

# Safety Data Sheet (SDS)

According to Regulation (EC) No 453/2010

C-UT6581-A

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Trade name/designation : C-UT6581-A

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

#### 1.2.1. Relevant identified uses

- As a urethane finishing coat for heavy-duty

#### 1.2.2. Uses advised against

- Do not use except for purpose

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

Manufacturer/Supplier : KCC Corporation  
 Address : 30, Bangeojinsunhwando-ro, Dong-gu, Ulsan  
 Telephone : 82-52-280-1717  
 Email : reach@kccworld.co.kr

### 1.4. Emergency telephone number

EU-wide emergency number : 112 <br> See section 16.6 for the list of telephone number of poison centers in the European Economic Area.

## SECTION 2: HAZARD IDENTIFICATION

### 2.1. Classification of the substance/mixture

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

- Acute toxicity (dermal) : Category4, H312
- Acute toxicity (inhalation: vapor) : Category4, H332
- Chronic aquatic toxicity : Category3, H412
- Carcinogenicity : Category1B, H350
- Germ cell mutagenicity : Category1B, H340
- Flammable liquids : Category3, H226
- Skin corrosion/irritation : Category2, H315
- Aspiration hazard : Category1, H304

### 2.2. Label elements

#### 2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]

##### \* Hazard Pictogram(s)



\* Signal word : Danger

##### \* Hazard statement(s)

- 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
- H340 May cause genetic defects
- H350 May cause cancer
- H412 Harmful to aquatic life with long lasting effects

**\* Precautionary statement(s)**

**1) 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/sparks/open flames/hot surfaces. ? 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. Flammable liquids (chapter 2.6) 1, 2, 3
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash hands 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.
- P281 Use personal protective equipment as required.

**2) Response**

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment
- P322 Specific measures
- P331 Do NOT induce vomiting.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).

**3) Storage**

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

**4) Disposal**

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

**2.3. Other hazards**

- Not available

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1. Substances**

- Not applicable

**3.2. Mixtures**

Name	CAS No.	REACH registration No.	% [weight]	Classification [1272/2008/EC]
Thermosetting acrylic resin	-	-	30 ~ 40	Not classified
Limestone	1317-65-3	-	20 ~ 30	Not classified
Solvent naphtha (petroleum), light arom.	64742-95-6	-	10 ~ 20	Carc. 1B, H350 Muta. 1B, H340
1,2,4-Trimethylbenzene	95-63-6	-	1 ~ 10	Acute Tox. 4, H332 Aquatic Chronic 2, H411 Eye Irrit. 2, H319 Flam. Liq. 3, H226 STOT SE 3, H335 Skin Irrit. 2, H315

m-xylene	108-38-3	-	1 ~ 10	Acute Tox. 4, H312 Acute Tox. 4, H332 Flam. Liq. 3, H226 Skin Irrit. 2, H315
Propylene glycol methyl ether acetate	108-65-6	-	1 ~ 10	Flam. Liq. 3, H226
Ethylbenzene	100-41-4	-	1 ~ 10	Acute Tox. 4, H332 Flam. Liq. 2, H225
p-Xylene	106-42-3	-	1 ~ 10	Acute Tox. 4, H312 Acute Tox. 4, H332 Flam. Liq. 3, H226 Skin Irrit. 2, H315
o-Xylene	95-47-6	-	1 ~ 10	Acute Tox. 4, H312 Acute Tox. 4, H332 Flam. Liq. 3, H226 Skin Irrit. 2, H315
Xylene	1330-20-7	01-2119488216-32-XXXX	1 ~ 10	Acute Tox. 4, H312 Acute Tox. 4, H332 Flam. Liq. 3, H226 Skin Irrit. 2, H315
Titanium dioxide	13463-67-7	-	1 ~ 10	Eye Irrit. 2B, H320 Skin Irrit. 3, H316
Stoddard solvent	8052-41-3	-	0 ~ 1	Carc. 1B, H350 Muta. 1B, H340 Asp. Tox. 1, H304
Secret	Secret	-	1 ~ 10	Not classified

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### General

- No general information.

#### Inhalation

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

#### Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms (flare, irritate) occur.
- Prevent the spread of the skin.
- Remove contaminated clothing, shoes and isolate.
- Wash thoroughly after handling.
- Wear gloves when washing the patient, and please avoid contact with contaminated clothing.

#### Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.

#### Ingestion

- About whether I should induce vomiting Take the advice of a doctor.
- Rinse your mouth with water immediately.
- Get medical attention immediately.
- If swallowed, large amounts of water to drink and do not induce vomiting.

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

- Not available

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

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

### SECTION 5: FIREFIGHTING MEASURES

#### 5.1. Extinguishing media

##### Suitable extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

##### Unsuitable extinguishing media

- Avoid use of water jet for extinguishing

#### 5.2. Special hazards arising from the substance or mixture

##### Hazardous combustion products

- Not available

#### 5.3. Advice for firefighters

- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Keep containers cool with water spray.
- Use fire fighting procedures suitable for surrounding area.
- Vapor or gas is burned at distant ignition sources can be spread quickly.
- The extremely low flash point made by fire-fighters may be less effective at digesting weeks.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal Precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Protective equipment: Wear proper protective equipment.
- Emergency procedures: Not applicable
- If required, notify relevant authorities according to all applicable regulations.

##### 6.1.2. For emergency responders

- Do not touch spilled material. Stop leak if you can do it without risk.
- Move container to safe area from the leak area.
- Remove all sources of ignition.
- Do not direct water at spill or source of leak.
- Avoid skin contact and inhalation.
- Cleanup and disposal under expert supervision is advised.
- Keep unauthorized people away, isolate hazard area and deny entry.

#### 6.2. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.
- Avoid dispersal of spilt material and runoff and contact with waterways, drains and sewers. If large spills, advise emergency services.

#### 6.3. Methods and material for containment and cleaning up

##### 6.3.1. For containment

- Don't use a brush or compressed air for cleaning surfaces or clothing.
- Clear area of personnel and move up wind.
- Prevent, by any means available, spillage from entering drains or water course.
- No smoking, naked lights or ignition sources.

### 6.3.2. For cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.
- Do not use plastic containers.
- Prevent the influx to waterways, sewers, basements or confined spaces.
- Spilled material should be treated as a potential risk of waste collected.

### 6.3.3. Other information

- Slippery when spilt.

## 6.4. Reference to other sections

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for information on disposal.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

- Get the manual before use.
- Refer to Engineering controls and personal protective equipment.
- Dealing only with a well-ventilated place.
- Operators should wear antistatic footwear and clothing.
- Do not inhale the steam prolonged or repeated.
- Avoid contact with heat, sparks, flame or other ignition sources.
- Contaminated work clothing should not be allowed out of the workplace.

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

- Check regularly for leaks.
- Do not use damaged containers.
- Avoid direct sunlight.
- Keep sealed when not in use.
- Prevent static electricity and keep away from combustible materials or heat sources.
- By specifying a storage area for carcinogenic substances.
- Collected them in sealed containers.
- Store away from water and sewer.

### 7.3. Specific end use(s)

- See Section 1 for information on 1.2 Relevant identified uses.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### 8.1.1. Occupational exposure limits

##### European Union (EU) Commission Directive 2006/15/EC (IOELVs)

- Not available

##### European Union (EU) Commission Directive 2006/15/EC (IOELVs) - Skin

- Not available

##### Greece Occupational Exposure Limits

- [o-Xylene] - Exposure Limit : 100 ppm ; Exposure Limit : 435 mg/m<sup>3</sup> (Ξυλόλια (όλα τα ισομερή))
- [1,2,4-Trimethylbenzene] - Exposure Limit : 25 ppm ; Exposure Limit : 125 mg/m<sup>3</sup> (Τριμεθυλο-βενζόλιο, 1,2,4-)
- [Ethylbenzene] - Exposure Limit : 100 ppm ; Exposure Limit : 435 mg/m<sup>3</sup> (Αιθυλοβενζόλιο)

- [p-Xylene] - Exposure Limit : 100 ppm ; Exposure Limit : 435 mg/m<sup>3</sup> (Ξυλόλια (όλα τα ισομερή))
- [m-xylene] - Exposure Limit : 100 ppm ; Exposure Limit : 435 mg/m<sup>3</sup> (Ξυλόλια (όλα τα ισομερή))
- [Propylene glycol methyl ether acetate] - Exposure Limit : 50 ppm ; Exposure Limit : 275 mg/m<sup>3</sup> (Οξικός 1-μεθοξυ-2-προπυλεστέρας ή 2-οξικό μεθοξυ-1-μεθυλοαιθύλιο)
- [Limestone] - Exposure Limit : 10(εισπν.); 5(αναπν.) mg/m<sup>3</sup> (Ασβέστιο ανθρακικό)
- [Limestone] - Exposure Limit : 10(εισπν.); 5(αναπν.) mg/m<sup>3</sup> (Μάρμαρο (ανθρακικό ασβέστιο))
- [Xylene] - Exposure Limit : 100 ppm ; Exposure Limit : 435 mg/m<sup>3</sup> (Ξυλόλια (όλα τα ισομερή))
- [Stoddard solvent] - Exposure Limit : 100 ppm ; Exposure Limit : 575 mg/m<sup>3</sup> (White spirit)
- [Titanium dioxide] - Exposure Limit : 10(εισπν.); 5(αναπν.) mg/m<sup>3</sup> (Τιτανίου διοξειδίο)

#### Netherlands Occupational Exposure Limits

- [m-xylene] - TWA 8 hours : 210 mg/m<sup>3</sup> ; TWA 15-minutes : 442 mg/m<sup>3</sup> (Xylen, o-, m-, p-isomeren)
- [Propylene glycol methyl ether acetate] - TWA 8 hours : 550 mg/m<sup>3</sup> (1-Methoxy-2-propylacetaat)
- [Ethylbenzene] - TWA 8 hours : 215 mg/m<sup>3</sup> ; TWA 15-minutes : 430 mg/m<sup>3</sup> (Ethylbenzeen)
- [Xylene] - TWA 8 hours : 210 mg/m<sup>3</sup> ; TWA 15-minutes : 442 mg/m<sup>3</sup> (Xylen, o-, m-, p-isomeren)
- [p-Xylene] - TWA 8 hours : 210 mg/m<sup>3</sup> ; TWA 15-minutes : 442 mg/m<sup>3</sup> (Xylen, o-, m-, p-isomeren)
- [o-Xylene] - TWA 8 hours : 210 mg/m<sup>3</sup> ; TWA 15-minutes : 442 mg/m<sup>3</sup> (Xylen, o-, m-, p-isomeren)
- [1,2,4-Trimethylbenzene] - TWA 8 hours : 100 mg/m<sup>3</sup> ; TWA 15-minutes : 200 mg/m<sup>3</sup> (1,2,4-Trimethylbenzeen)

#### Denmark Indicative List of Organic Solvents

- [o-Xylene] - Substances in the list of limit values : 25 ppm (Xylene, all isomers (1996))
- [1,2,4-Trimethylbenzene] - Substances in the list of limit values : 20 ppm (Trimethylbenzene (2002))
- [Ethylbenzene] - Substances in the list of limit values : 50 ppm (Ethyl benzene)
- [p-Xylene] - Substances in the list of limit values : 25 ppm (Xylene, all isomers (1996))
- [m-xylene] - Substances in the list of limit values : 25 ppm (Xylene, all isomers (1996))
- [Propylene glycol methyl ether acetate] - Substances in the list of limit values : 50 ppm (2-Methoxy-1-methyl ethyl acetate (2002))
- [Xylene] - Substances in the list of limit values : 25 ppm (Xylene, all isomers (1996))
- [Stoddard solvent] - Substances in the list of limit values : 25 ppm (White spirits, max. 20 per cent aromatic compounds (1994))

#### Denmark List of Limit Values for Dust

- Not available

#### Latvia Occupational Exposure Limit Values (OELV) for Chemical Substances in the Work Environment AtmbExcel Air & Hydraulics<sup>9</sup>

- [o-Xylene] - Occupational Exposure Limit Values (OELV) 8hr : 221 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 8hr : 50 ppm ; Occupational Exposure Limit Values (OELV) 15 min : 442 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 442 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 100 ppm (o-Ksilols, (1,2-dimetilbenzols))
- [1,2,4-Trimethylbenzene] - Occupational Exposure Limit Values (OELV) 8hr : 100 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 8hr : 20 ppm (1,2,4-Trimetilbenzols (psaidokumols))
- [Ethylbenzene] - Occupational Exposure Limit Values (OELV) 8hr : 442 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 8hr : 100 ppm ; Occupational Exposure Limit Values (OELV) 15 min : 884 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 884 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 200 ppm (Etilbenzols)
- [p-Xylene] - Occupational Exposure Limit Values (OELV) 8hr : 221 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 8hr : 50 ppm ; Occupational Exposure Limit Values (OELV) 15 min : 442 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 442 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 100 ppm (p-Ksilols, (1,4-dimetilbenzols))
- [m-xylene] - Occupational Exposure Limit Values (OELV) 8hr : 221 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 8hr : 50 ppm ; Occupational Exposure Limit Values (OELV) 15 min : 442 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 442 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 100 ppm (m-Ksilols, (1,3-dimetilbenzols))
- [Propylene glycol methyl ether acetate] - Occupational Exposure Limit Values (OELV) 8hr : 275 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 8hr : 50 ppm ; Occupational Exposure Limit Values (OELV) 15 min : 550 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 550 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 100 ppm (1-Metoksi-2-propilacetāts (propilēnglikola monometilētera acetāts))
- [Xylene] - Occupational Exposure Limit Values (OELV) 8hr : 221 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 8hr : 50 ppm ; Occupational Exposure Limit Values (OELV) 15 min : 442 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 442 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 100 ppm (Ksilols (o-,m-,p-ksilols, dimetilbenzols))
- [Stoddard solvent] - Occupational Exposure Limit Values (OELV) 8hr : 200 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 300 mg/m<sup>3</sup> ; Occupational Exposure Limit Values (OELV) 15 min : 300 mg/m<sup>3</sup> (Ligroīns (nafta, hidrodesulfurizēta, smaga; ar ūdeņradi apstrādāta nafta ar zemu viršanas temperatūru) (vaitspirts, lakbenzīns))
- [Titanium dioxide] - Occupational Exposure Limit Values (OELV) 8hr : 10 mg/m<sup>3</sup> (Titāna dioksīds)

#### Latvia Carcinogens and their Occupational Exposure Limit Values (OELV)

- [Stoddard solvent] - Limit Value (8-hours of exposure) : 200 mg/m<sup>3</sup> (Ligroīns (naftas), hidrodesulfurizētā, smagā; Ar ūdeņradi apstrādāta nafta ar zemu viršanas temperatūru)

#### Bulgaria Occupational Exposure Limits

- [o-Xylene] - Limit Values 8 hours : 442.0 mg/m<sup>3</sup> ; Limit values 15 min : 221.0 mg/m<sup>3</sup> (o-Ксилен (1/10))
- [1,2,4-Trimethylbenzene] - Limit values 15 min : 100.0 mg/m<sup>3</sup> (1,2,4-Триметилбензен (1/10))
- [Ethylbenzene] - Limit Values 8 hours : 545.0 mg/m<sup>3</sup> ; Limit values 15 min : 435.0 mg/m<sup>3</sup> (Етилбензен (1/10))
- [p-Xylene] - Limit Values 8 hours : 442.0 mg/m<sup>3</sup> ; Limit values 15 min : 221.0 mg/m<sup>3</sup> (p-Ксилен (1/10))
- [m-xylene] - Limit Values 8 hours : 442.0 mg/m<sup>3</sup> ; Limit values 15 min : 221.0 mg/m<sup>3</sup> (m-Ксилен (1/10))

- [Propylene glycol methyl ether acetate] - Limit Values 8 hours : 550.0 mg/m<sup>3</sup> ; Limit values 15 min : 275.0 mg/m<sup>3</sup> (2-Метокси-1-метилетилацетат (1/10))
- [Limestone] - Limit values 8 hours : 1.0 fiber/cm<sup>3</sup> (Варовик, съдържащ под 2 % свободен кристален силициев диоксид в респирабилната фракция влакнести частици (респирабилни))
- [Limestone] - Limit values 15 min : 10.0 mg/m<sup>3</sup> (Калциев карбонат)
- [Limestone] - Limit values 15 min : 10.0 mg/m<sup>3</sup> (Варовик, съдържащ под 2 % свободен кристален силициев диоксид в респирабилната фракция влакнести частици (респирабилни))
- [Xylene] - Limit Values 8 hours : 442 mg/m<sup>3</sup> ; Limit values 15 min : 221.0 mg/m<sup>3</sup> (Ксилен (смес от изомери), чист (1/10))
- [Stoddard solvent] - Limit values 15 min : 1600.0 mg/m<sup>3</sup> (Газьол (нафта) - петролеев дестилат)
- [Stoddard solvent] - Limit Values 8 hours : 1800.0 mg/m<sup>3</sup> ; Limit values 15 min : 350.0 mg/m<sup>3</sup> (Петролеев етер)
- [Titanium dioxide] - Limit values 15 min : 10.0 mg/m<sup>3</sup> (Титанов диоксид, респирабилен прах)

#### **Bulgaria Limit values for the chemical agents in the air at the working environment**

- [o-Xylene] - Limit Values 8 hours : 221.0 mg/m<sup>3</sup> ; Limit values 15 min : 442.0 mg/m<sup>3</sup> (o- Xylene \*)
- [1,2,4-Trimethylbenzene] - Limit Values 8 hours : 100.0 mg/m<sup>3</sup> (1,2,4-Trimethylbenzene)
- [Ethylbenzene] - Limit Values 8 hours : 435.0 mg/m<sup>3</sup> ; Limit values 15 min : 545.0 mg/m<sup>3</sup> (Ethylbenzene\*)
- [p-Xylene] - Limit Values 8 hours : 221.0 mg/m<sup>3</sup> ; Limit values 15 min : 442.0 mg/m<sup>3</sup> (p- Xylene \*)
- [m-xylene] - Limit Values 8 hours : 221.0 mg/m<sup>3</sup> ; Limit values 15 min : 442.0 mg/m<sup>3</sup> (m- Xylene \*)
- [Propylene glycol methyl ether acetate] - Limit Values 8 hours : 275.0 mg/m<sup>3</sup> ; Limit values 15 min : 550.0 mg/m<sup>3</sup> (2-Methoxy-1-methylacetate\*)
- [Limestone] - Limit Values 8 hours : 10.0 mg/m<sup>3</sup> (Limestone, containing less than 2% free crystal silicon dioxide in the respirable fraction fibrillated particles (respirable) - Inhalable fraction)
- [Limestone] - Limit values 8 hours : 1.0 fiber/cm<sup>3</sup> (Limestone, containing less than 2% free crystal silicon dioxide in the respirable fraction fibrillated particles (respirable) - Inhalable fraction - Fibres - respirable fraction)
- [Limestone] - Limit Values 8 hours : 10.0 mg/m<sup>3</sup> (Calcium carbonate)
- [Xylene] - Limit Values 8 hours : 221.0 mg/m<sup>3</sup> ; Limit values 15 min : 442 mg/m<sup>3</sup> (Xylene (mixture of isomers), pure\*)
- [Stoddard solvent] - Limit Values 8 hours : 350.0 mg/m<sup>3</sup> ; Limit values 15 min : 1800.0 mg/m<sup>3</sup> (Petroleum ether)
- [Titanium dioxide] - Limit Values 8 hours : 10.0 mg/m<sup>3</sup> (Titanium dioxide, Respirable dust)

#### **Sweden Occupational Exposure Limit Values**

- [o-Xylene] - NGV : 50 ppm ; NGV : 200 mg/m<sup>3</sup> ; KTV : 100 ppm ; KTV : 450 mg/m<sup>3</sup> (Xylen - o-Xylen; m-Xylen; p-Xylen)
- [1,2,4-Trimethylbenzene] - NGV : 25 ppm ; NGV : 120 mg/m<sup>3</sup> ; KTV : 35 ppm ; KTV : 170 mg/m<sup>3</sup> (Trimethylbensen - 1,2,3-Trimethylbensen; 1,2,4-Trimethylbensen; 1,3,5-Trimethylbensen)
- [Ethylbenzene] - NGV : 50 ppm ; NGV : 200 mg/m<sup>3</sup> ; KTV : 100 ppm ; KTV : 450 mg/m<sup>3</sup> (Etylbenzen)
- [p-Xylene] - NGV : 50 ppm ; NGV : 200 mg/m<sup>3</sup> ; KTV : 100 ppm ; KTV : 450 mg/m<sup>3</sup> (Xylen - o-Xylen; m-Xylen; p-Xylen)
- [m-xylene] - NGV : 50 ppm ; NGV : 200 mg/m<sup>3</sup> ; KTV : 100 ppm ; KTV : 450 mg/m<sup>3</sup> (Xylen - o-Xylen; m-Xylen; p-Xylen)
- [Propylene glycol methyl ether acetate] - NGV : 50 ppm ; NGV : 250 mg/m<sup>3</sup> ; KTV : 75 ppm ; KTV : 400 mg/m<sup>3</sup> (1-Metoksi-2-propylacetat)
- [Xylene] - NGV : 50 ppm ; NGV : 200 mg/m<sup>3</sup> ; KTV : 100 ppm ; KTV : 450 mg/m<sup>3</sup> (Xylen - o-Xylen; m-Xylen; p-Xylen)
- [Titanium dioxide] - NGV : 5 mg/m<sup>3</sup> (Titandioxid - totaldamm)

#### **Sweden Occupational Exposure Limit Values and Measures against Air Contaminants**

- [Ethylbenzene] - LLV : 50 ppm ; LLV : 200 mg/m<sup>3</sup> ; STV : 100 ppm ; STV : 450 mg/m<sup>3</sup> (Ethylbenzene)
- [Propylene glycol methyl ether acetate] - LLV : 50 ppm ; LLV : 250 mg/m<sup>3</sup> ; STV : 75 ppm ; STV : 400 mg/m<sup>3</sup> (1-Methoxy-2-propyl)
- [Xylene] - LLV : 50 ppm ; LLV : 221 mg/m<sup>3</sup> ; STV : 100 ppm ; STV : 442 mg/m<sup>3</sup> (# Xylene)
- [Titanium dioxide] - LLV : 5 mg/m<sup>3</sup> (Titanium dioxide - total dust)

#### **Spain Changes Proposed for Occupational Limit Values**

- Not available

#### **Spain Occupational Exposure Limit for Chemical Agents**

- [o-Xylene] - VLA- ED : 50 ppm ; VLA- ED : 221 mg/m<sup>3</sup> ; VLA- EC : 100 ppm ; VLA- EC : 442 mg/m<sup>3</sup> (o-Xylene)
- [1,2,4-Trimethylbenzene] - VLA- ED : 20 ppm ; VLA- ED : 100 mg/m<sup>3</sup> (1,2,4-Trimethyl benzene)
- [Ethylbenzene] - VLA- ED : 100 ppm ; VLA- ED : 441 mg/m<sup>3</sup> ; VLA- EC : 200 ppm ; VLA- EC : 884 mg/m<sup>3</sup> (Ethyl benzene)
- [p-Xylene] - VLA- ED : 50 ppm ; VLA- ED : 221 mg/m<sup>3</sup> ; VLA- EC : 100 ppm ; VLA- EC : 442 mg/m<sup>3</sup> (p-Xylene)
- [m-xylene] - VLA- ED : 50 ppm ; VLA- ED : 221 mg/m<sup>3</sup> ; VLA- EC : 100 ppm ; VLA- EC : 442 mg/m<sup>3</sup> (m-Xylene)
- [Propylene glycol methyl ether acetate] - VLA- ED : 50 ppm ; VLA- ED : 275 mg/m<sup>3</sup> ; VLA- EC : 100 ppm ; VLA- EC : 550 mg/m<sup>3</sup> (2-Methoxy-1-methylethyl acetate)
- [Xylene] - VLA- ED : 50 ppm ; VLA- ED : 221 mg/m<sup>3</sup> ; VLA- EC : 100 ppm ; VLA- EC : 442 mg/m<sup>3</sup> (Xylene (mixed isomers))
- [Stoddard solvent] - VLA- ED : 50 ppm ; VLA- ED : 290 mg/m<sup>3</sup> ; VLA- EC : 100 ppm ; VLA- EC : 580 mg/m<sup>3</sup> (White spirit (petroleum naphtha))
- [Titanium dioxide] - VLA- ED : 10 mg/m<sup>3</sup> (Titanium dioxide)

#### **Slovak Republic Highest Admissible Exposure Limits**

- [o-Xylene] - STEL : 50 ppm ; STEL : 221 mg/m<sup>3</sup> (o-Xylene)
- [1,2,4-Trimethylbenzene] - STEL : 20 ppm ; STEL : 100 mg/m<sup>3</sup> (1,2,4-Trimethylbenzene)
- [Ethylbenzene] - TWA : 100 ppm ; TWA : 442 mg/m<sup>3</sup> (Ethylbenzene)
- [p-Xylene] - STEL : 50 ppm ; STEL : 221 mg/m<sup>3</sup> (p-Xylene)



- [m-xylene] - STEL : 50 ppm ; STEL : 221 mg/m<sup>3</sup> (m-xylene)
- [Propylene glycol methyl ether acetate] - PEAK : 275 ppm ; PEAK : 50 mg/m<sup>3</sup> (Propylene glycol methyl ether acetate)
- [Xylene] - TWA : 50 ppm ; TWA : 221 mg/m<sup>3</sup> (Xylene)

**Slovak Republic Highest Admissible Exposure Limits - Solid aerosols predominately with fibrogenic effect**

- Not available

**Slovak Republic Highest Admissible Exposure Limits - Solid aerosols with possible fibrogenic effect**

- Not available

**Slovak Republic Highest Admissible Exposure Limits - Solid aerosols predominately with nonspecific effect**

- [Limestone] - NPELc : 10.0 mg/m<sup>3</sup> (Limestone)

**Ireland Occupational Exposure Limits**

- [Limestone] - Occupational Exposure Limit Value (8-hour reference period) : 10 mg/m<sup>3</sup> (Calcium carbonate total inhalable dust)
- [Limestone] - Occupational Exposure Limit Value (8-hour reference period) : 4 mg/m<sup>3</sup> (Calcium carbonate respirable dust)
- [Xylene] - Occupational Exposure Limit Value (8-hour reference period) : 50 ppm ; Occupational Exposure Limit Value (8-hour reference period) : 221 mg/m<sup>3</sup> ; Occupational Exposure Limit Value (15-minute reference period) : 100 ppm ; Occupational Exposure Limit Value (15-minute reference period) : 442 mg/m<sup>3</sup> (Xylene, mixed isomers)
- [Titanium dioxide] - Occupational Exposure Limit Value (8-hour reference period) : 10 mg/m<sup>3</sup> (Titanium dioxide total inhalable dust)
- [Titanium dioxide] - Occupational Exposure Limit Value (8-hour reference period) : 4 mg/m<sup>3</sup> (Titanium dioxide respirable dust)
- [p-Xylene] - Occupational Exposure Limit Value (8-hour reference period) : 50 ppm ; Occupational Exposure Limit Value (8-hour reference period) : 221 mg/m<sup>3</sup> ; Occupational Exposure Limit Value (15-minute reference period) : 100 ppm ; Occupational Exposure Limit Value (15-minute reference period) : 442 mg/m<sup>3</sup> (Xylene p-isomer)
- [Ethylbenzene] - Occupational Exposure Limit Value (8-hour reference period) : 100 ppm ; Occupational Exposure Limit Value (8-hour reference period) : 442 mg/m<sup>3</sup> ; Occupational Exposure Limit Value (15-minute reference period) : 200 ppm ; Occupational Exposure Limit Value (15-minute reference period) : 884 mg/m<sup>3</sup> (Ethylbenzene)
- [m-xylene] - Occupational Exposure Limit Value (8-hour reference period) : 50 ppm ; Occupational Exposure Limit Value (8-hour reference period) : 221 mg/m<sup>3</sup> ; Occupational Exposure Limit Value (15-minute reference period) : 100 ppm ; Occupational Exposure Limit Value (15-minute reference period) : 442 mg/m<sup>3</sup> (Xylene m-isomer)
- [Propylene glycol methyl ether acetate] - Occupational Exposure Limit Value (8-hour reference period) : 50 ppm ; Occupational Exposure Limit Value (8-hour reference period) : 275 mg/m<sup>3</sup> ; Occupational Exposure Limit Value (15-minute reference period) : 100 ppm ; Occupational Exposure Limit Value (15-minute reference period) : 550 mg/m<sup>3</sup> (2-Methoxy-1-methylethylacetate)
- [Stoddard solvent] - Occupational Exposure Limit Value (8-hour reference period) : 100 ppm ; Occupational Exposure Limit Value (8-hour reference period) : 573 mg/m<sup>3</sup> (Stoddard solvent)
- [o-Xylene] - Occupational Exposure Limit Value (8-hour reference period) : 50 ppm ; Occupational Exposure Limit Value (8-hour reference period) : 221 mg/m<sup>3</sup> ; Occupational Exposure Limit Value (15-minute reference period) : 100 ppm ; Occupational Exposure Limit Value (15-minute reference period) : 442 mg/m<sup>3</sup> (Xylene, o-isomer)
- [1,2,4-Trimethylbenzene] - Occupational Exposure Limit Value (8-hour reference period) : 20 ppm ; Occupational Exposure Limit Value (8-hour reference period) : 100 mg/m<sup>3</sup> (1,2,4 - Trimethylbenzene)

**UK Workplace Exposure Limits (WELs)**

- [o-Xylene] - Long-term Exposure Limit : 50 ppm ; Long-term Exposure Limit : 220 mg/m<sup>3</sup> ; Short-term Exposure Limit : 100 ppm ; Short-term Exposure Limit : 441 mg/m<sup>3</sup> (Xylene, o-,m-,p- or mixed isomers)
- [1,2,4-Trimethylbenzene] - Long-term Exposure Limit : 25 ppm ; Long-term Exposure Limit : 125 mg/m<sup>3</sup> (Trimethylbenzenes, all isomers or mixtures)
- [Ethylbenzene] - Long-term Exposure Limit : 100 ppm ; Long-term Exposure Limit : 441 mg/m<sup>3</sup> ; Short-term Exposure Limit : 125 ppm ; Short-term Exposure Limit : 552 mg/m<sup>3</sup> (Ethylbenzene)
- [p-Xylene] - Long-term Exposure Limit : 50 ppm ; Long-term Exposure Limit : 220 mg/m<sup>3</sup> ; Short-term Exposure Limit : 100 ppm ; Short-term Exposure Limit : 441 mg/m<sup>3</sup> (Xylene, o-,m-,p- or mixed isomers)
- [m-xylene] - Long-term Exposure Limit : 50 ppm ; Long-term Exposure Limit : 220 mg/m<sup>3</sup> ; Short-term Exposure Limit : 100 ppm ; Short-term Exposure Limit : 441 mg/m<sup>3</sup> (Xylene, o-,m-,p- or mixed isomers)
- [Propylene glycol methyl ether acetate] - Long-term Exposure Limit : 50 ppm ; Long-term Exposure Limit : 274 mg/m<sup>3</sup> ; Short-term Exposure Limit : 100 ppm ; Short-term Exposure Limit : 548 mg/m<sup>3</sup> (1-Methoxypropyl acetate)
- [Limestone] - Long-term Exposure Limit : 10 mg/m<sup>3</sup> (Calcium carbonate inhalable)
- [Limestone] - Long-term Exposure Limit : 4 mg/m<sup>3</sup> (Calcium carbonate respirable)
- [Limestone] - Long-term Exposure Limit : 10 mg/m<sup>3</sup> (Limestone total inhalable)
- [Limestone] - Long-term Exposure Limit : 4 mg/m<sup>3</sup> (Limestone respirable)
- [Limestone] - Long-term Exposure Limit : 10 mg/m<sup>3</sup> (Marble total inhalable)
- [Limestone] - Long-term Exposure Limit : 4 mg/m<sup>3</sup> (Marble respirable)
- [Xylene] - Long-term Exposure Limit : 50 ppm ; Long-term Exposure Limit : 220 mg/m<sup>3</sup> ; Short-term Exposure Limit : 100 ppm ; Short-term Exposure Limit : 441 mg/m<sup>3</sup> (Xylene, o-,m-,p- or mixed isomers)
- [Titanium dioxide] - Long-term Exposure Limit : 10 mg/m<sup>3</sup> (Titanium dioxide total inhalable)
- [Titanium dioxide] - Long-term Exposure Limit : 4 mg/m<sup>3</sup> (Titanium dioxide respirable)

**Austria Technical Exposure Limits (TRK Values)**

- Not available

**Austria Occupational Exposure Limits - Maximum Workplace Concentrations (MAK)**

- [o-Xylene] - TMW : 50 ppm ; TMW : 221 mg/m<sup>3</sup> ; KZW : 100 ppm ; KZW : 442 mg/m<sup>3</sup> (Xylol (alle Isomeren): o-Xylol)
- [1,2,4-Trimethylbenzene] - TMW : 20 ppm ; TMW : 100 mg/m<sup>3</sup> ; KZW : 30 ppm ; KZW : 150 mg/m<sup>3</sup> (Trimethylbenzol (alle Isomeren): 1,2,4-Trimethylbenzol)



- [Ethylbenzene] - TMW : 100 ppm ; TMW : 440 mg/m<sup>3</sup> ; KZW : 200 ppm ; KZW : 880 mg/m<sup>3</sup> (Ethylbenzol)
- [p-Xylene] - TMW : 50 ppm ; TMW : 221 mg/m<sup>3</sup> ; KZW : 100 ppm ; KZW : 442 mg/m<sup>3</sup> (Xylol (alle Isomeren): p-Xylol)
- [m-xylene] - TMW : 50 ppm ; TMW : 221 mg/m<sup>3</sup> ; KZW : 100 ppm ; KZW : 442 mg/m<sup>3</sup> (Xylol (alle Isomeren): m-Xylol)
- [Propylene glycol methyl ether acetate] - TMW : 50 ppm ; TMW : 275 mg/m<sup>3</sup> ; KZW : 100 ppm ; KZW : 550 mg/m<sup>3</sup> (1-Methoxypropylacetat-2)
- [Xylene] - TMW : 50 ppm ; TMW : 221 mg/m<sup>3</sup> ; KZW : 100 ppm ; KZW : 442 mg/m<sup>3</sup> (Xylol (alle Isomeren))
- [Titanium dioxide] - TMW : 5 mg/m<sup>3</sup> ; KZW : 10 mg/m<sup>3</sup> (Titandioxid (Alveolarstaub))

#### Italy Occupational Exposure Limits

- [o-Xylene] - TWA : 100 ppm ; STEL : 150 ppm (Xylene (o, m & p isomers))
- [1,2,4-Trimethylbenzene] - TWA : 25 ppm (Trimethyl benzene (mixed isomers))
- [Ethylbenzene] - TWA : 20 ppm (Ethyl benzene)
- [p-Xylene] - TWA : 100 ppm ; STEL : 150 ppm (Xylene (o, m & p isomers))
- [m-xylene] - TWA : 100 ppm ; STEL : 150 ppm (Xylene (o, m & p isomers))
- [Xylene] - TWA : 100 ppm ; STEL : 150 ppm (Xylene (o, m & p isomers))
- [Xylene] - TWA : 100 mg/m<sup>3</sup> (Diesel fuel, as total hydrocarbons)
- [Stoddard solvent] - TWA : 100 ppm (Stoddard solvent)
- [Titanium dioxide] - TWA : 10 mg/m<sup>3</sup> (Titanium dioxide)
- [Solvent naphtha (petroleum), light arom.] - TWA : 100 mg/m<sup>3</sup> (Diesel fuel, as total hydrocarbons)

#### Czech Republic Occupational Exposure Limits (PEL and NPK-P)

- [o-Xylene] - PEL : 200 mg/m<sup>3</sup> ; NPK-P : 400 mg/m<sup>3</sup> (Xylen technická směs isomerů a (všechny isomery))
- [1,2,4-Trimethylbenzene] - PEL : 100 mg/m<sup>3</sup> ; NPK-P : 250 mg/m<sup>3</sup> (1,2,4-Trimethylbenzen)
- [Ethylbenzene] - PEL : 200 mg/m<sup>3</sup> ; NPK-P : 500 mg/m<sup>3</sup> (Ethylbenzen)
- [p-Xylene] - PEL : 200 mg/m<sup>3</sup> ; NPK-P : 400 mg/m<sup>3</sup> (Xylen technická směs isomerů a (všechny isomery))
- [m-xylene] - PEL : 200 mg/m<sup>3</sup> ; NPK-P : 400 mg/m<sup>3</sup> (Xylen technická směs isomerů a (všechny isomery))
- [Propylene glycol methyl ether acetate] - PEL : 270 mg/m<sup>3</sup> ; NPK-P : 550 mg/m<sup>3</sup> (2-Methoxy-1-methylethylacetát)
- [Xylene] - PEL : 200 mg/m<sup>3</sup> ; NPK-P : 400 mg/m<sup>3</sup> (Xylen technická směs isomerů a (všechny isomery))

#### Czech Republic Occupational Exposure Limits - Dusts predominately with fibrogenic effect

- Not available

#### Czech Republic Occupational Exposure Limits - Dusts with possible fibrogenic effect

- Not available

#### Czech Republic Occupational Exposure Limits - Dusts predominately with nonspecific effect

- [Limestone] - PELc : 10.0 mg/m<sup>3</sup> (vápenec, mramor)

#### Czech Republic Occupational Exposure Limits - Dusts predominately with irritating effect

- Not available

#### Czech Republic Occupational Exposure Limits - Mineral fibrous dusts

- Not available

#### Poland Workplace Maximum Allowable Concentration - Dust

- [Titanium dioxide] - Najwyższe dopuszczalne stężenie : 10 mg/m<sup>3</sup> (Pyły ditlenku tytanu zawierające wolną krystaliczną krzemionkę poniżej 2% i niezawierające azbestu - pył całkowity)

#### Poland Workplace Maximum Allowable Concentration

- [o-Xylene] - NDS 8h/d - 40h/w : 100 mg/m<sup>3</sup> (Ksylen - mieszanina izomerów (1,2-, 1,3- 1,4-))
- [1,2,4-Trimethylbenzene] - NDS 8h/d - 40h/w : 100 mg/m<sup>3</sup> ; NDSC 15min : 170 mg/m<sup>3</sup> (Trimetylobenzen - mieszanina izomerów (1,2,3-, 1,2,4- i 1,3,5-))
- [Ethylbenzene] - NDS 8h/d - 40h/w : 200 mg/m<sup>3</sup> ; NDSC 15min : 400 mg/m<sup>3</sup> (Etylobenzen)
- [p-Xylene] - NDS 8h/d - 40h/w : 100 mg/m<sup>3</sup> (Ksylen - mieszanina izomerów (1,2-, 1,3- 1,4-))
- [m-xylene] - NDS 8h/d - 40h/w : 100 mg/m<sup>3</sup> (Ksylen - mieszanina izomerów (1,2-, 1,3- 1,4-))
- [Propylene glycol methyl ether acetate] - NDS 8h/d - 40h/w : 260 mg/m<sup>3</sup> ; NDSC 15min : 520 mg/m<sup>3</sup> (Octan 2-metoksy-1-metyloetylu)
- [Xylene] - NDS 8h/d - 40h/w : 100 mg/m<sup>3</sup> (Ksylen - mieszanina izomerów (1,2-, 1,3- 1,4-))
- [Stoddard solvent] - NDS 8h/d - 40h/w : 500 mg/m<sup>3</sup> ; NDSC 15min : 1.500 mg/m<sup>3</sup> (Benzyna - ekstrakcyjna [\*3])
- [Titanium dioxide] - NDS 8h/d - 40h/w : 10 mg/m<sup>3</sup> ; NDSC 15min : 30 mg/m<sup>3</sup> (Tytan i jego związki - w przeliczeniu na Ti)
- [Solvent naphtha (petroleum), light arom.] - NDS 8h/d - 40h/w : 300 mg/m<sup>3</sup> ; NDSC 15min : 900 mg/m<sup>3</sup> (Benzyna - do lakierów)

#### France Threshold Limit Values for Occupational Exposure - VLE/VME

- [o-Xylene] - VME : 50 ppm ; VME : 221 mg/m<sup>3</sup> (o-Xylène)
- [1,2,4-Trimethylbenzene] - VME : 20 ppm ; VME : 100 mg/m<sup>3</sup> (1,2,4-Triméthylbenzène)
- [Ethylbenzene] - VME : 20 ppm ; VME : 88.4 mg/m<sup>3</sup> (Ethylbenzène)
- [p-Xylene] - VME : 50 ppm ; VME : 221 mg/m<sup>3</sup> (p-Xylène)
- [m-xylene] - VME : 50 ppm ; VME : 221 mg/m<sup>3</sup> (m-Xylène)
- [Propylene glycol methyl ether acetate] - VME : 50 ppm ; VME : 275 mg/m<sup>3</sup> (Acétate de 2-méthoxy-1-méthyléthyle)

- [Xylene] - VME : 50 ppm ; VME : 221 mg/m<sup>3</sup> (Xylène, isomères mixtes, purs)
- [Stoddard solvent] - VME : 150 mg/m<sup>3</sup> (Hydrocarbures benzéniques en C9-C12 (vapeurs) (5))
- [Titanium dioxide] - VME : 10 mg/m<sup>3</sup> (Titane (dioxyde de), en Ti)
- [Solvent naphtha (petroleum), light arom.] - VME : 150 mg/m<sup>3</sup> (Hydrocarbures benzéniques en C9-C12 (vapeurs) (5))

#### **Finland Occupational Exposure Levels - Concentrations Known to be Harmful**

- [o-Xylene] - HTP Value (8h) : 50 ppm ; HTP Value (8h) : 220 mg/m<sup>3</sup> ; HTP Value (15min) : 100 ppm ; HTP Value (15min) : 440 mg/m<sup>3</sup> (o-Xylen)
- [1,2,4-Trimethylbenzene] - HTP Value (8h) : 20 ppm ; HTP Value (8h) : 100 mg/m<sup>3</sup> (Trimetylbenzen 1,2,4-Trimetylbenzen)
- [Ethylbenzene] - HTP Value (8h) : 50 ppm ; HTP Value (8h) : 220 mg/m<sup>3</sup> ; HTP Value (15min) : 200 ppm ; HTP Value (15min) : 880 mg/m<sup>3</sup> (Etylbenzen)
- [p-Xylene] - HTP Value (8h) : 50 ppm ; HTP Value (8h) : 220 mg/m<sup>3</sup> ; HTP Value (15min) : 100 ppm ; HTP Value (15min) : 440 mg/m<sup>3</sup> (p-Xylen)
- [m-xylene] - HTP Value (8h) : 50 ppm ; HTP Value (8h) : 220 mg/m<sup>3</sup> ; HTP Value (15min) : 100 ppm ; HTP Value (15min) : 440 mg/m<sup>3</sup> (m-Xylen)
- [Propylene glycol methyl ether acetate] - HTP Value (8h) : 50 ppm ; HTP Value (8h) : 270 mg/m<sup>3</sup> ; HTP Value (15min) : 100 ppm ; HTP Value (15min) : 550 mg/m<sup>3</sup> (2-Metoxi-1-metyletyl-acetat)
- [Xylene] - HTP Value (8h) : 50 ppm ; HTP Value (8h) : 220 mg/m<sup>3</sup> ; HTP Value (15min) : 100 ppm ; HTP Value (15min) : 440 mg/m<sup>3</sup>
- [Stoddard solvent] - HTP Value (15min) : 500 ppm (Petroleumnafta, grupp 1)
- [Stoddard solvent] - HTP Value (15min) : 200 ppm (Petroleumnafta, grupp 2)
- [Stoddard solvent] - HTP Value (15min) : 100 ppm (Petroleumnafta, grupp 3)
- [Stoddard solvent] - HTP Value (15min) : 100 ppm (Petroleumnafta, grupp 4)
- [Stoddard solvent] - HTP Value (15min) : 500 ppm (Petroleumnafta, grupp 5)

#### **Hungary Occupational Exposure Limits**

- [o-Xylene] - TWA : 221 mg/m<sup>3</sup> ; STEL : 442 mg/m<sup>3</sup> (o-XILOL)
- [1,2,4-Trimethylbenzene] - TWA : 100 mg/m<sup>3</sup> (1,2,4-TRIMETILBENZOL)
- [Ethylbenzene] - TWA : 442 mg/m<sup>3</sup> ; STEL : 884 mg/m<sup>3</sup> (ETIL-BENZOL)
- [p-Xylene] - TWA : 221 mg/m<sup>3</sup> ; STEL : 442 mg/m<sup>3</sup> (p-XILOL)
- [m-xylene] - TWA : 221 mg/m<sup>3</sup> ; STEL : 442 mg/m<sup>3</sup> (m-XILOL)
- [Propylene glycol methyl ether acetate] - TWA : 275 mg/m<sup>3</sup> ; STEL : 550 mg/m<sup>3</sup> (1-METOXI-2-PROPIL-ACETÁ T)
- [Limestone] - TWA : 10 mg/m<sup>3</sup> (KALCIUM-KARBONÁ T)
- [Xylene] - TWA : 221 mg/m<sup>3</sup> ; STEL : 442 mg/m<sup>3</sup> (XILOL(ok))

#### **8.1.2. Recommended Monitoring Procedures**

- Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

#### **8.1.3. DNEL/PNEC - Values**

- Not available

## **8.2. Exposure controls**

### **8.2.1. Appropriate engineering controls**

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

### **8.2.2. Individual protection measures, such as personal protective equipment**

#### **Hand protection**

- Wear appropriate chemical resistant glove.

#### **Eye protection**

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

#### **Respiratory Protection**

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

**Skin protection**

- Wear appropriate chemical resistant protective clothing.

**Others**

- It is necessary to wear protective clothes and other protection equipment. Cover your face, head and neck.
- Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.
- Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.

**Thermal hazards**

- Not available

**8.2.3 Environmental exposure controls**

- Do not let product enter drains. For ecological information refer to section 12.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

Appearance(State)	Liquid(Viscous liquid)
Appearance(Color)	Not available
Odor	Solvent odor
Odor threshold	Not available
pH	Not available
Melting point/Freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point	29 °C
Evaporation rate	Not available
Flammability(solid, gas)	Not available
Upper/Lower Flammability or explosive limits	14% / 1%
Vapour pressure	Not available
Vapour density	> 1(Air=1)
Relative density	1.104~1.164
Solubility	Not available
Partition coefficient of n-octanol/water	Not available
Autoignition temperature	343 °C
Decomposition temperature	Not available
Viscosity	70 ~ 80 KU
Explosive properties	Not available
Oxidising properties	Not available

**9.2. Other information**

- Not available

**SECTION 10: STABILITY AND REACTIVITY**

**10.1. Reactivity**

- Product is stable or unstable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**10.2. Chemical Stability**

- This material is stable under recommended storage and handling conditions.

**10.3. Possibility of hazardous reactions**

- Cylinders exposed to fire may vent and release flammable gas.

**10.4. Conditions to avoid**

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with heat, sparks, flame or other ignition sources.

### 10.5. Incompatible materials

- Not available

### 10.6. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Acute toxicity

#### - Oral

- [Titanium dioxide] : LD50 > 10000 mg/kg Rat

#### - Dermal

- [m-xylene] : LD50 = 1000 ~ 2000 mg/L
- [o-Xylene] : LD50 = 1000 ~ 2000 mg/L
- [p-Xylene] : LD50 = 1000 ~ 2000 mg/L
- [Xylene] : LD50 = 1000 ~ 2000 mg/L
- [Titanium dioxide] : LD50 > 10000 mg/kg Rabbit

#### - Inhalation

- [1,2,4-Trimethylbenzene] : LC50 = 10 ~ 20 mg/L
- [m-xylene] : LC50 = 10 ~ 20 mg/L
- [Ethylbenzene] : LC50 = 10 ~ 20 mg/L
- [p-Xylene] : LC50 = 10 ~ 20 mg/L
- [o-Xylene] : LC50 = 10 ~ 20 mg/L
- [Xylene] : LC50 = 10 ~ 20 mg/L
- [Titanium dioxide] : LC50 > 6.82 mg/ℓ 4 hr Rat

### 11.2. Skin corrosion/irritation

- Causes skin irritation

### 11.3. Serious eye damage/irritation

- Not available

### 11.4. Respiratory sensitization

- Not available

### 11.5. Skin sensitization

- Not available

### 11.6. Germ cell mutagenicity

- May cause genetic defects

### 11.7. Carcinogenicity

#### - IARC

- [Ethylbenzene] : Group 2B
- [Titanium dioxide] : Group 2B
- [o-Xylene] : Group 3
- [p-Xylene] : Group 3
- [m-xylene] : Group 3
- [Xylene] : Group 3

#### - OSHA

- Not available

#### - ACGIH

- [Ethylbenzene] : A3
- [Titanium dioxide] : A4
- [o-Xylene] : A4
- [p-Xylene] : A4
- [m-xylene] : A4

- [Xylene] : A4
- **NTP**
  - Not available
- **EU CLP**
  - [Stoddard solvent] : Carc.1B
  - [Solvent naphtha (petroleum), light arom.] : Carc.1B

#### 11.8. Reproductive toxicity

- Not available

#### 11.9. Specific target organ toxicity(single exposure):

- Not available

#### 11.10. Specific target organ toxicity(repeated exposure):

- Not available

#### 11.11. Aspiration hazard

- May be fatal if swallowed and enters airways

### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1. Toxicity

##### 12.1.1. Fish

- Not available

##### 12.1.2. Invertebrate

- [Titanium dioxide] : EC50 > 1000 mg/ℓ 48 hr

##### 12.1.3. Algae

- Not available

#### 12.2. Persistence and degradability

##### 12.2.1. Persistence

- Not available

##### 12.2.2. Degradability

- Not available

#### 12.3. Bioaccumulative potential

##### 12.3.1. Bioaccumulation

- Not available

##### 12.3.2. Biodegradability

- Not available

#### 12.4. Mobility in soil

- Not available

#### 12.5. Results of PBT and vPvB assessment

- Not available

#### 12.6. Other adverse effects

- Harmful to aquatic life with long lasting effects

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.

- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.
- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

## SECTION 14: TRANSPORT INFORMATION

### 14.1. UN No.

#### 14.1.1. UN No. (ADR/RID/ADN)

- 1263

#### 14.1.2. UN No. (IMDG)

- 1263

#### 14.1.3. UN No. (ICAO)

- 1263

### 14.2. UN proper shipping name

- Paint including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler, and liquid lacquer base

### 14.3. Transport hazard class(es)

#### 14.3.1. ADR/RID/ADN Class

- 3

#### 14.3.2. ADR Label No.

- 3

#### 14.3.3. IMDG Class

- 3

#### 14.3.4. ICAO Class/Division

- 3

#### 14.3.5. Transport Labels



### 14.4. Packing group

#### 14.4.1. ADR/RID/ADN Packing group

- III

#### 14.4.2. IMDG Packing group

- III

#### 14.4.3. ICAO Packing group

- III

### 14.5. Environmental hazards

- Not applicable

### 14.6. Special precautions for user

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-E (Non-water-reactive flammable liquids)
- EmS SPILLAGE SCHEDULE : S-E (Flammable liquids, floating on water)
- Emergency Action Code : I3YE

- Hazard No.(ADR) : 33
- Emergency Action Code : 1 (D/E)

#### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Not available

### SECTION 15: REGULATORY INFORMATION

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

##### 15.1.1. Europe regulatory

###### REACH Restricted substance under REACH

- Applicable (Stoddard solvent)
- Applicable (Solvent naphtha (petroleum), light arom.)

###### REACH Substances subject to authorization under REACH

- Not applicable

###### REACH SVHC

- Not applicable

###### Europe PBT

- Not applicable

###### European Union (EU) Transport of Dangerous Goods by Road - Dangerous Goods List

- Not applicable

#### 15.2. Chemical Safety Assessment

- Not conducted

### SECTION 16: OTHER INFORMATION

#### 16.1. Indication of changes

- The Safety Data Sheet has been reviewed and the data therein were revised and laid out according the requirements of the Commission Regulation (EU) No. 453/2010

#### 16.2. Abbreviations and acronyms

- 1272/2008 CLP : Classification, Labelling and Packaging regulation.
- REACH : Registration, Evaluation and authorisation of chemical substances.
- DNEL : Derive no effects level
- PNEC : Predicted no effect concentration

#### 16.3. Key literature references and sources for data

- This Safety Data Sheet was compiled with data and information from the following sources: RTECS, ECOSAR, HSDB, SIDS SIAP, ChemWATCH, CESAR, Chemical DB

#### 16.4. Classification procedure

- The mixture classification has been derived based on the classification of the individual components in accordance with the rules set out in Regulation (EC) No 1272/2008 (CLP) as well as the translation tables in Annex VII to the same regulation.

#### 16.5. Training advice

- Not applicable

#### 16.6. Further information

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.
- 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.



- Contact a poison control centre, List of Telephone Numbers : AUSTRIA (Vienna Wien) +43 1 406 43 43; BELGIUM (Brussels Bruxelles) +32 70 245 245; BULGARIA (Sofia) +359 2 9154 409; CZECH REPUBLIC (Prague Praha) +420 224 919 293; DENMARK (Copenhagen) 82 12 12 12; ESTONIA (Tallinn) 112; FINLAND (Helsinki) +358 9 471 977; FRANCE (Paris) +33 1 40 0548 48; GERMANY (Berlin) +49 30 19240; GREECE (Athens Athinai) +30 10 779 3777; HUNGARY (Budapest) 06 80 20 11 99; ICELAND (Reykjavik) +354 525 111, +354 543 2222; IRELAND (Dublin) +353 1 8379964; ITALY (Rome) +39 06 305 4343; LATVIA (Riga) +371 704 2468; LITHUANIA (Vilnius) +370 5 236 20 52 or +370 687 53378; MALTA (Valletta) 2425 0000; NETHERLANDS (Bilthoven) +31 30 274 88 88; NORWAY (Oslo) 22 591300; POLAND (Gdansk) +48 58301 65 16 or +48 58 349 2831; PORTUGAL (Lisbon Lisboa) 808 250 143; ROMANIA (Bucharest) +40 21 3183606; SLOVAKIA (Bratislava) +421 2 54 77 4166; SLOVENIA (Ljubljana) + 386 41 650 500; SPAIN (Barcelona) +34 93 227 98 33 or +34 93 227 54 00 bleep 190; SWEDEN (Stockholm) 112 or +46 8 33 12 31 (mon-fri 9.00-17.00); UNITED KINGDOM (London) 112 or 0845 4647 (NHS)