

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Issue date: 09/11/2009 Revision date: 09/07/2024 Version: 2.0

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

1.1. Product identifier

Product form : Mixture

Product name : PDC F-830 MURACULON C3 BLACK

Product code : F830105C3
Product group : Trade product

UFI

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Coating

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer Distributor **EU Importer of Record** Plasti Dip UK Ltd. Plasti Dip International, Inc. Global Express Unit 1 Harvesting Lane 3920 Pheasant Ridge Drive 7 Indian Path **PETERSFIELD** Blaine, MN 55449 Millstone, NJ 08535 **GU32 1QR** Phone - (763) 785-2156 (732) 977-0605 United Kingdom

1.4. Emergency telephone number

 Manufacturer Emergency number
 Manufacturer Emergency number
 Importer Emergency number

 CHEMTREC: 1-800-424-9300 (US);
 CHEMTREC: 1-800-424-9300 (US);
 CHEMTREC: 1-800-424-9300 (US);

 +1 703-741-5970 (International)
 +1 703-741-5970 (International)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids Category 2 H225 Skin corrosion/irritation Category 2 H315 Serious eye damage/eye irritation, Category 2 H319 H351 Carcinogenicity Category 2 Reproductive toxicity Category 2 H361 Specific target organ toxicity - Single exposure, Category 3, Narcosis H336 Specific target organ toxicity - Repeated exposure, Category 2 H373 Aspiration hazard Category 1 H304 Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :







GHS07

GHS08

Signal word (CLP)

GHS02 Danger

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Precautionary statements (CLP)

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour.

H304 - May be fatal if swallowed and enters airways.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H336 - May cause drowsiness or dizziness.

H351 - Suspected of causing cancer.

H361 - Suspected of damaging fertility or the unborn child.

H373 - May cause damage to organs through prolonged or repeated exposure.

No smoking.

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

protection.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water.

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.

P501 - Dispose of contents/container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation.

2.3. Other hazards

The mixture contains Methyl ethyl ketone (CAS#78-93-3), which is identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605, at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acetone	CAS-No.: 67-64-1 EC-No.: 200-662-2 EC Index-No.: 606-001-00-8	15 – 40	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Toluene	CAS-No.: 108-88-3 EC-No.: 203-625-9 EC Index-No.: 601-021-00-3	10 – 30	Flam. Liq. 2, H225 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304
Methyl ethyl ketone	CAS-No.: 78-93-3 EC-No.: 201-159-0 EC Index-No.: 606-002-00-3	7 – 13	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Xylene	CAS-No.: 1330-20-7 EC-No.: 215-535-7 EC Index-No.: 601-022-00-9	7 – 13	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethylbenzene	CAS-No.: 100-41-4 EC-No.: 202-849-4 EC Index-No.: 601-023-00-4	1 – 5	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Carbon black	CAS-No.: 1333-86-4 EC-No.: 215-609-9	0.1 – 1	Carc. 2, H351 STOT RE 1, H372
Cumene	CAS-No.: 98-82-8 EC-No.: 202-704-5 EC Index-No.: 601-024-00-X	0.1 – 1	Flam. Liq. 3, H226 Carc. 1B, H350 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Full text of H- and EUH-statements: see section 16

SECTION 4: First Aid measures

4.1. Description of first aid measures

First-aid measures general	: If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
First-aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention. If breathing is difficult, supply oxygen. If breathing has stopped, give artificial respiration.

First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention immediately.

First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing if pain, blinking, or irritation develops

or persists, get medical attention. Continue rinsing.

: IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention immediately.

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

Symptoms/effects : May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : May cause drowsiness or dizziness. Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : May be fatal if swallowed and enters airways.

Chronic symptoms : Suspected of causing cancer. Suspected of damaging fertility. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure.

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

No additional information available.

First-aid measures after ingestion

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Carbon dioxide. Dry chemical.

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5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour. Explosion hazard : Heating may cause an explosion.

Reactivity in case of fire : None known.

Hazardous decomposition products in case of fire : Thermal decomposition is highly dependent on conditions. A complex mixture of airborne

solids, liquids and gases, including carbon oxides and other organic compounds will be

evolved when this material undergoes thermal degradation.

5.3. Advice for firefighters

Other information

Precautionary measures fire : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Do not dispose of fire-fighting water in the environment. Prevent human

exposure to fire, fumes, smoke and products of combustion.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

: This material is flammable and may be ignited by heat, sparks, or static electricity.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Ventilate area. Keep upwind. Spill should be handled by trained cleaning

personnel properly equipped with respiratory and eye protection.

6.1.1. For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air

respirator, in case of emergency.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or

streams. Prevent entry to sewers and public waters.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

This material and its container must be disposed of in a safe way, and as per local

legislation.

6.4. Reference to other sections

See Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Handle in

accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when

leaving work. Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep the container tightly closed. Store in a dry, cool and well-ventilated place. Keep away

from ignition sources.

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7.3. Specific end use(s)

Coating Solution.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

Toluene (108-88-3)			
EU - Indicative Occupational Exposure Limit (IOEL)	EU - Indicative Occupational Exposure Limit (IOEL)		
IOEL TWA	192 mg/m³		
IOEL TWA [ppm]	50 ppm		
IOEL STEL	384 mg/m³		
IOEL STEL [ppm]	100 ppm		
Notes	Possibility of significant uptake through the skin		
Austria - Occupational Exposure Limits			
MAK (OEL TWA)	190 mg/m³		
MAK (OEL TWA) [ppm]	50 ppm		
MAK (OEL STEL)	380 mg/m³		
MAK (OEL STEL) [ppm]	100 ppm		
Chemical category	skin notation		
Belgium - Occupational Exposure Limits			
OEL TWA	77 mg/m³		
OEL TWA	20 ppm		
OEL STEL	384 mg/m³		
OEL STEL	100 ppm		
Chemical category	Skin, skin notation		
Bulgaria - Occupational Exposure Limits			
OEL TWA	192 mg/m³		
OEL TWA	50 ppm		
OEL STEL	384 mg/m³		
OEL STEL	100 ppm		
Bulgaria - Biological limit values			
BLV	1.6 mmol/mmol Creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: at the end of exposure or end of work shift		
Croatia - Occupational Exposure Limits			
GVI (OEL TWA) [1]	192 mg/m³		
GVI (OEL TWA) [2]	50 ppm		
KGVI (OEL STEL)	384 mg/m³		
KGVI (OEL STEL) [ppm]	100 ppm		
Chemical category	skin notation		

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Toluene (108-88-3)		
Croatia - Biological limit values		
BLV	1 mg/l Parameter: Toluene - Medium: blood - Sampling time: at the end of the work shift 20 ppm Medium: final exhaled air - Sampling time: during exposure 2.5 g/g Kreatinin Parameter: Hippuric acid - Medium: urine - Sampling time: at the end of the work shift (calculated on the average Creatinine value of 1.2 g/L urine) 1 mg/g Kreatinin Parameter: o-Cresol - Medium: urine - Sampling time: at the end of the work shift (calculated on the average Creatinine value of 1.2 g/L urine)	
Cyprus - Occupational Exposure Limits		
OEL TWA	192 mg/m³	
OEL TWA	50 ppm	
OEL STEL	384 mg/m³	
OEL STEL	100 ppm	
Chemical category	Skin-potential for cutaneous absorption	
Czech Republic - Occupational Exposure Limits		
PEL (OEL TWA)	200 mg/m³	
Chemical category	Potential for cutaneous absorption	
Czech Republic - Biological limit values		
BLV	1.6 µmol/mmol Creatinine Parameter: o-Cresol - Medium: urine - Sampling time: end of shift (after hydrolysis) 1000 µmol/mmol Creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift (exposure testing using the o-Cresol parameter to precisely measure Toluene exposure is needed if the value of Hippuric acid is between 1600 and 2500 mg/g of Creatinine, no additional testing is needed if the Hippuric acid value is >2500 mg/g of Creatinine as work exposure to Toluene will have highly exceeded the PEL value.) 1.5 mg/g Kreatinin Parameter: o-Cresol - Medium: urine - Sampling time: end of shift (after hydrolysis) 1600 mg/g Kreatinin Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift (exposure testing using the o-Cresol parameter to precisely measure Toluene exposure is needed if the value of Hippuric acid is between 1600 and 2500 mg/g of Creatinine, no additional testing is needed if the Hippuric acid value is >2500 mg/g of Creatinine as work exposure to Toluene will have highly exceeded the PEL value.)	
Denmark - Occupational Exposure Limits		
OEL TWA [1]	94 mg/m³	
OEL TWA [2]	25 ppm	
OEL STEL	188 mg/m³	
OEL STEL	50 ppm	
Chemical category	Potential for cutaneous absorption	
Estonia - Occupational Exposure Limits		
OEL TWA	192 mg/m³	
OEL TWA	50 ppm	
OEL STEL	384 mg/m³	
OEL STEL	100 ppm	
Chemical category	skin notation	
Finland - Occupational Exposure Limits		
HTP (OEL TWA) [1]	81 mg/m ³	

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Toluene (108-88-3)			
HTP (OEL TWA) [2]	25 ppm		
HTP (OEL STEL)	380 mg/m³		
HTP (OEL STEL) [ppm]	100 ppm		
Chemical category	Potential for cutaneous absorption		
Finland - Biological limit values			
BLV	500 nmol/L Parameter: Toluene - Medium: blood - Sampling time: in the morning after a working day		
France - Occupational Exposure Limits			
VME (OEL TWA)	76.8 mg/m³ TWA [VME] (restrictive limit)		
VME (OEL TWA) [ppm]	20 ppm TWA [VME] (restrictive limit)		
VLE (OEL C/STEL)	384 mg/m³ STEL [VLCT] (restrictive limit)		
VLE (OEL C/STEL) [ppm]	100 ppm STEL [VLCT] (restrictive limit)		
Chemical category	Risk of cutaneous absorption		
France - Biological limit values			
BLV	20 µg/l Parameter: Toluene - Medium: blood - Sampling time: end of workweek (Semi- quantitative (ambiguous interpretation)) Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift (per the Authority, the values for this substance must be decided and/or determined on a case by case basis. Guidance for the calculation of and interpretation of values is provided in the source)		
Germany - Occupational Exposure Limits (TRGS 90	00)		
AGW (OEL TWA) [1]	190 mg/m³		
AGW (OEL TWA) [2]	50 ppm		
AGW (OEL C)	760 mg/m³		
AGW (OEL C) [ppm]	200 ppm		
Chemical category	skin notation		
Germany - Biological limit values (TRGS 903)			
BLV	600 μg/l Parameter: Toluene - Medium: whole blood - Sampling time: immediately after exposure 75 μg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift 1.5 mg/l Parameter: o-Cresol (after hydrolysis) - Medium: urine - Sampling time: for long-term exposures: at the end of the shift after several shifts 1.5 mg/l Parameter: o-Cresol (after hydrolysis) - Medium: urine - Sampling time: end of shift		
Gibraltar - Occupational Exposure Limits			
OEL TWA	192 mg/m³		
OEL TWA	50 ppm		
OEL STEL	384 mg/m³		
OEL STEL	100 ppm		
Chemical category	skin notation		
Greece - Occupational Exposure Limits	Greece - Occupational Exposure Limits		
OEL TWA	192 mg/m³		
OEL TWA	50 ppm		
OEL STEL	384 mg/m³		

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Toluene (108-88-3)		
OEL STEL	100 ppm	
Chemical category	skin - potential for cutaneous absorption	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	190	
CK (OEL STEL)	380 mg/m³	
Chemical category	Potential for cutaneous absorption	
Ireland - Occupational Exposure Limits		
OEL TWA [1]	192 mg/m³	
OEL TWA [2]	50 ppm	
OEL STEL	384 mg/m³	
OEL STEL	100 ppm	
Chemical category	Potential for cutaneous absorption	
Italy - Occupational Exposure Limits		
OEL TWA	192 mg/m³	
OEL TWA	50 ppm	
Chemical category	skin - potential for cutaneous absorption	
Latvia - Occupational Exposure Limits		
OEL TWA	50 mg/m³	
OEL TWA	14 ppm	
OEL STEL	150 mg/m³	
OEL STEL	40 ppm	
Chemical category	skin - potential for cutaneous exposure	
Latvia - Biological limit values		
BEI (BLV)	1.6 g/g Kreatinin Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift 0.05 mg/l Parameter: Toluene - Medium: blood - Sampling time: end of shift	
Lithuania - Occupational Exposure Limits		
IPRV (OEL TWA)	192 mg/m³	
IPRV (OEL TWA) [ppm]	50 ppm	
TPRV (OEL STEL)	384 mg/m³	
TPRV (OEL STEL) [ppm]	100 ppm	
Chemical category	Reproductive toxin, skin notation	
Luxembourg - Occupational Exposure Limits		
OEL TWA	192 mg/m³	
OEL TWA	50 ppm	
OEL STEL	384 mg/m³	
OEL STEL	100 ppm	
Chemical category	Possibility of significant uptake through the skin	
Malta - Occupational Exposure Limits		
OEL TWA	192 mg/m³	

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Toluene (108-88-3)		
OEL TWA	50 ppm	
OEL STEL	384 mg/m³	
OEL STEL	100 ppm	
Chemical category	Possibility of significant uptake through the skin	
Netherlands - Occupational Exposure Limits		
TGG-8u (OEL TWA)	150 mg/m³	
TGG-8u (OEL TWA) [ppm]	39 ppm	
TGG-15min (OEL STEL)	384 mg/m³	
TGG-15min (OEL STEL) [ppm]	100 ppm	
Poland - Occupational Exposure Limits		
NDS (OEL TWA)	100 mg/m³	
NDSCh (OEL STEL)	200 mg/m³	
Portugal - Occupational Exposure Limits		
OEL TWA	192 mg/m³ (indicative limit value)	
OEL TWA	50 ppm (indicative limit value)	
OEL STEL	384 mg/m³ (indicative limit value)	
OEL STEL	100 ppm (indicative limit value)	
Chemical category	A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure indicative limit value	
Romania - Occupational Exposure Limits		
OEL TWA	192 mg/m³	
OEL TWA	50 ppm	
OEL STEL	384 mg/m³	
OEL STEL	100 ppm	
Chemical category	skin notation	
Romania - Biological limit values		
BLV	2 g/l Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift 3 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift	
Slovakia - Occupational Exposure Limits		
NPHV (OEL TWA) [1]	192 mg/m³	
NPHV (OEL TWA) [2]	50 ppm	
NPHV (OEL C)	384 mg/m³	
Chemical category	Potential for cutaneous absorption	
Slovakia - Biological limit values		
BLV	600 μg/l Parameter: Toluene - Medium: blood - Sampling time: end of exposure or work shift 1.5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: after all work shifts (for long-term exposure) 1.5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of exposure or work shift 1600 mg/g Kreatinin Parameter: Hippuric acid - Sampling time: end of exposure or work shift	

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Toluene (108-88-3)		
Slovenia - Occupational Exposure Limits		
OEL TWA	192 mg/m³	
OEL TWA	50 ppm	
OEL STEL	384 mg/m³	
OEL STEL	100 ppm	
Chemical category	Category 2, Potential for cutaneous absorption	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA) [1]	191 mg/m³	
VLA-ED (OEL TWA) [2]	50 ppm	
VLA-EC (OEL STEL)	384 mg/m³	
VLA-EC (OEL STEL) [ppm]	100 ppm	
Chemical category	skin - potential for cutaneous absorption	
Spain - Biological limit values		
BLV	0.6 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift 0.05 mg/l Parameter: Toluene - Medium: blood - Sampling time: start of last shift of workweek 0.08 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	192 mg/m³	
NGV (OEL TWA) [ppm]	50 ppm	
KGV (OEL STEL)	384 mg/m³	
KGV (OEL STEL) [ppm]	100 ppm	
Chemical category	skin notation	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA) [1]	191 mg/m³	
WEL TWA (OEL TWA) [2]	50 ppm	
WEL STEL (OEL STEL)	384 mg/m³	
WEL STEL (OEL STEL) [ppm]	100 ppm	
WEL chemical category	Potential for cutaneous absorption	
Norway - Occupational Exposure Limits		
Grenseverdi (OEL TWA) [1]	94 mg/m³	
Grenseverdi (OEL TWA) [2]	25 ppm	
Korttidsverdi (OEL STEL)	141 mg/m³ (value calculated)	
Korttidsverdi (OEL STEL) [ppm]	37.5 ppm (value calculated)	
Chemical category	skin notation	
Switzerland - Occupational Exposure Limits		
MAK (OEL TWA) [1]	190 mg/m³	
MAK (OEL TWA) [2]	50 ppm	
KZGW (OEL STEL)	760 mg/m³	
KZGW (OEL STEL) [ppm]	200 ppm	

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Toluene (108-88-3)		
Chemical category	skin notation, Category 2 reproductive toxin	
Switzerland - Biological limit values		
BAT (BLV)	600 μg/l Parameter: Toluene - Medium: whole blood - Sampling time: end of shift 6.48 μmol/l Parameter: Toluene - Medium: whole blood - Sampling time: end of shift 2 g/g Kreatinin Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures) Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures) 0.5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures) 4.62 μmol/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures) 75 μg/l Parameter: Toluol - Medium: urine - Sampling time: end of shift	
Turkey - Occupational Exposure Limits		
OEL TWA	192 mg/m³	
OEL TWA	50 ppm	
OEL STEL	384 mg/m³	
OEL STEL	100 ppm	
Chemical category	skin notation	
USA - ACGIH - Occupational Exposure Limits		
Local name	Toluene	
ACGIH OEL TWA [ppm]	20 ppm	
Remark (ACGIH)	TLV® Basis: CNS, visual & hearing impair; female repro system eff; pregnancy loss. Notations: OTO; A4 (Not classifiable as a Human Carcinogen); BEI	
ACGIH chemical category	Not Classifiable as a Human Carcinogen	
Regulatory reference	ACGIH 2024	
USA - ACGIH - Biological Exposure Indices		
Local name	Toluene	
BEI (BLV)	0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: prior to last shift of workweek 0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift 0.3 mg/g Kreatinin Parameter: o-Cresol with hydrolysis - Medium: urine - Sampling time: end of shift (background)	
Regulatory reference	ACGIH 2024	
Ethylbenzene (100-41-4)		
EU - Indicative Occupational Exposure Limit (IOEL)		
IOEL TWA	442 mg/m³	
IOEL TWA [ppm]	100 ppm	
IOEL STEL	884 mg/m³	
IOEL STEL [ppm]	200 ppm	
Notes	Possibility of significant uptake through the skin	
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	440 mg/m³	
MAK (OEL TWA) [ppm]	100 ppm	

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Ethylbenzene (100-41-4)		
MAK (OEL STEL)	880 mg/m³	
MAK (OEL STEL) [ppm]	200 ppm	
Chemical category	skin notation	
Belgium - Occupational Exposure Limits		
OEL TWA	442 mg/m³	
OEL TWA	100 ppm	
OEL STEL	551 mg/m³	
OEL STEL	125 ppm	
Chemical category	Skin, skin notation	
Bulgaria - Occupational Exposure Limits		
OEL TWA	435 mg/m³	
OEL STEL	545 mg/m³	
Bulgaria - Biological limit values		
BLV	2000 mg/g Kreatinin Parameter: Mandelic acid and Phenylglyoxylic acid - total - Medium: urine - Sampling time: at the end of exposure or end of work shift (possible significant absorption through the skin)	
Croatia - Occupational Exposure Limits		
GVI (OEL TWA) [1]	442 mg/m³	
GVI (OEL TWA) [2]	100 ppm	
KGVI (OEL STEL)	884 mg/m³	
KGVI (OEL STEL) [ppm]	200 ppm	
Chemical category	skin notation	
Croatia - Biological limit values		
BLV	1.5 mg/l Parameter: Ethylbenzene - Medium: blood - Sampling time: during exposure 1.5 g/g Kreatinin Parameter: Mandelic acid - Medium: urine - Sampling time: at the end of the work shift and at the end of the working week (calculated on the average Creatinine value of 1.2 g/L urine)	
Cyprus - Occupational Exposure Limits		
OEL TWA	442 mg/m³	
OEL TWA	100 ppm	
OEL STEL	884 mg/m³	
OEL STEL	200 ppm	
Chemical category	Skin-potential for cutaneous absorption	
Czech Republic - Occupational Exposure Limits		
PEL (OEL TWA)	200 mg/m³	
Chemical category	Potential for cutaneous absorption	
Czech Republic - Biological limit values		
BLV	1100 μmol/mmol Creatinine Parameter: Mandelic acid - Medium: urine - Sampling time: end of shift 1500 mg/g Kreatinin Parameter: Mandelic acid - Medium: urine - Sampling time: end of shift	

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Ethylbenzene (100-41-4)		
Denmark - Occupational Exposure Limits		
OEL TWA [1]	217 mg/m³	
OEL TWA [2]	50 ppm	
OEL STEL	434 mg/m³	
OEL STEL	100 ppm	
Chemical category	Potential for cutaneous absorption	
Estonia - Occupational Exposure Limits		
OEL TWA	442 mg/m³	
OEL TWA	100 ppm	
OEL STEL	884 mg/m³	
OEL STEL	200 ppm	
Chemical category	skin notation, Sensitizer	
Finland - Occupational Exposure Limits		
HTP (OEL TWA) [1]	220 mg/m³	
HTP (OEL TWA) [2]	50 ppm	
HTP (OEL STEL)	880 mg/m³	
HTP (OEL STEL) [ppm]	200 ppm	
Chemical category	Potential for cutaneous absorption	
Finland - Biological limit values		
BLV	Parameter: Mandelic acid - Medium: urine - Sampling time: after the shift after a working week or exposure period	
France - Occupational Exposure Limits		
VME (OEL TWA)	88.4 mg/m³ TWA [VME] (restrictive limit)	
VME (OEL TWA) [ppm]	20 ppm TWA [VME] (restrictive limit)	
VLE (OEL C/STEL)	442 mg/m³ STEL [VLCT] (restrictive limit)	
VLE (OEL C/STEL) [ppm]	100 ppm STEL [VLCT] (restrictive limit)	
Chemical category	Risk of cutaneous absorption	
France - Biological limit values		
BLV	Parameter: Mandelic acid - Medium: urine - Sampling time: end of shift at end of workweek (per the Authority, the values for this substance must be decided and/or determined on a case by case basis. Guidance for the calculation of and interpretation of values is provided in the source)	
Germany - Occupational Exposure Limits (TRGS 900)		
AGW (OEL TWA) [1]	88 mg/m³	
AGW (OEL TWA) [2]	20 ppm	
AGW (OEL C)	176 mg/m³	
AGW (OEL C) [ppm]	40 ppm	
Chemical category	skin notation	
Germany - Biological limit values (TRGS 903)		
BLV	250 mg/g Kreatinin Parameter: Mandelic acid plus Phenylglyoxylic acid - Medium: urine - Sampling time: end of shift	

Safety Data Sheet

Ethylbenzene (100-41-4)		
Gibraltar - Occupational Exposure Limits		
OEL TWA	442 mg/m³	
OEL TWA	100 ppm	
OEL STEL	884 mg/m³	
OEL STEL	200 ppm	
Chemical category	skin notation	
Greece - Occupational Exposure Limits		
OEL TWA	435 mg/m³	
OEL TWA	100 ppm	
OEL STEL	545 mg/m³	
OEL STEL	125 ppm	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	442 mg/m³	
CK (OEL STEL)	884 mg/m³	
Chemical category	Potential for cutaneous absorption	
Ireland - Occupational Exposure Limits		
OEL TWA [1]	442 mg/m³	
OEL TWA [2]	100 ppm	
OEL STEL	884 mg/m³	
OEL STEL	200 ppm	
Chemical category	Potential for cutaneous absorption	
Italy - Occupational Exposure Limits		
OEL TWA	442 mg/m³	
OEL TWA	100 ppm	
OEL STEL	884 mg/m³	
OEL STEL	200 ppm	
Chemical category	skin - potential for cutaneous absorption	
Latvia - Occupational Exposure Limits		
OEL TWA	442 mg/m³	
OEL TWA	100 ppm	
OEL STEL	884 mg/m³	
OEL STEL	200 ppm	
Chemical category	skin - potential for cutaneous exposure	
Lithuania - Occupational Exposure Limits		
IPRV (OEL TWA)	442 mg/m³	
IPRV (OEL TWA) [ppm]	100 ppm	
TPRV (OEL STEL)	884 mg/m³	
TPRV (OEL STEL) [ppm]	200 ppm	
Chemical category	skin notation	

Safety Data Sheet

Ethylbenzene (100-41-4)			
Luxembourg - Occupational Exposure Limits			
OEL TWA	442 mg/m³		
OEL TWA	100 ppm		
OEL STEL	884 mg/m³		
OEL STEL	200 ppm		
Chemical category	Possibility of significant uptake through the skin		
Malta - Occupational Exposure Limits			
OEL TWA	442 mg/m³		
OEL TWA	100 ppm		
OEL STEL	884 mg/m³		
OEL STEL	200 ppm		
Chemical category	Possibility of significant uptake through the skin		
Netherlands - Occupational Exposure Limits			
TGG-8u (OEL TWA)	215 mg/m³		
TGG-8u (OEL TWA) [ppm]	48.6 ppm		
TGG-15min (OEL STEL)	430 mg/m³		
TGG-15min (OEL STEL) [ppm]	97.3 ppm		
MAC chemical category	skin notation		
Poland - Occupational Exposure Limits	Poland - Occupational Exposure Limits		
NDS (OEL TWA)	200 mg/m³		
NDSCh (OEL STEL)	400 mg/m³		
Portugal - Occupational Exposure Limits	Portugal - Occupational Exposure Limits		
OEL TWA	442 mg/m³ (indicative limit value)		
OEL TWA	100 ppm (indicative limit value)		
OEL STEL	884 mg/m³ (indicative limit value)		
OEL STEL	200 ppm (indicative limit value)		
Chemical category	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, skin - potential for cutaneous exposure indicative limit value		
Romania - Occupational Exposure Limits			
OEL TWA	442 mg/m³		
OEL TWA	100 ppm		
OEL STEL	884 mg/m³		
OEL STEL	200 ppm		
Chemical category	skin notation		
Romania - Biological limit values			
BLV	1.5 g/g Kreatinin Parameter: Mandelic acid - Medium: urine - Sampling time: end of work week		
Slovakia - Occupational Exposure Limits			
NPHV (OEL TWA) [1]	442 mg/m³		
NPHV (OEL TWA) [2]	100 ppm		

Safety Data Sheet

Ethylbenzene (100-41-4)		
NPHV (OEL C)	884 mg/m³	
Chemical category	Potential for cutaneous absorption	
Slovakia - Biological limit values		
BLV	12 mg/l Parameter: 2 and 4-Ethylphenol - Medium: urine - Sampling time: end of exposure or work shift (also after all work shifts for long-term exposure) 1600 mg/l Parameter: Mandelic acid and Phenylglycolic acid - Medium: urine - Sampling time: end of exposure or work shift (also after all work shifts for long-term exposure)	
Slovenia - Occupational Exposure Limits		
OEL TWA	442 mg/m³	
OEL TWA	100 ppm	
OEL STEL	884 mg/m³	
OEL STEL	200 ppm	
Chemical category	Potential for cutaneous absorption	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA) [1]	441 mg/m³	
VLA-ED (OEL TWA) [2]	100 ppm	
VLA-EC (OEL STEL)	884 mg/m³	
VLA-EC (OEL STEL) [ppm]	200 ppm	
Chemical category	skin - potential for cutaneous absorption	
Spain - Biological limit values		
BLV	700 mg/g Kreatinin Parameter: Mandelic acid plus Phenylglyoxylic acid - Medium: urine - Sampling time: end of workweek	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	220 mg/m³	
NGV (OEL TWA) [ppm]	50 ppm	
KGV (OEL STEL)	884 mg/m³	
KGV (OEL STEL) [ppm]	200 ppm	
Chemical category	skin notation	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA) [1]	441 mg/m³	
WEL TWA (OEL TWA) [2]	100 ppm	
WEL STEL (OEL STEL)	552 mg/m³	
WEL STEL (OEL STEL) [ppm]	125 ppm	
WEL chemical category	Potential for cutaneous absorption	
Norway - Occupational Exposure Limits		
Grenseverdi (OEL TWA) [1]	20 mg/m³	
Grenseverdi (OEL TWA) [2]	5 ppm	
Korttidsverdi (OEL STEL)	30 mg/m³ (value calculated)	
Korttidsverdi (OEL STEL) [ppm]	10 ppm (value calculated)	
Chemical category	skin notation, Carcinogen	

Safety Data Sheet

Ethylbenzene (100-41-4)		
Switzerland - Occupational Exposure Limits		
MAK (OEL TWA) [1]	435 mg/m³	
MAK (OEL TWA) [2]	100 ppm	
KZGW (OEL STEL)	435 mg/m³	
KZGW (OEL STEL) [ppm]	100 ppm	
Chemical category	skin notation	
Switzerland - Biological limit values		
BAT (BLV)	600 mg/g Kreatinin Parameter: Mandelic acid and Phenylglyoxylacid - Medium: urine - Sampling time: end of shift (see also Styrene)	
Turkey - Occupational Exposure Limits		
OEL TWA	442 mg/m³	
OEL TWA	100 ppm	
OEL STEL	884 mg/m³	
OEL STEL	200 ppm	
Chemical category	skin notation	
USA - ACGIH - Occupational Exposure Limits		
Local name	Ethylbenzene	
ACGIH OEL TWA [ppm]	20 ppm	
Remark (ACGIH)	TLV® Basis: URT & eye irr; ototoxicity; kidney eff; CNS impair. Notations: OTO (Ototoxicant); A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI	
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans	
Regulatory reference	ACGIH 2023	
USA - ACGIH - Biological Exposure Indices		
Local name	ETHYLBENZENE	
BEI (BLV)	0.15 g/g Kreatinin Parameter: Sum of mandelic acid and phenylglyoxylic acid (with hydrolysis) - Medium: urine - Sampling time: End of shift - Notations: Ns	
Regulatory reference	ACGIH 2023	
Cumene (98-82-8)		
EU - Indicative Occupational Exposure Limit (IOEL)		
IOEL TWA	100 mg/m³	
IOEL TWA [ppm]	20 ppm	
IOEL STEL	250 mg/m³	
IOEL STEL [ppm]	50 ppm	
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	100 mg/m³	
MAK (OEL TWA) [ppm]	20 ppm	
MAK (OEL STEL)	250 mg/m³	
MAK (OEL STEL) [ppm]	50 ppm	
Chemical category	skin notation	

Safety Data Sheet

Cumene (98-82-8)			
Belgium - Occupational Exposure Limits	Belgium - Occupational Exposure Limits		
OEL TWA	100 mg/m³		
OEL TWA	20 ppm		
OEL STEL	250 mg/m³		
OEL STEL	50 ppm		
Chemical category	Skin, skin notation		
Bulgaria - Occupational Exposure Limits			
OEL TWA	50 mg/m³ (exposure monitoring should take into account the relevant biological monitoring methods of the Scientific Committee on Occupational Exposure Limits (SCOEL) under Annex 2)		
OEL TWA	10 ppm (exposure monitoring should take into account the relevant biological monitoring methods of the Scientific Committee on Occupational Exposure Limits (SCOEL) under Annex 2)		
OEL STEL	250 mg/m³ (exposure monitoring should take into account the relevant biological monitoring methods of the Scientific Committee on Occupational Exposure Limits (SCOEL) under Annex 2)		
OEL STEL	50 ppm (exposure monitoring should take into account the relevant biological monitoring methods of the Scientific Committee on Occupational Exposure Limits (SCOEL) under Annex 2)		
Bulgaria - Biological limit values			
BLV	7 mg/g Kreatinin Parameter: 2-Phenol-2 propanol - Medium: urine - Sampling time: up to two hours after the end of work shift (possible significant absorption through the skin)		
Croatia - Occupational Exposure Limits			
GVI (OEL TWA) [1]	50 mg/m³ (during the monitoring of exposure the relevant value of biological monitoring shall be taken into account as suggested by the Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL) (Cumene)		
GVI (OEL TWA) [2]	10 ppm (during the monitoring of exposure the relevant value of biological monitoring shall be taken into account as suggested by the Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL) (Cumene)		
KGVI (OEL STEL)	250 mg/m³ (during the monitoring of exposure the relevant value of biological monitoring shall be taken into account as suggested by the Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL) (Cumene)		
KGVI (OEL STEL) [ppm]	50 ppm		
Chemical category	skin notation during the monitoring of exposure the relevant value of biological monitoring shall be taken into account as suggested by the Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL)		
Cyprus - Occupational Exposure Limits			
OEL TWA	50 mg/m³ (inhalable fraction)		
OEL TWA	10 ppm (inhalable fraction)		
OEL STEL	250 mg/m³ (inhalable fraction)		
OEL STEL	50 ppm (inhalable fraction)		
Chemical category	Skin-potential for cutaneous absorption		
Czech Republic - Occupational Exposure Limits			
PEL (OEL TWA)	100 mg/m³		
Chemical category	Potential for cutaneous absorption		

Safety Data Sheet

Cumene (98-82-8)			
Denmark - Occupational Exposure Limits			
OEL TWA [1]	100 mg/m³		
OEL TWA [2]	20 ppm		
OEL STEL	200 mg/m³		
OEL STEL	40 ppm		
Chemical category	Potential for cutaneous absorption		
Estonia - Occupational Exposure Limits			
OEL TWA	50 mg/m³		
OEL TWA	10 ppm		
OEL STEL	250 mg/m³		
OEL STEL	50 ppm		
Chemical category	skin notation		
Finland - Occupational Exposure Limits			
HTP (OEL TWA) [1]	100 mg/m³		
HTP (OEL TWA) [2]	20 ppm		
HTP (OEL STEL)	250 mg/m³		
HTP (OEL STEL) [ppm]	50 ppm		
Chemical category	Potential for cutaneous absorption		
France - Occupational Exposure Limits	France - Occupational Exposure Limits		
VME (OEL TWA)	100 mg/m³		
VME (OEL TWA) [ppm]	20 ppm		
VLE (OEL C/STEL)	250 mg/m³		
VLE (OEL C/STEL) [ppm]	50 ppm		
Chemical category	Carcinogen category 1B, Risk of cutaneous absorption		
Germany - Occupational Exposure Limits (TRGS 90	0)		
AGW (OEL TWA) [1]	50 mg/m³		
AGW (OEL TWA) [2]	10 ppm		
AGW (OEL C)	200 mg/m³		
AGW (OEL C) [ppm]	40 ppm		
Chemical category	skin notation		
Germany - Biological limit values (TRGS 903)			
BLV	10 mg/g Kreatinin Parameter: 2-Phenyl-2-propanol (after hydrolysis) - Medium: urine - Sampling time: end of shift		
Gibraltar - Occupational Exposure Limits			
OEL TWA	100 mg/m³		
OEL TWA	20 ppm		
OEL STEL	250 mg/m³		
OEL STEL	50 ppm		
Chemical category	skin notation		

Safety Data Sheet

Cumene (98-82-8)	
Greece - Occupational Exposure Limits	
OEL TWA	50 mg/m³ (during the monitoring of the exposure, the relevant biological monitoring values recommended by the Scientific Committee on Occupational Exposure Limit Values (SCOEL) should be taken under consideration)
OEL TWA	10 ppm (during the monitoring of the exposure, the relevant biological monitoring values recommended by the Scientific Committee on Occupational Exposure Limit Values (SCOEL) should be taken under consideration)
OEL STEL	250 mg/m³ (during the monitoring of the exposure, the relevant biological monitoring values recommended by the Scientific Committee on Occupational Exposure Limit Values (SCOEL) should be taken under consideration)
OEL STEL	50 ppm (during the monitoring of the exposure, the relevant biological monitoring values recommended by the Scientific Committee on Occupational Exposure Limit Values (SCOEL) should be taken under consideration)
Chemical category	skin - potential for cutaneous absorption during the monitoring of the exposure, the relevant biological monitoring values recommended by the Scientific Committee on Occupational Exposure Limit Values (SCOEL) should be taken under consideration
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	100 mg/m³
CK (OEL STEL)	250 mg/m³
Chemical category	Potential for cutaneous absorption
Ireland - Occupational Exposure Limits	
OEL TWA [1]	100 mg/m³
OEL TWA [2]	20 ppm
OEL STEL	250 mg/m³
OEL STEL	50 ppm
Chemical category	Potential for cutaneous absorption
Italy - Occupational Exposure Limits	
OEL TWA	100 mg/m³
OEL TWA	20 ppm
OEL STEL	250 mg/m³
OEL STEL	50 ppm
Chemical category	skin - potential for cutaneous absorption
Latvia - Occupational Exposure Limits	
OEL TWA	100 mg/m³
OEL TWA	20 ppm
OEL STEL	250 mg/m³
OEL STEL	50 ppm
Chemical category	skin - potential for cutaneous exposure
Latvia - Biological limit values	
BEI (BLV)	$7~\mu g/g$ Kreatinin Parameter: Cumene - Medium: urine - Sampling time: no later than two hours after the end of the shift

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thuania - Occupational Exposure Limits		
RV (OEL TWA)	50 mg/m³ (in addition to the indicative occupational exposure limit values, biological monitoring values must be taken into account when monitoring exposure)	
RV (OEL TWA) [ppm]	10 ppm (in addition to the indicative occupational exposure limit values, biological monitoring values must be taken into account when monitoring exposure)	
PRV (OEL STEL)	170 mg/m³ (in addition to the indicative occupational exposure limit values, biological monitoring values must be taken into account when monitoring exposure)	
PRV (OEL STEL) [ppm]	35 ppm (in addition to the indicative occupational exposure limit values, biological monitoring values must be taken into account when monitoring exposure)	
nemical category	skin notation	
xembourg - Occupational Exposure Limits		
EL TWA	50 mg/m ³	
EL TWA	10 ppm	
EL STEL	250 mg/m³	
EL STEL	50 ppm	
nemical category	Possibility of significant uptake through the skin	
Malta - Occupational Exposure Limits		
EL TWA	50 mg/m ³	
EL TWA	10 ppm	
EL STEL	250 mg/m³	
EL STEL	50 ppm	
nemical category	Possibility of significant uptake through the skin	
etherlands - Occupational Exposure Limits		
GG-8u (OEL TWA)	100 mg/m³	
GG-8u (OEL TWA) [ppm]	10 ppm	
GG-15min (OEL STEL)	250 mg/m³	
GG-15min (OEL STEL) [ppm]	50 ppm	
AC chemical category	skin notation	
oland - Occupational Exposure Limits		
OS (OEL TWA)	100 mg/m³	
OSCh (OEL STEL)	250 mg/m³	
ortugal - Occupational Exposure Limits		
EL TWA	50 mg/m³ (indicative limit value)	
EL TWA	10 ppm (indicative limit value)	
EL STEL	250 mg/m³ (indicative limit value)	
EL STEL	50 ppm (indicative limit value)	
nemical category	skin - potential for cutaneous exposure indicative limit value	
Romania - Occupational Exposure Limits		
EL TWA	100 mg/m³	
EL TWA	20 ppm	

Safety Data Sheet

Cumene (98-82-8)		
OEL STEL	250 mg/m³	
OEL STEL	50 ppm	
Chemical category	skin notation	
Slovakia - Occupational Exposure Limits		
NPHV (OEL TWA) [1]	500 mg/m³	
NPHV (OEL TWA) [2]	20 ppm	
NPHV (OEL C)	250 mg/m³	
Chemical category	Potential for cutaneous absorption	
Slovakia - Biological limit values		
BLV	10.6 mg/l Parameter: 2-Phenylpropane - Medium: urine - Sampling time: end of exposure or work shift	
Slovenia - Occupational Exposure Limits		
OEL TWA	50 mg/m³	
OEL TWA	10 ppm	
OEL STEL	250 mg/m³	
OEL STEL	50 ppm	
Chemical category	Potential for cutaneous absorption	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA) [1]	100 mg/m³	
VLA-ED (OEL TWA) [2]	20 ppm	
VLA-EC (OEL STEL)	250 mg/m³	
VLA-EC (OEL STEL) [ppm]	50 ppm	
Chemical category	C1B, skin - potential for cutaneous absorption	
Spain - Biological limit values		
BLV	7 mg/g Kreatinin Parameter: 2-Phenyl-2-propanol - Medium: urine - Sampling time: end of shift (with hydrolysis)	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	120 mg/m³	
NGV (OEL TWA) [ppm]	25 ppm	
KGV (OEL STEL)	250 mg/m³	
KGV (OEL STEL) [ppm]	50 ppm	
Chemical category	skin notation	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA) [1]	125 mg/m³	
WEL TWA (OEL TWA) [2]	25 ppm	
WEL STEL (OEL STEL)	375 mg/m ³	
WEL STEL (OEL STEL) [ppm]	75 ppm	
WEL chemical category	Potential for cutaneous absorption	
Norway - Occupational Exposure Limits		
Grenseverdi (OEL TWA) [1]	50 mg/m³	

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Cumene (98-82-8)		
Grenseverdi (OEL TWA) [2]	10 ppm	
Korttidsverdi (OEL STEL)	250 mg/m³ (value from the regulation)	
Korttidsverdi (OEL STEL) [ppm]	50 ppm (value from the regulation)	
Chemical category	skin notation, Carcinogen	
Switzerland - Occupational Exposure Limits		
MAK (OEL TWA) [1]	100 mg/m³	
MAK (OEL TWA) [2]	20 ppm	
KZGW (OEL STEL)	400 mg/m³	
KZGW (OEL STEL) [ppm]	80 ppm	
Chemical category	skin notation, Category C2 carcinogen	
Switzerland - Biological limit values		
BAT (BLV)	20 mg/g Kreatinin Parameter: 2-Phenyl-2-propanol after hydrolysis - Medium: urine - Sampling time: end of shift Parameter: 2-Phenyl-2-propanol after hydrolysis - Medium: urine - Sampling time: end of shift	
Turkey - Occupational Exposure Limits		
OEL TWA	100 mg/m³	
OEL TWA	20 ppm	
OEL STEL	250 mg/m³	
OEL STEL	50 ppm	
Chemical category	skin notation	
USA - ACGIH - Occupational Exposure Limits		
Local name	Cumene	
ACGIH OEL TWA [ppm]	50 ppm	
Remark (ACGIH)	TLV® Basis: URT adenoma; neurological eff. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)	
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans	
Regulatory reference	ACGIH 2023	
Xylene (1330-20-7)		
EU - Indicative Occupational Exposure Limit (IOEL)		
IOEL TWA	221 mg/m³	
IOEL TWA [ppm]	50 ppm	
IOEL STEL	442 mg/m³	
IOEL STEL [ppm]	100 ppm	
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	221 mg/m³	
MAK (OEL TWA) [ppm]	50 ppm	
MAK (OEL STEL)	442	
MAK (OEL STEL) [ppm]	100 ppm	

Safety Data Sheet

Xylene (1330-20-7)	Xylene (1330-20-7)	
Belgium - Occupational Exposure Limits		
OEL TWA	221	
OEL TWA	50 ppm	
OEL STEL	442 mg/m³	
OEL STEL	100 ppm	
Denmark - Occupational Exposure Limits		
OEL TWA [1]	109 mg/m³	
OEL TWA [2]	25 ppm	
OEL STEL	218 mg/m³	
OEL STEL	50 ppm	
Finland - Occupational Exposure Limits		
HTP (OEL TWA) [1]	220 mg/m³	
HTP (OEL TWA) [2]	50 ppm	
HTP (OEL STEL)	440 mg/m³	
HTP (OEL STEL) [ppm]	100 ppm	
France - Occupational Exposure Limits		
VME (OEL TWA)	221 mg/m³ [VME] (restrictive limit)	
VME (OEL TWA) [ppm]	50 ppm [VME] (restrictive limit)	
VLE (OEL C/STEL)	442 mg/m³ [VLCT] (restrictive limit)	
VLE (OEL C/STEL) [ppm]	100 ppm [VLCT] (restrictive limit)	
Chemical category	Risk of cutaneous absorption	
Germany - Occupational Exposure Limits (TRGS 90	0)	
AGW (OEL TWA) [1]	440 mg/m³	
AGW (OEL TWA) [2]	100 ppm	
AGW (OEL C)	880 mg/m³	
AGW (OEL C) [ppm]	200 ppm	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	221 mg/m³	
CK (OEL STEL)	442 mg/m³	
Ireland - Occupational Exposure Limits		
OEL TWA [1]	221 mg/m³	
OEL TWA [2]	50 ppm	
OEL STEL	442 mg/m³	
OEL STEL	100 ppm	
Italy - Occupational Exposure Limits		
OEL TWA	50 ppm TWA (pure)	
OEL STEL	100 ppm STEL (pure)	
Chemical category	skin - potential for cutaneous absorption	

Safety Data Sheet

Xylene (1330-20-7)		
Latvia - Occupational Exposure Limits		
OEL TWA	221 mg/m³	
OEL TWA	50 ppm	
OEL STEL	442 mg/m³	
OEL STEL	100 ppm	
Poland - Occupational Exposure Limits		
NDS (OEL TWA)	100 mg/m³	
Romania - Occupational Exposure Limits		
OEL TWA	221 mg/m³	
OEL TWA	50 ppm	
OEL STEL	422 mg/m³	
OEL STEL	100 ppm	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA) [1]	221 mg/m³	
VLA-ED (OEL TWA) [2]	50 ppm	
VLA-EC (OEL STEL)	442 mg/m³	
VLA-EC (OEL STEL) [ppm]	100 ppm	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	221 mg/m³	
NGV (OEL TWA) [ppm]	50 ppm	
KGV (OEL STEL)	442 mg/m³	
KGV (OEL STEL) [ppm]	100 ppm	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA) [1]	221 mg/m³	
WEL TWA (OEL TWA) [2]	50 ppm	
WEL STEL (OEL STEL)	442 mg/m³	
WEL STEL (OEL STEL) [ppm]	100 ppm	
Switzerland - Occupational Exposure Limits		
MAK (OEL TWA) [1]	435 mg/m³	
MAK (OEL TWA) [2]	100 ppm	
KZGW (OEL STEL)	870 mg/m³	
KZGW (OEL STEL) [ppm]	200 ppm	
USA - ACGIH - Occupational Exposure Limits		
Local name	Xylene, mixed isomers (Dimethylbenzene)	
ACGIH OEL TWA	221 mg/m³	
ACGIH OEL TWA [ppm]	50 ppm	
ACGIH OEL STEL	442 mg/m³	
ACGIH OEL STEL [ppm]	100 ppm	

Safety Data Sheet

Xylene (1330-20-7)	Xylene (1330-20-7)		
Remark (ACGIH)	TLV® Basis: URT & eye irr; hematologic eff; ototoxycity (for mixtures containing p-xylene); CNS impair. Notations: OTO (for mixtures containing p-xylene); A4 (Not classifiable as a Human Carcinogen); BEI		
Regulatory reference	ACGIH 2023		
USA - ACGIH - Biological Exposure Indica	es		
Local name	XYLENES (Technical or commercial grade)		
BEI (BLV)	1.5 g/g Kreatinin Parameter: Methylhippuric acids - Medium: urine - Sampling time: End of shift		
Regulatory reference	ACGIH 2023		
Carbon black (1333-86-4)			
Belgium - Occupational Exposure Limits			
OEL TWA	3 mg/m³		
Croatia - Occupational Exposure Limits			
GVI (OEL TWA) [1]	3.5 mg/m³		
KGVI (OEL STEL)	7 mg/m³		
Czech Republic - Occupational Exposure	Limits		
PEL (OEL TWA)	2 mg/m³ (dust)		
Denmark - Occupational Exposure Limits			
OEL TWA [1]	3.5 mg/m³		
OEL STEL	7 mg/m³		
Estonia - Occupational Exposure Limits			
OEL TWA	3 mg/m³		
Finland - Occupational Exposure Limits			
HTP (OEL TWA) [1]	3.5 mg/m³		
HTP (OEL STEL)	7 mg/m³		
France - Occupational Exposure Limits			
VME (OEL TWA)	3.5 mg/m³		
Greece - Occupational Exposure Limits			
OEL TWA	3.5 mg/m³		
OEL STEL	7 mg/m³		
Hungary - Occupational Exposure Limits			
AK (OEL TWA)	3 mg/m³ (inhalable concentration (flying and fibrous powders)		
Ireland - Occupational Exposure Limits			
OEL TWA [1]	3 mg/m³ (inhalable fraction)		
OEL STEL	15 mg/m³ (calculated-inhalable fraction)		
Poland - Occupational Exposure Limits	·		
NDS (OEL TWA)	4 mg/m³ (inhalable fraction)		
Portugal - Occupational Exposure Limits	·		
OEL TWA	3 mg/m³ (inhalable fraction)		
Chemical category	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans		

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Carbon black (1333-86-4)		
Slovakia - Occupational Exposure Limits		
NPHV (OEL TWA) [1]	2 mg/m³ (respirable fraction, 5% or less fibrogenic component) 10 mg/m³ (respirable fraction, greater than 5% fibrogenic component) 10 mg/m³ (total aerosol)	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA) [1]	3.5 mg/m³	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	3 mg/m³ (inhalable fraction)	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA) [1]	3.5 mg/m³	
WEL STEL (OEL STEL)	7 mg/m³	
Norway - Occupational Exposure Limits		
Grenseverdi (OEL TWA) [1]	3.5 mg/m³	
Korttidsverdi (OEL STEL)	7 mg/m³ (value calculated)	
USA - ACGIH - Occupational Exposure Limits		
Local name	Carbon black	
ACGIH OEL TWA	3 mg/m³ (I - Inhalable particulate matter)	
Remark (ACGIH)	TLV® Basis: Bronchitis. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)	
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans	
Regulatory reference	ACGIH 2024	
Acetone (67-64-1)		
EU - Indicative Occupational Exposure Limit (IOEL)		
IOEL TWA	1210 mg/m³	
IOEL TWA [ppm]	500 ppm	
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	1200 mg/m³	
MAK (OEL TWA) [ppm]	500 ppm	
MAK (OEL STEL)	4800 mg/m³	
MAK (OEL STEL) [ppm]	2000 ppm	
Belgium - Occupational Exposure Limits		
OEL TWA	594 mg/m³	
OEL TWA	246 ppm	
OEL STEL	1187 mg/m³	
OEL STEL	492 ppm	
Bulgaria - Occupational Exposure Limits		
OEL TWA	600 mg/m³	
OEL STEL	1400 mg/m³	

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Acetone (67-64-1)	
Bulgaria - Biological limit values	
BLV	80 mg/l Parameter: Acetone - Medium: urine - Sampling time: at the end of exposure or end of work shift
Croatia - Occupational Exposure Limits	·
GVI (OEL TWA) [1]	1210 mg/m³
GVI (OEL TWA) [2]	500 ppm
Croatia - Biological limit values	·
BLV	20 mg/l Parameter: Acetone - Medium: blood - Sampling time: at the end of the work shift (interference of endogenous Acetone (<1.3 mg/L)) 20 mg/g Kreatinin Parameter: Acetone - Medium: urine - Sampling time: at the end of the work shift (calculated on the average Creatinine value of 1.2 g/L urine)
Cyprus - Occupational Exposure Limits	
OEL TWA	1210 mg/m³
OEL TWA	500 ppm
Chemical category	Skin-potential for cutaneous absorption
Czech Republic - Occupational Exposure Li	mits
PEL (OEL TWA)	800 mg/m³
Denmark - Occupational Exposure Limits	
OEL TWA [1]	600 mg/m³
OEL TWA [2]	250 ppm
OEL STEL	1200 mg/m³
OEL STEL	500 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	1210 mg/m³
OEL TWA	500 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	1200 mg/m³
HTP (OEL TWA) [2]	500 ppm
HTP (OEL STEL)	1500 mg/m³
HTP (OEL STEL) [ppm]	630 ppm
France - Occupational Exposure Limits	·
VME (OEL TWA)	1210 mg/m³ (restrictive limit)
VME (OEL TWA) [ppm]	500 ppm (restrictive limit)
VLE (OEL C/STEL)	2420 mg/m³ (restrictive limit)
VLE (OEL C/STEL) [ppm]	1000 ppm (restrictive limit)
France - Biological limit values	
BLV	Parameter: Acetone - Medium: urine - Sampling time: end of shift (per the Authority, the values for this substance must be decided and/or determined on a case by case basis. Guidance for the calculation of and interpretation of values is provided in the source)

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Acetone (67-64-1)		
Germany - Occupational Exposure Limits (TRGS 900)		
AGW (OEL TWA) [1]	1200 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)	
AGW (OEL TWA) [2]	500 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)	
Germany - Biological limit values (TRGS 903)		
BLV	50 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift	
Gibraltar - Occupational Exposure Limits		
OEL TWA	1210 mg/m³	
OEL TWA	500 ppm	
Greece - Occupational Exposure Limits		
OEL TWA	1780 mg/m³	
OEL STEL	3560 mg/m³	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	1210 mg/m³	
Ireland - Occupational Exposure Limits		
OEL TWA [1]	1210 mg/m³	
OEL TWA [2]	500 ppm	
OEL STEL	3630 mg/m³ (calculated)	
OEL STEL	1500 ppm (calculated)	
Italy - Occupational Exposure Limits		
OEL TWA	1210 mg/m³	
OEL TWA	500 ppm	
Latvia - Occupational Exposure Limits		
OEL TWA	1210 mg/m³	
OEL TWA	500 ppm	
Lithuania - Occupational Exposure Limits		
IPRV (OEL TWA)	1210 mg/m³	
IPRV (OEL TWA) [ppm]	500 ppm	
TPRV (OEL STEL)	2420 mg/m³	
TPRV (OEL STEL) [ppm]	1000 ppm	
Luxembourg - Occupational Exposure Limits		
OEL TWA	1210 mg/m³	
OEL TWA	500 ppm	
Malta - Occupational Exposure Limits		
OEL TWA	1210 mg/m³	
OEL TWA	500 ppm	
Netherlands - Occupational Exposure Limits		
TGG-8u (OEL TWA)	1210 mg/m³	
TGG-8u (OEL TWA) [ppm]	500 ppm	

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Acetone (67-64-1)		
TGG-15min (OEL STEL)	2420 mg/m³	
TGG-15min (OEL STEL) [ppm]	1 ppm	
Poland - Occupational Exposure Limits		
NDS (OEL TWA)	600 mg/m³	
NDSCh (OEL STEL)	1800 mg/m³	
Portugal - Occupational Exposure Limits		
OEL TWA	1210 mg/m³ (indicative limit value)	
OEL TWA	500 ppm (indicative limit value)	
OEL STEL	750 ppm	
Chemical category	A4 - Not Classifiable as a Human Carcinogen	
Romania - Occupational Exposure Limits		
OEL TWA	1210 mg/m³	
OEL TWA	500 ppm	
Romania - Biological limit values		
BLV	50 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift	
Slovakia - Occupational Exposure Limits		
NPHV (OEL TWA) [1]	1210 mg/m³	
NPHV (OEL TWA) [2]	500 ppm	
Slovakia - Biological limit values		
BLV	80 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of exposure or work shift	
Slovenia - Occupational Exposure Limits		
OEL TWA	1210 mg/m³	
OEL TWA	500 ppm	
OEL STEL	2420 mg/m³	
OEL STEL	1000 ppm	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA) [1]	1210 mg/m³ (indicative limit value)	
VLA-ED (OEL TWA) [2]	500 ppm (indicative limit value)	
Spain - Biological limit values		
BLV	50 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	600 mg/m³	
NGV (OEL TWA) [ppm]	250 ppm	
KGV (OEL STEL)	1200 mg/m³	
KGV (OEL STEL) [ppm]	500 ppm	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA) [1]	1210 mg/m³	
WEL TWA (OEL TWA) [2]	500 ppm	

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Acetone (67-64-1)		
WEL STEL (OEL STEL)	3620 mg/m³	
WEL STEL (OEL STEL) [ppm]	1500 ppm	
Norway - Occupational Exposure Limits		
Grenseverdi (OEL TWA) [1]	295 mg/m³	
Grenseverdi (OEL TWA) [2]	125 ppm	
Korttidsverdi (OEL STEL)	368.75 mg/m³ (value calculated)	
Korttidsverdi (OEL STEL) [ppm]	156.25 ppm (value calculated)	
Switzerland - Occupational Exposure Limits		
MAK (OEL TWA) [1]	1200 mg/m³	
MAK (OEL TWA) [2]	500 ppm	
KZGW (OEL STEL)	2400 mg/m³	
KZGW (OEL STEL) [ppm]	1000 ppm	
Switzerland - Biological limit values		
BAT (BLV)	50 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift Parameter: Acetone - Medium: urine - Sampling time: end of shift	
Turkey - Occupational Exposure Limits		
OEL TWA	1210 mg/m³	
OEL TWA	500 ppm	
USA - ACGIH - Occupational Exposure Limits		
Local name	Acetone	
ACGIH OEL TWA [ppm]	250 ppm	
ACGIH OEL STEL [ppm]	500 ppm	
Remark (ACGIH)	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI	
ACGIH chemical category	Not Classifiable as a Human Carcinogen	
Regulatory reference	ACGIH 2023	
USA - ACGIH - Biological Exposure Indices		
Local name	ACETONE	
BEI (BLV)	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift (nonspecific)	
Regulatory reference	ACGIH 2023	
Methyl ethyl ketone (78-93-3)		
EU - Indicative Occupational Exposure Limit (IOEL)		
IOEL TWA	600 mg/m³	
IOEL TWA [ppm]	200 ppm	
IOEL STEL	900 mg/m³	
IOEL STEL [ppm]	300 ppm	
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	295 mg/m³	
MAK (OEL TWA) [ppm]	100 ppm	

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Methyl ethyl ketone (78-93-3)		
MAK (OEL STEL)	590 mg/m³	
MAK (OEL STEL) [ppm]	200 ppm	
Chemical category	skin notation	
Belgium - Occupational Exposure Limits		
OEL TWA	600 mg/m³	
OEL TWA	200 ppm	
OEL STEL	900 mg/m³	
OEL STEL	300 ppm	
Bulgaria - Occupational Exposure Limits		
OEL TWA	590 mg/m³	
OEL STEL	885 mg/m³	
Croatia - Occupational Exposure Limits		
GVI (OEL TWA) [1]	600 mg/m³	
GVI (OEL TWA) [2]	200 ppm	
KGVI (OEL STEL)	900 mg/m³	
KGVI (OEL STEL) [ppm]	300 ppm	
Croatia - Biological limit values		
BLV	2.6 mg/g Kreatinin Parameter: Ethyl methyl ketone - Medium: urine - Sampling time: at the end of the work shift (calculated on the average Creatinine value of 1.2 g/L urine)	
Cyprus - Occupational Exposure Limits		
OEL TWA	600 mg/m³	
OEL TWA	200 ppm	
OEL STEL	900 mg/m³	
OEL STEL	300 ppm	
Czech Republic - Occupational Exposure Limits		
PEL (OEL TWA)	600 mg/m³	
Denmark - Occupational Exposure Limits		
OEL TWA [1]	145 mg/m³	
OEL TWA [2]	50 ppm	
OEL STEL	290 mg/m³	
OEL STEL	100 ppm	
Chemical category	Potential for cutaneous absorption	
Estonia - Occupational Exposure Limits		
OEL TWA	600 mg/m³	
OEL TWA	200 ppm	
OEL STEL	900 mg/m³	
OEL STEL	300 ppm	
Finland - Occupational Exposure Limits		
HTP (OEL TWA) [1]	60 mg/m³	

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Methyl ethyl ketone (78-93-3)		
HTP (OEL TWA) [2]	20 ppm	
HTP (OEL STEL)	300 mg/m³	
HTP (OEL STEL) [ppm]	100 ppm	
Chemical category	Potential for cutaneous absorption	
France - Occupational Exposure Limits		
VME (OEL TWA)	600 mg/m³	
VME (OEL TWA) [ppm]	200 ppm	
VLE (OEL C/STEL)	900 mg/m³	
VLE (OEL C/STEL) [ppm]	300 ppm	
Chemical category	Risk of cutaneous absorption	
France - Biological limit values		
BLV	Parameter: Methylethylketone - Medium: urine - Sampling time: end of shift (per the Authority, the values for this substance must be decided and/or determined on a case by case basis. Guidance for the calculation of and interpretation of values is provided in the source)	
Germany - Occupational Exposure Limits (TRGS 90	00)	
AGW (OEL TWA) [1]	600 mg/m ³	
AGW (OEL TWA) [2]	200 ppm	
AGW (OEL C)	600 mg/m³	
AGW (OEL C) [ppm]	200 ppm	
Chemical category	skin notation	
Germany - Biological limit values (TRGS 903)		
BLV	2 mg/l Parameter: 2-Butanone - Medium: urine - Sampling time: end of shift	
Gibraltar - Occupational Exposure Limits		
OEL TWA	600 mg/m ³	
OEL TWA	200 ppm	
OEL STEL	900 mg/m³	
OEL STEL	300 ppm	
Greece - Occupational Exposure Limits		
OEL TWA	600 mg/m³	
OEL TWA	200 ppm	
OEL STEL	900 mg/m³	
OEL STEL	300 ppm	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	600 mg/m ³	
CK (OEL STEL)	900 mg/m ³	
Chemical category	Potential for cutaneous absorption	
Ireland - Occupational Exposure Limits		
OEL TWA [1]	600 mg/m ³	
OEL TWA [2]	200 ppm	

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Methyl ethyl ketone (78-93-3)			
OEL STEL	900 mg/m³		
OEL STEL	300 ppm		
Chemical category	Potential for cutaneous absorption		
Italy - Occupational Exposure Limits			
OEL TWA	600 mg/m³		
OEL TWA	200 ppm		
OEL STEL	900 mg/m³		
OEL STEL	300 ppm		
Latvia - Occupational Exposure Limits			
OEL TWA	200 mg/m³		
OEL TWA	67 ppm		
OEL STEL	900 mg/m³		
OEL STEL	300 ppm		
Luxembourg - Occupational Exposure Limits			
OEL TWA	600 mg/m³		
OEL TWA	200 ppm		
OEL STEL	900 mg/m³		
OEL STEL	300 ppm		
Malta - Occupational Exposure Limits			
OEL TWA	600 mg/m³		
OEL TWA	200 ppm		
OEL STEL	900 mg/m³		
OEL STEL	300 ppm		
Netherlands - Occupational Exposure Limits			
TGG-8u (OEL TWA)	590 mg/m³		
TGG-8u (OEL TWA) [ppm]	197 ppm		
TGG-15min (OEL STEL)	900 mg/m³		
TGG-15min (OEL STEL) [ppm]	300 ppm		
MAC chemical category	skin notation		
Poland - Occupational Exposure Limits	Poland - Occupational Exposure Limits		
NDS (OEL TWA)	590		
NDSCh (OEL STEL)	900		
Portugal - Occupational Exposure Limits			
OEL TWA	600 mg/m³ (indicative limit value)		
OEL TWA	200 ppm (indicative limit value)		
OEL STEL	900 mg/m³ (indicative limit value)		
OEL STEL	300 ppm (indicative limit value)		
Romania - Occupational Exposure Limits			
OEL TWA	600 mg/m³		

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Methyl ethyl ketone (78-93-3)		
OEL TWA	200 ppm	
OEL STEL	900 mg/m³	
OEL STEL	300 ppm	
Romania - Biological limit values		
BLV	2 mg/l Parameter: Methylethylketone - Medium: urine - Sampling time: end of shift	
Slovakia - Occupational Exposure Limits		
NPHV (OEL TWA) [1]	600 mg/m³	
NPHV (OEL TWA) [2]	200 ppm	
NPHV (OEL C)	900 mg/m³	
Slovenia - Occupational Exposure Limits		
OEL TWA	600 mg/m³	
OEL TWA	200 ppm	
OEL STEL	900 mg/m³	
OEL STEL	300 ppm	
Chemical category	Potential for cutaneous absorption	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA) [1]	600 mg/m³	
VLA-ED (OEL TWA) [2]	200 ppm	
VLA-EC (OEL STEL)	900 mg/m³	
VLA-EC (OEL STEL) [ppm]	300 ppm	
Spain - Biological limit values		
BLV	2 mg/l Parameter: Methyl ethyl ketone - Medium: urine - Sampling time: end of shift	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	150 mg/m³	
NGV (OEL TWA) [ppm]	50 ppm	
KGV (OEL STEL)	900 mg/m³	
KGV (OEL STEL) [ppm]	600 ppm	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA) [1]	600 mg/m³	
WEL TWA (OEL TWA) [2]	200 ppm	
WEL STEL (OEL STEL)	899 mg/m³	
WEL STEL (OEL STEL) [ppm]	300 ppm	
WEL chemical category	Potential for cutaneous absorption	
Norway - Occupational Exposure Limits		
Grenseverdi (OEL TWA) [1]	220 mg/m³	
Grenseverdi (OEL TWA) [2]	75 ppm	
Korttidsverdi (OEL STEL)	275 mg/m³ (value calculated)	

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Methyl ethyl ketone (78-93-3)		
Switzerland - Occupational Exposure Limits		
MAK (OEL TWA) [1]	590 mg/m³	
MAK (OEL TWA) [2]	200 ppm	
KZGW (OEL STEL)	590 mg/m³	
KZGW (OEL STEL) [ppm]	200 ppm	
Chemical category	skin notation	
Switzerland - Biological limit values		
BAT (BLV)	2 mg/l Parameter: 2-Butanone - Medium: urine - Sampling time: end of shift, before subsequent shift or 16 hour 27.7 µmol/l Parameter: 2-Butanone - Medium: urine - Sampling time: end of shift, before subsequent shift or 16 hour	
Turkey - Occupational Exposure Limits		
OEL TWA	600 mg/m³	
OEL TWA	200 ppm	
OEL STEL	900 mg/m³	
OEL STEL	300 ppm	
USA - ACGIH - Occupational Exposure Limits		
Local name	Methyl ethyl ketone (MEK)	
ACGIH OEL TWA [ppm]	200 ppm	
ACGIH OEL STEL [ppm]	300 ppm	
Remark (ACGIH)	TLV® Basis: Embryo/fetal dam; URT irr; headache; dizziness. Notations: Skin; BEI	
Regulatory reference	ACGIH 2024	
USA - ACGIH - Biological Exposure Indices		
Local name	Methyl ethyl ketone	
BEI (BLV)	2 mg/l Parameter: MEK - Medium: urine - Sampling time: end of shift (nonspecific)	
Regulatory reference	ACGIH 2024	

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.

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8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Protective goggles. Protective clothing. Insufficient ventilation: wear respiratory protection.

Personal protective equipment symbol(s):







8.2.2.1. Eye and face protection

Eye protection:

Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles [EN 166]

8.2.2.2. Skin protection

Skin and body protection:

Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure. [EN 14605:2005 and EN 13034:2005]

Hand protection:

Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Suitable gloves for this specific application can be recommended by the glove supplier.

8.2.2.3. Respiratory protection

Respiratory protection:

Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment with gas filter (type A2). Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid Colour : Black.

Odour : characteristic. Solvent.

Odour threshold : Not available : Not available Melting point : Not available Freezing point : Not available Boiling point : Not available Flammability **Explosion limits** : Not available Lower explosive limit (LEL) : Not available Upper explosive limit (UEL) : Not available

Flash point : -20 °C (-4 °F) (Acetone value)

Auto-ignition temperature Not available Not available Decomposition temperature Not available рΗ Viscosity, kinematic Not available Not available Partition coefficient n-octanol/water (Log Kow) Not available Vapour pressure Not available Vapour pressure at 50°C : Not available Density : Not available

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

: Not available Relative density Relative vapour density at 20°C : Not available Particle size : Not applicable Particle size distribution : Not applicable Particle shape : Not applicable Particle aspect ratio : Not applicable Particle aggregation state : Not applicable Particle agglomeration state : Not applicable Particle specific surface area : Not applicable Particle dustiness : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Ignition sources. Heat. Sparks. Open flame. Static electricity.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. selected amines with alkali metals and halogens.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2).

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

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Toluene (108-88-3)	
LD50 oral rat	5000 mg/kg
LD50 dermal rabbit	5000 mg/kg
LC50 Inhalation - Rat	384 mg/m³
LC50 Inhalation - Rat (Vapours)	> 20 mg/l Source: ECHA
Ethylbenzene (100-41-4)	
LD50 oral rat	3500 mg/kg

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Ethylbenzene (100-41-4)	Ethylbenzene (100-41-4)		
LD50 dermal rabbit	15400 mg/kg		
LC50 Inhalation - Rat	17.2 mg/l/4h		
LC50 Inhalation - Rat [ppm]	4000 ppm Source: ECHA, Harmonized classification of EU CLP		
Cumene (98-82-8)			
LD50 oral rat	2910 mg/kg Source: HSDB		
LD50 oral	2700 mg/kg body weight		
LD50 dermal rabbit	12300 µl/kg		
LC50 Inhalation - Rat [ppm]	> 3577 ppm 6 h		
Xylene (1330-20-7)			
LD50 oral rat	3523 mg/kg		
LD50 dermal rabbit	12126 mg/kg body weight Animal: rabbit, Animal sex: male, Remarks on results: other:		
LC50 Inhalation - Rat	27124 mg/m³ (air)		
LC50 Inhalation - Rat [ppm]	5922 ppm		
Carbon black (1333-86-4)			
LD50 oral rat	> 15400 mg/kg		
LD50 dermal rat	> 2000 mg/kg (Source: ECHA)		
LD50 dermal rabbit	> 3 g/kg		
LC50 Inhalation - Rat	> 4.6 mg/m³ (Exposure time: 4 h Source: ECHA_API)		
Acetone (67-64-1)			
LD50 oral rat	5800 mg/kg (Source: NLM_CIP)		
LD50 dermal rat	> 15700 mg/kg		
LD50 dermal rabbit	> 15700 mg/kg (Source: OECD_SIDS)		
LC50 Inhalation - Rat	50100 mg/m³ (Exposure time: 8 h Source: OECD_SIDS)		
LC50 Inhalation - Rat (Vapours)	76 mg/l Source: ECHA		
Methyl ethyl ketone (78-93-3)			
LD50 oral rat	2483 mg/kg (Source: JAPAN_GHS)		
LD50 oral	4000 mg/kg body weight		
LD50 dermal rabbit	5000 mg/kg (Source: JAPAN_GHS)		
LC50 Inhalation - Rat [ppm]	11700 ppm/4h		
LC50 Inhalation - Rat (Vapours)	32 mg/l Source: RTECS		
Skin corrosion/irritation	: Causes skin irritation.		
Serious eye damage/irritation Respiratory or skin sensitization	: Causes serious eye irritation. : Not classified		
Germ cell mutagenicity Carcinogenicity	: Not classified		
Ethylbenzene (100-41-4)	: Suspected of causing cancer.		
IARC group	2B - Possibly carcinogenic to humans		
Cumene (98-82-8)			
IARC group	2B - Possibly carcinogenic to humans		
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Carbon black (1333-86-4)	
IARC group 2B - Possibly carcinogenic to humans	
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: May cause drowsiness or dizziness. May cause respiratory irritation.
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.

11.2. Information on other hazards

The mixture contains Methyl ethyl ketone (CAS#78-93-3), which is identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605, at a concentration equal to or greater than 0,1 %

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

The mixture contains Methyl ethyl ketone (CAS#78-93-3), which is identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605, at a concentration equal to or greater than 0,1 %

12.7. Other adverse effects

Other adverse effects : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Obtain the consent of pollution control authorities before discharging to wastewater

treatment plants.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR) : UN 1139

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 UN-No. (IMDG)
 : UN 1139

 UN-No. (IATA)
 : UN 1139

 UN-No. (ADN)
 : UN 1139

 UN-No. (RID)
 : UN 1139

14.2. UN proper shipping name

Proper Shipping Name (ADR) : COATING SOLUTION
Proper Shipping Name (IMDG) : COATING SOLUTION
Proper Shipping Name (IATA) : Coating solution
Proper Shipping Name (ADN) : COATING SOLUTION
Proper Shipping Name (RID) : COATING SOLUTION

Transport document description (ADR)

Transport document description (IMDG)

Transport document description (IMDG)

Transport document description (IATA)

Transport document description (ADN)

Transport document description (RID)

Transport document description (RID)

UN 1139 COATING SOLUTION, 3, II

UN 1139 COATING SOLUTION, 3, II

UN 1139 COATING SOLUTION, 3, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3 Hazard labels (ADR) : 3



IMDG

Transport hazard class(es) (IMDG) : 3 Hazard labels (IMDG) : 3



IATA

Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3



ADN

Transport hazard class(es) (ADN) : 3 Hazard labels (ADN) : 3



RID

Transport hazard class(es) (RID) : 3 Hazard labels (RID) : 3

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14.4. Packing group

Packing group (ADR) : 11 Packing group (IMDG) : 11 Packing group (IATA) : 11 Ш Packing group (ADN) Packing group (RID) : 11

14.5. Environmental hazards

Dangerous for the environment : No Marine pollutant No

Other information No supplementary information available

14.6. Special precautions for user

Overland transport

: F1 Classification code (ADR) Special provision (ADR) : 640D Limited quantities (ADR) : 51 Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02, R001

Mixed packing provisions (ADR) : MP19 Portable tank and bulk container instructions (ADR) : T4 Portable tank and bulk container special provisions : TP1, TP8

(ADR)

Tank code (ADR) : LGBF Vehicle for tank carriage : FL Transport category (ADR) : 2 Special provisions for carriage - Operation (ADR) : S2, S20 33

Hazard identification number (Kemler No.) :

Orange plates 33 1139

Tunnel restriction code (ADR) : D/E EAC : •3YE

Transport by sea (IMDG)

Limited quantities (IMDG) : 5 L Excepted quantities (IMDG) : E2 Packing instructions (IMDG) P001 IBC packing instructions (IMDG) IBC02 Tank instructions (IMDG) T4 Tank special provisions (IMDG) TP1, TP8 EmS-No. (Fire) : F-E : S-E EmS-No. (Spillage) Stowage category (IMDG) : B

Air transport (IATA)

PCA Excepted quantities (IATA) : E2 PCA Limited quantities (IATA) Y341 PCA limited quantity max net quantity (IATA) 1L PCA packing instructions (IATA) 353 PCA max net quantity (IATA) : 5L CAO packing instructions (IATA) 364 CAO max net quantity (IATA) : 60L Special provision (IATA) : A3

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ERG code (IATA) : 3L

Inland waterway transport

Classification code (ADN) : F1

Special provision (ADN) : 640D

Limited quantities (ADN) : 5 L

Excepted quantities (ADN) : E2

Equipment required (ADN) : PP, EX, A

Ventilation (ADN) : VE01

Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID): F1Special provision (RID): 640DLimited quantities (RID): 5LExcepted quantities (RID): E2

Packing instructions (RID) : P001, IBC02, R001

Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions : TP1, TP8

(RID)

Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance(s) subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

All chemical substances in this product are listed as "Active" in the EPA (Environmental Protection Agency) "TSCA Inventory Notification (Active-Inactive) Requirements Rule" ("the Final Rule") of Feb. 2019, as amended Feb. 2021, or are otherwise exempt or regulated by other agencies such as FDA or FIFRA

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : Benzene, Cumene, Vinyl chloride are listed

SZW-lijst van mutagene stoffen : Benzene is listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed SZW-lijst van reprotoxische stoffen – : None of the components are listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling : Methyl alcohol, Toluene, Xylene are listed

Denmark

Class for fire hazard : Class I-1 Store unit : 1 Liter

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Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids

must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with

the product

The requirements from the Danish Working Environment Authorities regarding work with

carcinogens must be followed during use and disposal

Switzerland

Storage class (LK) : LK 3 - Flammable liquids

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-phrases		
Asp. Tox. 1	Aspiration hazard Category 1	
Carc. 2	Carcinogenicity Category 2	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
Flam. Liq. 2	Flammable liquids Category 2	
Flam. Liq. 3	Flammable liquids Category 3	
Repr. 2	Reproductive toxicity Category 2	
Skin Irrit. 2	Skin corrosion/irritation Category 2	
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2	
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis	
H225	Highly flammable liquid and vapour.	
H226	Flammable liquid and vapour.	
H304	May be fatal if swallowed and enters airways.	
H315	Causes skin irritation.	
H319	Causes serious eye irritation.	
H332	Harmful if inhaled.	
H336	May cause drowsiness or dizziness.	
H351	Suspected of causing cancer.	
H361	Suspected of damaging fertility or the unborn child.	
H373	May cause damage to organs through prolonged or repeated exposure.	

Abbreviations and acronyms		
ACGIH	American Conference of Government Industrial Hygienists	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
CAS-No.	Chemical Abstract Service number	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
DNEL	Derived-No Effect Level	
EC50	Median effective concentration	
EC-No.	European Community number	

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Abbreviations and acronyms		
ED	Endocrine disrupting properties	
EN	European Standard	
IATA	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LD50	Median lethal dose	
OEL	Occupational Exposure Limit	
OSHA	Occupational Safety and Health Administration	
PBT	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STOT	Specific target organ toxicity	
TRGS	Technical Rules for Hazardous Substances	
vPvB	Very Persistent and Very Bioaccumulative	
WGK	Water Hazard Class	

Data sources

: Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Classification for the USA in accordance with 29 CFR 1910.1200 (2012).

Classification for the EU in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

ECHA (European Chemicals Agency).

Training advice : Normal use of this product shall imply use in accordance with the instructions for use and corresponding product packaging.

Indication of changes: New Composition Revision 1.0: New SDS Created.

Other information : Author: WJS

SDS prepared for Plasti Dip International, Inc. by: Pace Analytical Services, Inc. Product Regulatory Services Group 1800 Elm Street Minneapolis, MN 55414 United States 612-656-1175

paceSDS@pacelabs.com

Classification according to Regulation (EC) No. 1272/2008	Classification procedure
Flammable liquids, Category 2	Test Data
Skin corrosion/irritation, Category 2	Specific concentration limit
Serious eye damage/eye irritation, Category 2	Specific concentration limit
Carcinoginicity, Category 2	Specific concentration limit
Reproductive toxicity, Category 2	Specific concentration limit
Specific target organ toxicity – Single exposure, Category 3, Narcosis	Specific concentration limit

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Classification according to Regulation (EC) No. 1272/2008	Classification procedure
Specific target organ toxicity – Repeated exposure, Category 2	Specific concentration limit
Aspiration toxicity, Category 1	Specific concentration limit

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.