Methyl isobutyl ketone	Urine	*
acetone (CAS 67-64-1)	53,36 mg/g	Acetone	Creatinine in urine	*
	80 mg/l	Acetone	Urine	*
Ethyl benzene (CAS 100-41-4)	8,03 mg/g	2-ethylphenol	Creatinine in urine	*
	12 mg/l	2-ethylphenol	Urine	*
Styrene, monomer (CAS 100-42-5)	600 mg/g	Mandelic acid plus phenylglyoxylic acid	Creatinine in urine	*
	901 mg/l	Mandelic acid plus phenylglyoxylic acid	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
1,2-Dimethylbenzene (CAS 95-47-6)	1 g/g	Ácidos metilhipúricos	Creatinine in urine	*
4-Methyl-2-pentanone (CAS 108-10-1)	1 mg/l	Metilisobutilcetona	Urine	*
acetone (CAS 67-64-1)	50 mg/l	Acetona	Urine	*
Ethyl benzene (CAS 100-41-4)	700 mg/g	Suma del ácido mandélico y el ácido fenilgloxílico	Creatinine in urine	*
		Ácido mandélico más ácido fenilgloxílico		
Styrene, monomer (CAS 100-42-5)	400 mg/g	Estireno	Creatinine in urine	*
	0,2 mg/l	Estireno	Venous blood	*
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
1,2-Dimethybenzene (CAS 95-47-6)	1,5 g/g	Methyl-Hippursäure	Creatinine in urine	*
	1,5 mg/l	Xylol	Blood	*
4-Methyl-2-pentanone (CAS 108-10-1)	2 mg/l	4-Methylpentan-2-on	Urine	*
	80 mg/l	Aceton	Urine	*
Cumene (CAS 98-82-8)	50 mg/g	2-Phenyl-2-propanol	Creatinine in urine	*
Ethyl benzene (CAS 100-41-4)	800 mg/l	Mandelsäure plus Phenylglyoxylsäure	Urine	*
		Mandelsäure	Creatinine in urine	*
Styrene, monomer (CAS 100-42-5)	400 mg/g	Methyl-Hippursäure	Creatinine in urine	*
Xylene (CAS 1330-20-7)	1,5 g/g	Xylol	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
1,2-Dimethybenzene (CAS 95-47-6)	650 mmol/mol	Methyl hippuric acid	Creatinine in urine	*
4-Methyl-2-pentanone (CAS 108-10-1)	20 umol/l	4-Methylpentan-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**

1,2-Dimethybenzene (CAS 95-47-6)	Can be absorbed through the skin.
Cumene (CAS 98-82-8)	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. Eye wash facilities and emergency shower must be available when handling this product.

**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 appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**- 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.

## **SECTION 9: Physical and chemical properties**

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

#### **Appearance**

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Grey.
<b>Odour</b>	Solvent.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	-98,8 °C (-145,84 °F) estimated
<b>Initial boiling point and boiling range</b>	116,5 °C (241,7 °F) estimated
<b>Flash point</b>	17,8 °C (64,0 °F) estimated
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	2,4 % estimated
<b>Flammability limit - upper (%)</b>	10,5 % estimated
<b>Vapour pressure</b>	1325,88 hPa estimated
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Solubility (other)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	423 °C (793,4 °F) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidizing properties</b>	Not available.

#### **9.2. Other information**

<b>Density</b>	12,37 lbs/gal
<b>Percent volatile</b>	69,45 %
<b>Specific gravity</b>	1,48
<b>VOC</b>	3,6 lbs/gal Regulatory 3,3 lbs/gal Material 431 g/l Regulatory 391 g/l Material

## **SECTION 10: Stability and reactivity**

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

## **SECTION 11: Toxicological information**

<b>General information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
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**Information on likely routes of exposure**

<b>Inhalation</b>	Harmful if inhaled.
<b>Skin contact</b>	Harmful in contact with skin. Causes skin irritation.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms** Skin irritation. May cause redness and pain.

**11.1. Information on toxicological effects**

**Acute toxicity** Harmful if inhaled. Harmful in contact with skin.

<b>Components</b>	<b>Species</b>	<b>Test results</b>
1,2-Dimethybenzene (CAS 95-47-6)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 43 g/kg
<b>Inhalation</b>		
LC50	Mouse	4600 ppm, 6 Hours
	Rat	6350 ppm, 4 Hours
<b>Oral</b>		
LD50	Mouse	1590 mg/kg
	Rat	4300 mg/kg
4-Methyl-2-pentanone (CAS 108-10-1)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 16000 mg/kg
<b>Inhalation</b>		
LC50	Rat	8,2 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	2080 mg/kg
acetone (CAS 67-64-1)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	20000 mg/kg 20 ml/kg
<b>Inhalation</b>		
LC50	Rat	76 mg/l, 4 Hours 50,1 mg/l, 8 Hours
<b>Oral</b>		
LD50	Mouse	3000 mg/kg
	Rabbit	5340 mg/kg
	Rat	5800 mg/kg
Carbon Black (CAS 1333-86-4)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	> 8000 mg/kg
Cumene (CAS 98-82-8)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Mouse	2000 ppm, 7 Hours 24,7 mg/l, 2 Hours
	Rat	8000 ppm, 4 Hours
<b>Oral</b>		
LD50	Rat	1400 mg/kg

Components	Species	Test results
Ethyl benzene (CAS 100-41-4)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	17800 mg/kg
<b>Oral</b>		
LD50	Rat	3500 mg/kg
Isobutyl acetate (CAS 110-19-0)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rabbit	4,8 g/kg
Styrene, monomer (CAS 100-42-5)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Mouse	4940 ppm, 2 Hours
	Rat	2770 ppm, 4 Hours
		24 mg/l, 4 Hours
<b>Oral</b>		
LD50	Mouse	316 mg/kg
	Rat	1 g/kg
Xylene (CAS 1330-20-7)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 43 g/kg
<b>Inhalation</b>		
LC50	Mouse	3907 mg/l, 6 Hours
	Rat	6350 mg/l, 4 Hours
<b>Oral</b>		
LD50	Mouse	1590 mg/kg
	Rat	3523 - 8600 mg/kg

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

<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Germ cell mutagenicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Carcinogenicity</b>	Suspected of causing cancer.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
1,2-Dimethylbenzene (CAS 95-47-6)	3 Not classifiable as to carcinogenicity to humans.
4-Methyl-2-pentanone (CAS 108-10-1)	2B Possibly carcinogenic to humans.
Carbon Black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
Cumene (CAS 98-82-8)	2B Possibly carcinogenic to humans.
Ethyl benzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.
Styrene, monomer (CAS 100-42-5)	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.
<b>Reproductive toxicity</b>	Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals.
<b>Specific target organ toxicity - single exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - repeated exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Aspiration hazard</b>	Due to partial or complete lack of data the classification is not possible.
<b>Mixture versus substance information</b>	No information available.

Other information Not available.

## SECTION 12: Ecological information

12.1. Toxicity Harmful to aquatic life with long lasting effects.

Components		Species	Test results
1,2-Dimethybenzene (CAS 95-47-6)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0,78 - 2,51 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	5,59 - 11,6 mg/l, 96 hours
4-Methyl-2-pentanone (CAS 108-10-1)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	492 - 593 mg/l, 96 hours
acetone (CAS 67-64-1)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	21,6 - 23,9 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
Cumene (CAS 98-82-8)			
<b>Aquatic</b>			
Crustacea	EC50	Brine shrimp (Artemia sp.)	3,55 - 11,29 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2,7 mg/l, 96 hours
Ethyl benzene (CAS 100-41-4)			
<b>Aquatic</b>			
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
Styrene, monomer (CAS 100-42-5)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	3,3 - 7,4 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	5,1 - 16 mg/l, 96 hours
Titanium dioxide (CAS 13463-67-7)			
<b>Aquatic</b>			
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)			
<b>Aquatic</b>			
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)

1,2-Dimethybenzene	3,12
4-Methyl-2-pentanone	1,31
acetone	-0,24
Cumene	3,66
Ethyl benzene	3,15
Isobutyl acetate	1,78
Styrene, monomer	2,95
Xylene	3,12 - 3,2

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

<b>12.5. Results of PBT and vPvB assessment</b>	Not available.
<b>12.6. Other adverse effects</b>	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

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

## SECTION 14: Transport information

### ADR

<b>14.1. UN number</b>	UN1263
<b>14.2. UN proper shipping name</b>	Paint, Paint Related Material
<b>14.3. Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
Label(s)	3
Hazard No. (ADR)	33
Tunnel restriction code	D/E
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### RID

<b>14.1. UN number</b>	UN1263
<b>14.2. UN proper shipping name</b>	Paint, Paint Related Material
<b>14.3. Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
Label(s)	3
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### ADN

<b>14.1. UN number</b>	UN1263
<b>14.2. UN proper shipping name</b>	Paint, Paint Related Material
<b>14.3. Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
Label(s)	3
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IATA

<b>14.1. UN number</b>	UN1263
<b>14.2. UN proper shipping name</b>	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**

4-Methyl-2-pentanone (CAS 108-10-1)

acetone (CAS 67-64-1)

Ethyl benzene (CAS 100-41-4)

Isobutyl acetate (CAS 110-19-0)

**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**

Styrene, monomer (CAS 100-42-5)

## Other EU regulations

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

1,2-Dimethybenzene (CAS 95-47-6)

4-Methyl-2-pentanone (CAS 108-10-1)

acetone (CAS 67-64-1)

Cumene (CAS 98-82-8)

Ethyl benzene (CAS 100-41-4)

Isobutyl acetate (CAS 110-19-0)

Styrene, monomer (CAS 100-42-5)

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**

1,2-Dimethybenzene (CAS 95-47-6)

4-Methyl-2-pentanone (CAS 108-10-1)

acetone (CAS 67-64-1)

Cumene (CAS 98-82-8)

Ethyl benzene (CAS 100-41-4)

Isobutyl acetate (CAS 110-19-0)

Styrene, monomer (CAS 100-42-5)

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)

Styrene, monomer (CAS 100-42-5)

## 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.

R36/37 Irritating to eyes and respiratory system.

R36/37/38 Irritating to eyes, respiratory system and skin.

R36/38 Irritating to eyes and skin.

R37 Irritating to respiratory system.

R38 Irritating to skin.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R65 Harmful: may cause lung damage if swallowed.  
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.  
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.

None.

**Revision information**

**Training information**

**Disclaimer**

Follow training instructions when handling this material.

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