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

1.1. Product identifier

Mixture identification:

Trade name: POLYFAN RUSH

Trade code: L0040210

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

Recommended use: Coatings and paints, thinners, paint removers

Dual compound spray filler

Liquid pigmented dispersion

Professional uses

Uses advised against: N.A.

1.3. Details of the supplier of the safety data sheet

Company: Lechler SpA - Via Cecilio, 17 - 22100 Como - CO - Italy

Telephone: +39031586111

First Email: safety@lechler.eu

1.4. Emergency telephone number

UNITED KINGDOM: Emergency Number 0044 1606738600 - This telephone number is available during office hours only (8.45-16.45).

UNITED STATES OF AMERICA: Emergency Contact: Lechler SPA -Tel. +39-031-586301 (8.00-18.00).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Flam. Liq. 2	Highly flammable liquid and vapour.
Skin Irrit. 2	Causes skin irritation.
Eye Irrit. 2	Causes serious eye irritation.
Skin Sens. 1A	May cause an allergic skin reaction.
Repr. 2	Suspected of damaging the unborn child.
STOT SE 3	May cause respiratory irritation.
STOT RE 1	Causes damage to organs through prolonged or repeated exposure.
DECL10	This titanium dioxide-containing product is not classified as carcinogen by inhalation because it does not meet the criteria stated in Note 10, Annex VI of Regulation (EC) 1272/2008. Note 10: The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Hazard pictograms and Signal Word

Danger

Hazard statements

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.

Special Provisions:

EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Contains

styrene

maleic anhydride

neodecanoic acid, cobalt salt

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazards

Results of PBT and vPvB assessment Not a PBT, vPvB substance as per the criteria of the REACH Regulation. Endocrine disrupting properties-Toxicity The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Endocrine disrupting properties-Ecotoxicity The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: POLYFAN RUSH

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
≥20 - ≤25 %	styrene	CAS:100-42-5 EC:202-851-5 Index:601-026-00-0	Flam. Liq. 3, H226; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; STOT RE 1, H372; Asp. Tox. 1, H304; Aquatic Chronic 3, H412; Repr. 2, H361	01-2119457861-32
≥20 - ≤25 %	Talc (Mg3H2(SiO3)4)	CAS:14807-96-6 EC:238-877-9	Substance with a Union workplace exposure limit.	
≥3 - ≤5 %	titanium dioxide	CAS:13463-67-7 EC:236-675-5 Index:022-006-00-2	Not classified as hazardous	01-2119489379-17
≥1 - ≤2.5 %	ethyl acetate	CAS:141-78-6 EC:205-500-4 Index:607-022-00-5	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	01-2119475103-46

≥1 - ≤2.5 %	ethanol	CAS:64-17-5 EC:200-578-6 Index:603-002-00-5	Flam. Liq. 2, H225; Eye Irrit. 2, H319	01-2119457610-43
≥0.1 - ≤0.25 %	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	CAS:6846-50-0 EC:229-934-9	Repr. 2, H361; Aquatic Chronic 3, H412	01-2119451093-47
≥0.1 - ≤0.25 %	neodecanoic acid, cobalt salt	CAS:27253-31-2 EC:248-373-0	Acute Tox. 4, H302; Skin Sens. 1, H317; STOT RE 1, H372; Aquatic Chronic 3, H412	01-2119970733-31
< 0.1 %	Respirable crystalline silica	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	
< 0.1 %	butanone	CAS:78-93-3 EC:201-159-0 Index:606-002-00-3	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	01-2119457290-43
< 0.1 %	Carbon black	CAS:1333-86-4 EC:215-609-9	Not classified as hazardous	01-2119384822-32
< 0.1 %	Quartz (SiO2)	CAS:14808-60-7 EC:238-878-4	Substance with a Union workplace exposure limit.	
< 0.1 %	methanol	CAS:67-56-1 EC:200-659-6 Index:603-001-00-X	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H331 Acute Tox. 3, H311 STOT SE 1, H370 Specific Concentration Limits: C ≥ 10%: STOT SE 1 H370 3% ≤ C < 10%: STOT SE 2 H371	01-2119433307-44
< 0.1 %	maleic anhydride	CAS:108-31-6 EC:203-571-6 Index:607-096-00-9	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1A, H317 STOT RE 1, H372, EUH071 Specific Concentration Limits: C ≥ 0.001%: Skin Sens. 1A H317	01-2119472428-31

Substances in nanoform:

Carbon black	CAS:1333-86-4 EC:215-609-9	Particle size distribution:	D10: >= 18 nm <= 61 nm D50: >= 36 nm <= 101 nm D90: >= 66 nm <= 173 nm (Measurement technique: STEM)
		Shape and aspect ratio:	Spheres, (:1): < 3 (Measurement technique: TEM)
		Crystallinity:	Amorphous: = 100% - (Measurement technique: X-ray Diffraction (XRD))
		Surface Treatment - Agent:	(No)
		Specific surface area:	>= 21m2/g <= 1,200m2/g - (Measurement technique: Brunaurer, Emmett and Teller (BET) method using Nitrogen)

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediatley and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist

immediately.
Protect uninjured eye.
In case of Ingestion:
Do not induce vomiting, get medical attention showing the SDS and label hazardous.
In case of Inhalation:
In case of inhalation, consult a doctor immediately and show him packing or label.

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

Eye irritation
Eye damages
Skin Irritation
Erythema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Extinguishing media which must not be used for safety reasons:
None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.
Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.
Remove all sources of ignition.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Provide adequate ventilation.
Use appropriate respiratory protection.
See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand
Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Exercise the greatest care when handling or opening the container.
Use localized ventilation system.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

7.2. Conditions for safe storage, including any incompatibilities

Always keep in a well ventilated place.
Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
styrene CAS: 100-42-5	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 430 mg/m3 - 100 ppm; Short Term: 1080 mg/m3 - 250 ppm
	ACGIH		Long Term: 10 ppm; Short Term: 20 ppm OTO, A3, BEI - CNS and hearing impair, URT irr, peripheral neuropathy, visual disorders
Talc (Mg3H2(SiO3)4) CAS: 14807-96-6	ACGIH		Long Term: 2 mg/m3 Containing no asbestos fibers$ E,R, A4 - Pulm fibrosis, pulm func
	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 1 mg/m3 Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.
	EU		Long Term: 0.1 mg/m3 2004/37/EC
	EU		Carcinogens or mutagens
	EU		Respirable dust
titanium dioxide CAS: 13463-67-7	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 10 mg/m3 Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.
	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 4 mg/m3 Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.
	ACGIH		Long Term: 0.2 mg/m3 Nanoscale particles; R ; A3 - LRT irr, pneumoconiosis
	ACGIH		Long Term: 2.5 mg/m3 Finescale particles; R ; A3 - LRT irr, pneumoconiosis
ethyl acetate CAS: 141-78-6	EU		Long Term: 734 mg/m3 - 200 ppm; Short Term: 1468 mg/m3 - 400 ppm Behaviour Indicative 2017/164/EU
	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 734 mg/m3 - 200 ppm; Short Term: 1468 mg/m3 - 400 ppm

ethanol CAS: 64-17-5	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 1920 mg/m3 - 1000 ppm Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.
	ACGIH		Short Term: 1000 ppm A3 - URT irr
neodecanoic acid, cobalt salt CAS: 27253-31-2	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 0.1 mg/m3 The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categor
Respirable crystalline silica CAS: 14808-60-7	ACGIH		Long Term: 0.025 mg/m3 R, A2 - Pulm fibrosis, lung cancer
	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 0.1 mg/m3 Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.
	EU		Long Term: 0.1 mg/m3 2004/37/EC
	EU		Respirable dust
	EU		Carcinogens or mutagens
butanone CAS: 78-93-3	EU		Long Term: 600 mg/m3 - 200 ppm; Short Term: 900 mg/m3 - 300 ppm Behaviour Indicative 2000/39/EC
	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 600 mg/m3 - 200 ppm; Short Term: 899 mg/m3 - 300 ppm Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to
	ACGIH		Long Term: 200 ppm; Short Term: 300 ppm BEI - URT irr, CNS and PNS impair
Carbon black CAS: 1333-86-4	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 3.5 mg/m3; Short Term: 7 mg/m3
	ACGIH		Long Term: 3 mg/m3 I, A3 - Bronchitis
Quartz (SiO2) CAS: 14808-60-7	ACGIH		Long Term: 0.025 mg/m3 R, A2 - Pulm fibrosis, lung cancer
	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 0.1 mg/m3 Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.
	EU		Long Term: 0.1 mg/m3 2004/37/EC
	EU		Respirable dust
	EU		Carcinogens or mutagens
methanol CAS: 67-56-1	ACGIH		Long Term: 200 ppm; Short Term: 250 ppm Skin, BEI - Headache, eye dam, dizziness, nausea
	EH40	UNITED KINGDOM OF GREAT BRITAIN AND	Long Term: 266 mg/m3 - 200 ppm; Short Term: 333 mg/m3 - 250 ppm Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to

		NORTHERN IRELAND	
	EU		Long Term: 260 mg/m3 - 200 ppm Behaviour Indicative 2006/15/EC
	EU		Identifies the possibility of significant uptake through the skin
maleic anhydride CAS: 108-31-6	EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 1 mg/m3; Short Term: 3 mg/m3 Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific
	ACGIH		Long Term: 0.01 mg/m3 IFV, DSEN, RSEN, A4 - Resp sens

Biological limit values

styrene CAS: 100-42-5	Biological Indicator: mandelic acid; Sampling Period: End of turn Value: 800 mg/g Creatinine; Medium: Urine Remark: Argentina. Biological Exposure Indices Biological Indicator: mandelic acid; Sampling Period: Before next shift Value: 300 mg/g Creatinine; Medium: Urine Remark: Argentina. Biological Exposure Indices Biological Indicator: phenyl glycolic acid; Sampling Period: End of turn Value: 240 mg/g Creatinine; Medium: Urine Remark: Argentina. Biological Exposure Indices Biological Indicator: phenyl glycolic acid; Sampling Period: Before next shift Value: 100 mg/g Creatinine; Medium: Urine Remark: Argentina. Biological Exposure Indices Biological Indicator: styrene; Sampling Period: End of turn Value: 0.55 mg/L; Medium: Blood Remark: Argentina. Biological Exposure Indices Biological Indicator: styrene; Sampling Period: Before next shift Value: 0.02 mg/L; Medium: Blood Remark: Argentina. Biological Exposure Indices Biological Indicator: mandelic acid; Sampling Period: End of last day of the working day (recommended to avoid the first day of the week) Value: 8 g/g creatinine; Medium: Urine Remark: Brazil. NR7. Parameters for Biological Control of Occupational Exposure to Some Chemical Agents Biological Indicator: phenyl glyoxylic acid; Sampling Period: End of last day of the working day (recommended to avoid the first day of the week) Value: 240 mg/g Creatinine; Medium: Urine Remark: Brazil. NR7. Parameters for Biological Control of Occupational Exposure to Some Chemical Agents Biological Indicator: total mandelic acid plus phenylglyoxylic acid; Sampling Period: In case of long-term exposure: after more than one shift Value: 600 mg/g Creatinine; Medium: Urine Remark: Bulgaria. Biological limit values Biological Indicator: mandelic acid; Sampling Period: End of turn Value: 800 mg/g Creatinine; Medium: Urine Remark: Chile. Biological Limit Values Biological Indicator: phenyl glyoxylic acid; Sampling Period: End of turn Value: 240 mg/g Creatinine; Medium: Urine Remark: Chile. Biological Limit Values Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: End of turn Value: 295 Millimoles per mole Creatinine; Medium: Urine Remark: China. Biological Occupational Exposure Limits for 15 chemicals. Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: End of turn Value: 400 mg/g Creatinine; Medium: Urine Remark: China. Biological Occupational Exposure Limits for 15 chemicals. Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: Before next shift Value: 120 Millimoles per mole Creatinine; Medium: Urine Remark: China. Biological Occupational Exposure Limits for 15 chemicals. Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: Before next shift

Value: 160 mg/g Creatinine; Medium: Urine
Remark: China. Biological Occupational Exposure Limits for 15 chemicals.

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: End of turn
Value: 400 mg/g Creatinine; Medium: Urine
Remark: Maximum allowable occupational exposure limits in the workplace - Table 3. Adopted Biological Exposu

Biological Indicator: Styrene; Sampling Period: End of turn
Value: 40 µg/L; Medium: Urine
Remark: Maximum allowable occupational exposure limits in the workplace - Table 3. Adopted Biological Exposu

Biological Indicator: styrene; Sampling Period: 16 Hours after the end of work
Value: 19 micromol per litre; Medium: Blood
Remark: Croatia. Biological Exposure Limits

Biological Indicator: styrene; Sampling Period: 16 Hours after the end of work
Value: 20 µg/L; Medium: Blood
Remark: Croatia. Biological Exposure Limits

Biological Indicator: mandelic acid; Sampling Period: End of turn
Value: 1 g/g creatinine; Medium: Urine
Remark: Croatia. Biological Exposure Limits

Biological Indicator: mandelic acid; Sampling Period: End of turn
Value: 74 mol/mol creatinine; Medium: Urine
Remark: Croatia. Biological Exposure Limits

Biological Indicator: phenyl glyoxylic acid; Sampling Period: End of turn
Value: 240 mg/g Creatinine; Medium: Urine
Remark: Croatia. Biological Exposure Limits

Biological Indicator: phenyl glyoxylic acid; Sampling Period: End of turn
Value: 18 mol/mol creatinine; Medium: Urine
Remark: Croatia. Biological Exposure Limits

Biological Indicator: mandelic acid + phenyl glyoxylic acid; Sampling Period: during long-term exposure in the middle of the work week
Value: 600 mg/g Creatinine; Medium: Urine
Remark: Croatia. Biological Exposure Limits

Biological Indicator: mandelic acid; Sampling Period: End of turn
Value: 400 mg/g Creatinine; Medium: Urine
Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: mandelic acid; Sampling Period: End of turn
Value: 300 micromoles per millimole creatinine; Medium: Urine
Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: mandelic + phenylglyoxilic acid; Sampling Period: End of turn
Value: 600 mg/g Creatinine; Medium: Urine
Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: MAPGA; Sampling Period: Morning after working day
Value: 1.2 mg/L; Medium: Urine
Remark: Finland. Biological limit values

Biological Indicator: mandelic acid + phenylglyoxylic acid; Sampling Period: Immediately after exposure or after working hours
Value: 600 mg/g Creatinine; Medium: Urine
Remark: TRGS 903 - Biological limit values

Biological Indicator: mandelic acid; Sampling Period: FSL
Value: 1000 mg/g Creatinine; Medium: Urine
Remark: Hungary. Permissible limit values of biological exposure (effect) indices

Biological Indicator: mandelic acid; Sampling Period: After shift
Value: 740 micromoles per millimole creatinine; Medium: Urine
Remark: Hungary. Permissible limit values of biological exposure (effect) indices

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: FSL
Value: 400 mg/g Creatinine; Medium: Urine
Remark: Israel. Safety at Work Regulations - Annex III Biological Exposure Indices

Biological Indicator: Mandelic acid + Phenylglyoxylic acid; Sampling Period: End of turn; End of working week
Value: 430 mg/L; Medium: Urine
Remark: Occupational exposure limits based on biological monitoring (JSOH).

Biological Indicator: Styrene; Sampling Period: End of turn; End of working week
Value: 0.2 mg/L; Medium: Blood
Remark: Occupational exposure limits based on biological monitoring (JSOH).

Biological Indicator: Mandelic acid; Sampling Period: End of turn
Value: 800 mg/g Creatinine; Medium: Urine
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: Mandelic acid; Sampling Period: Before next shift
Value: 300 mg/g Creatinine; Medium: Urine
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: Phenylglyoxylic acid; Sampling Period: End of turn
Value: 240 mg/g Creatinine; Medium: Urine
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: Phenylglyoxylic acid; Sampling Period: Before next shift
Value: 100 mg/g Creatinine; Medium: Urine
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: Styrene; Sampling Period: End of turn
Value: 0.55 mg/L; Medium: venous blood
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: Styrene; Sampling Period: Before next shift
Value: 0.02 mg/L; Medium: venous blood
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: mandelic acid; Sampling Period: End of turn
Value: 8 g/g creatinine; Medium: Urine
Remark: Latvia. Biological Exposure Indices

Biological Indicator: styrene; Sampling Period: End of turn
Value: 0.55 mg/L; Medium: Blood
Remark: Latvia. Biological Exposure Indices

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: End of turn
Value: 400 mg/g Creatinine; Medium: Urine
Remark: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for work

Biological Indicator: Styrene; Sampling Period: End of turn
Value: 0.2 mg/L; Medium: venous blood
Remark: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for work

Biological Indicator: Mandelic acid; Sampling Period: End of turn
Value: 1 Millimoles per liter; Medium: Urine
Remark: New Zealand. Biological Exposure Indices

Biological Indicator: Sum of mandelic acid and phenyl glyoxylic acid; Sampling Period: End of turn
Value: 400 mg/g Creatinine; Medium: Urine
Remark: Portuguese Norm 1796 - Biological Exposure Indices

Biological Indicator: Styrene; Sampling Period: End of turn
Value: 0.2 mg/L; Medium: venous blood
Remark: Portuguese Norm 1796 - Biological Exposure Indices

Biological Indicator: mandelic acid; Sampling Period: End of turn
Value: 800 mg/g Creatinine; Medium: Urine
Remark: Romania. Biological limit values

Biological Indicator: mandelic acid; Sampling Period: Beginning of next shift
Value: 300 mg/g Creatinine; Medium: Urine
Remark: Romania. Biological limit values

Biological Indicator: phenylglyoxalic acid; Sampling Period: End of turn
Value: 100 mg/g Creatinine; Medium: Urine
Remark: Romania. Biological limit values

Biological Indicator: styrene; Sampling Period: End of turn
Value: 0.55 mg/L; Medium: Blood
Remark: Romania. Biological limit values

Biological Indicator: styrene; Sampling Period: Beginning of next shift
Value: 0.02 mg/L; Medium: Blood
Remark: Romania. Biological limit values

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: End of turn
Value: 901 mg/L; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: In case of long-term exposure: after more than one shift
Value: 5960 micromol per litre; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: End of turn
Value: 600 mg/g Creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: In case of long-term exposure: after more than one shift
Value: 449 micromoles per millimole creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: End of turn
Value: 600 mg/g Creatinine; Medium: Urine
Remark: Slovenia. BAT-values

Biological Indicator: Mandelic acid; Sampling Period: End of turn
Value: 800 mg/g Creatinine; Medium: Urine
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Mandelic acid; Sampling Period: Before next shift
Value: 300 mg/g Creatinine; Medium: Urine
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Phenolglyoxylic acid; Sampling Period: End of turn
Value: 240 mg/g Creatinine; Medium: Urine
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Phenolglyoxylic acid; Sampling Period: Before next shift
Value: 100 mg/g Creatinine; Medium: Urine
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Styrene; Sampling Period: End of turn
Value: 0.55 mg/L; Medium: venous blood
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Styrene; Sampling Period: Before next shift
Value: 0.02 mg/L; Medium: venous blood
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: End of workday
Value: 400 mg/g Creatinine; Medium: Urine
Remark: Occupational Exposure Limits for Chemical Agents in Spain - Biological Exposure Values

Biological Indicator: styrene; Sampling Period: End of workday
Value: 0.2 mg/L; Medium: venous blood
Remark: Occupational Exposure Limits for Chemical Agents in Spain - Biological Exposure Values

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: Immediately after exposure or after working hours
Value: 600 mg/g Creatinine; Medium: Urine
Remark: Svizzera. Lista di valori BAT

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: End of workday
Value: 400 mg/g Creatinine; Medium: Urine
Remark: Uruguay. Health surveillance of workers - Biological Exposure Indices (BEI).

Biological Indicator: styrene; Sampling Period: End of workday
Value: 0.2 mg/L; Medium: Blood
Remark: Uruguay. Health surveillance of workers - Biological Exposure Indices (BEI).

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: End of turn
Value: 400 mg/g Creatinine; Medium: Urine
Remark: ACGIH - Indicatori di Esposizione Biologica (BEI)

Biological Indicator: Styrene; Sampling Period: End of turn
Value: 40 µg/L; Medium: Urine
Remark: ACGIH - Indicatori di Esposizione Biologica (BEI)

Biological Indicator: Mandelic acid; Sampling Period: End of workday

	Value: 400 mg/g Creatinine; Medium: Urine Remark: VE.Biological Exposure Limits Biological Indicator: Styrene; Sampling Period: End of workday Value: 0.2 mg/L; Medium: Blood Remark: VE.Biological Exposure Limits Sampling Period: during long-term exposure: at the end of the work shift after several consecutive workdays Sampling Period: End of turn Sampling Period: In case of long-term exposure: after more than one shift Sampling Period: End of turn Sampling Period: In case of long-term exposure: after more than one shift Sampling Period: After shift Sampling Period: In case of long-term exposure: after more than one shift Sampling Period: End of turn
neodecanoic acid, cobalt salt CAS: 27253-31-2	Sampling Period: No restrictions Value: 30 µg/L; Medium: Urine Remark: Slovakia. Biological Limit Values Sampling Period: No restrictions Value: 5098 micromol per litre; Medium: Urine Remark: Slovakia. Biological Limit Values Sampling Period: No restrictions Value: 2003 µg/g creatinine; Medium: Urine Remark: Slovakia. Biological Limit Values Sampling Period: No restrictions Value: 3845 micromoles per millimole creatinine; Medium: Urine Remark: Slovakia. Biological Limit Values Sampling Period: At the end of a work week / at the end of a work day / at the end of a shift Value: 10 µg/L; Medium: Urine Remark: Austria. Regulation on health surveillance in the workplace 2014 Sampling Period: Immediately after exposure or after working hours Value: 30 µg/L; Medium: Urine Remark: Svizzera. Lista di valori BAT Sampling Period: Immediately after exposure or after working hours Value: 509 Nanomoles per liter; Medium: Urine Remark: Svizzera. Lista di valori BAT
butanone CAS: 78-93-3	Biological Indicator: MEK; Sampling Period: End of turn Value: 2 mg/L; Medium: Urine Remark: Argentina. Biological Exposure Indices Biological Indicator: MEK; Sampling Period: End of last day of the working day (recommended to avoid the first day of the week) Value: 2 mg/L; Medium: Urine Remark: Brazil. NR7. Parameters for Biological Control of Occupational Exposure to Some Chemical Agents Biological Indicator: MEC; Sampling Period: FSL Value: 26 mg/g Creatinine; Medium: Urine Remark: Chile. Biological Limit Values Biological Indicator: MEK; Sampling Period: End of turn Value: 2 mg/L; Medium: Urine Remark: Maximum allowable occupational exposure limits in the workplace - Table 3. Adopted Biological Exposu Biological Indicator: ethyl-methyl-ketone; Sampling Period: End of turn Value: 408 Millimoles per mole Creatinine; Medium: Urine Remark: Croatia. Biological Exposure Limits Biological Indicator: ethyl-methyl-ketone; Sampling Period: End of turn Value: 26 mg/g Creatinine; Medium: Urine Remark: Croatia. Biological Exposure Limits Biological Indicator: 2-butanone; Sampling Period: Immediately after exposure or after working hours Value: 2 mg/L; Medium: Urine Remark: TRGS 903 - Biological limit values Biological Indicator: MEK; Sampling Period: End of shift or A few hours after high exposure Value: 5 mg/L; Medium: Urine

	Remark: Occupational exposure limits based on biological monitoring (JSOH). Biological Indicator: MEK; Sampling Period: End of turn Value: 2 mg/L; Medium: Urine Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits Biological Indicator: MEK; Sampling Period: End of turn Value: 2 mg/L; Medium: Urine Remark: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for work Biological Indicator: MEK; Sampling Period: End of turn Value: 2 mg/L; Medium: Urine Remark: New Zealand. Biological Exposure Indices Biological Indicator: MEK; Sampling Period: End of turn Value: 2 mg/L; Medium: Urine Remark: Portuguese Norm 1796 - Biological Exposure Indices Biological Indicator: MEK; Sampling Period: End of turn Value: 2 mg/L; Medium: Urine Remark: Romania. Biological limit values Sampling Period: End of turn Value: 2 mg/L; Medium: Urine Remark: Slovenia. BAT-values Biological Indicator: MEK; Sampling Period: End of turn Value: 26 mg/g Creatinine; Medium: Urine Remark: Slovenia. BAT-values Biological Indicator: MEK; Sampling Period: End of turn Value: 2 mg/L; Medium: Urine Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices. Biological Indicator: MEK; Sampling Period: End of workday Value: 2 mg/L; Medium: Urine Remark: Occupational Exposure Limits for Chemical Agents in Spain - Biological Exposure Values Biological Indicator: 2-butanone (MEK); Sampling Period: Immediately after exposure or after working hours Value: 2 mg/L; Medium: Urine Remark: Svizzera. Lista di valori BAT Biological Indicator: 2-Butanon (MEK); Sampling Period: Immediately after exposure or after working hours Value: 277 micromol per litre; Medium: Urine Remark: Svizzera. Lista di valori BAT Biological Indicator: butan-2-one; Sampling Period: After shift Value: 70 micromol per litre; Medium: Urine Remark: UK. Biological monitoring guidance values Biological Indicator: MEK; Sampling Period: End of turn Value: 2 mg/L; Medium: Urine Remark: ACGIH - Indicatori di Esposizione Biologica (BEI) Biological Indicator: MEK; Sampling Period: End of workday Value: 2 mg/L; Medium: Urine Remark: VE.Biological Exposure Limits Sampling Period: End of turn
methanol CAS: 67-56-1	Biological Indicator: Methanol; Sampling Period: End of turn Value: 15 mg/L; Medium: Urine Remark: Argentina. Biological Exposure Indices Biological Indicator: Methanol; Sampling Period: You can differentiate between pre-and post-shift Value: 15 mg/L; Medium: Urine Remark: Brazil. NR7. Parameters for Biological Control of Occupational Exposure to Some Chemical Agents Biological Indicator: Methanol; Sampling Period: Not critical Value: 7 mg/g Creatinine; Medium: Urine Remark: Chile. Biological Limit Values Biological Indicator: Methanol; Sampling Period: End of turn Value: 15 mg/L; Medium: Urine Remark: Maximum allowable occupational exposure limits in the workplace - Table 3. Adopted Biological Exposu Biological Indicator: Methanol; Sampling Period: End of turn

Value: 247 Millimoles per mole Creatinine; Medium: Urine
Remark: Croatia. Biological Exposure Limits

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 7 mg/g Creatinine; Medium: Urine
Remark: Croatia. Biological Exposure Limits

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 15 mg/L; Medium: Urine
Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 47 Millimoles per liter; Medium: Urine
Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: Methanol; Sampling Period: Immediately after exposure or after working hours
Value: 30 mg/L; Medium: Urine
Remark: TRGS 903 - Biological limit values

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 20 mg/L; Medium: Urine
Remark: Occupational exposure limits based on biological monitoring (JSOH).

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 15 mg/L; Medium: Urine
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: Formic acid; Sampling Period: Before shift at end of workweek
Value: 80 mg/g Creatinine; Medium: Urine
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 15 mg/L; Medium: Urine
Remark: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for work

Biological Indicator: Methyl alcohol; Sampling Period: End of turn
Value: 15 mg/L; Medium: Urine
Remark: New Zealand. Biological Exposure Indices

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 15 mg/L; Medium: Urine
Remark: Portuguese Norm 1796 - Biological Exposure Indices

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 6 mg/L; Medium: Urine
Remark: Romania. Biological limit values

Biological Indicator: Methanol; Sampling Period: In case of long-term exposure: after more than one shift
Value: 30 mg/L; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 938 micromol per litre; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Methanol; Sampling Period: In case of long-term exposure: after more than one shift
Value: 20 mg/g Creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 707 micromoles per millimole creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Methanol; Sampling Period: during long-term exposure: at the end of the work shift after several consecutive workdays
Value: 30 mg/L; Medium: Urine
Remark: Slovenia. BAT-values

Biological Indicator: Methanol; Sampling Period: End of turn
Value: 15 mg/L; Medium: Urine
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Formic acid; Sampling Period: Prior to last shift of workweek
Value: 80 mg/g Creatinine; Medium: Urine
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Methanol; Sampling Period: End of workday

	Value: 15 mg/L; Medium: Urine Remark: Occupational Exposure Limits for Chemical Agents in Spain - Biological Exposure Values
	Biological Indicator: Methanol; Sampling Period: Immediately after exposure or after working hours Value: 30 mg/L; Medium: Urine Remark: Svizzera. Lista di valori BAT
	Biological Indicator: Methanol; Sampling Period: In case of long-term exposure: after more than one shift Value: 936 micromol per litre; Medium: Urine Remark: Svizzera. Lista di valori BAT
	Biological Indicator: Methanol; Sampling Period: End of turn Value: 15 mg/L; Medium: Urine Remark: ACGIH - Indicatori di Esposizione Biologica (BEI)
	Biological Indicator: Methanol; Sampling Period: End of workday Value: 15 mg/L; Medium: Urine Remark: VE.Biological Exposure Limits
	Sampling Period: Immediately after exposure or after working hours
	Sampling Period: In case of long-term exposure: after more than one shift
	Sampling Period: End of turn
	Sampling Period: In case of long-term exposure: after more than one shift
	Sampling Period: End of turn
	Sampling Period: In case of long-term exposure: after more than one shift
	Sampling Period: End of turn
	Sampling Period: In case of long-term exposure: after more than one shift
	Sampling Period: End of last day of the working day (recommended to avoid the first day of the week)

Predicted No Effect Concentration (PNEC) values

styrene CAS: 100-42-5	Exposure Route: Fresh Water; PNEC Limit: 0.028 mg/l
	Exposure Route: Marine water; PNEC Limit: 0.014 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 0.614 mg/kg
	Exposure Route: Marine water sediments; PNEC Limit: 0.307 mg/kg
	Exposure Route: Soil; PNEC Limit: 0.2 mg/kg
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 5 mg/l
titanium dioxide CAS: 13463-67-7	Exposure Route: Fresh Water; PNEC Limit: 1 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 1000 mg/kg
	Exposure Route: Marine water; PNEC Limit: 0.127 mg/l
	Exposure Route: Marine water sediments; PNEC Limit: 100 mg/kg
	Exposure Route: Soil; PNEC Limit: 100 mg/kg
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate CAS: 6846-50-0	Exposure Route: Fresh Water; PNEC Limit: 0.014 mg/l
	Exposure Route: Marine water; PNEC Limit: 0.0014 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 3 mg/l
	Exposure Route: Soil; PNEC Limit: 0.926 mg/kg
butanone CAS: 78-93-3	Exposure Route: Oral; PNEC Limit: 1000 mg/kg
	Exposure Route: Fresh Water; PNEC Limit: 55.8 mg/l
	Exposure Route: Marine water; PNEC Limit: 55.8 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 284.74 mg/kg
	Exposure Route: Marine water sediments; PNEC Limit: 284 mg/kg
	Exposure Route: Soil; PNEC Limit: 22.5 mg/kg

Derived No Effect Level (DNEL) values

styrene CAS: 100-42-5	Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Worker Professional: 406 mg/kg
	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Professional: 85 mg/m3

	Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects Worker Professional: 289 mg/m3 Exposure Route: Human Inhalation; Exposure Frequency: Short Term (acute) Worker Professional: 306 mg/m3 Exposure Route: Oral; Exposure Frequency: Long Term, systemic effects Consumer: 2.1 mg/kg Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Consumer: 343 mg/kg Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Consumer: 10 mg/m3 Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects Consumer: 174.25 mg/m3 Exposure Route: Human Inhalation; Exposure Frequency: Short Term (acute) Consumer: 182.75 mg/m3
titanium dioxide CAS: 13463-67-7	Exposure Route: Human Inhalation; Exposure Frequency: Local Effects Worker Professional: 10 mg/m3 Exposure Route: Human Oral; Exposure Frequency: Specific Effects Consumer: 700 ppm
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate CAS: 6846-50-0	Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Worker Professional: 5 mg/kg Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Professional: 17.62 mg/m3 Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects Consumer: 5 mg/kg Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Consumer: 4.35 mg/m3 Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Consumer: 5 mg/kg
butanone CAS: 78-93-3	Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Worker Professional: 1161 mg/kg; Consumer: 412 mg/kg Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Professional: 600 mg/m3; Consumer: 106 mg/m3 Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects Consumer: 31 mg/kg

Technical measures to prevent exposure

methanol: ei

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Colour: Grey
Odour: N.A.
pH: Not Relevant
Kinematic viscosity: > 20,5 mm2/sec (40 °C)
Melting point/freezing point: N.A.
Boiling point or initial boiling point and boiling range: N.A.
Flash point: 16.5 °C (61.7 °F)
Lower and upper explosion limit: N.A.
Relative vapour density: N.A.
Vapour pressure: N.A.
Density and/or relative density: 1.50 g/cm3
Solubility in water: N.A.
Solubility in oil: N.A.
Partition coefficient n-octanol/water (log value): N.A.
Auto-ignition temperature: N.A.
Decomposition temperature: N.A.
Flammability: The product is classified Flam. Liq. 2 H225
Kinematic viscosity m2/s (40°C) > 20,5 mm2/sec (40 °C)
Viscosity: = 20.00 s - Method: ISO/DIN 2431 84 - Section: 6.00 mm
Particle characteristics:
Particle size: N.A.
Nanoforms: See Nanoform information in Section 3.

9.2. Other information

Evaporation rate: N.A.
Miscibility: N.A.
Conductivity: N.A.
No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
	ATEmix - Inhalation (Vapours) : 54.4891 mg/l
b) skin corrosion/irritation	The product is classified: Skin Irrit. 2(H315)
c) serious eye damage/irritation	The product is classified: Eye Irrit. 2(H319)
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1A(H317)
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	The product is classified: Repr. 2(H361)
h) STOT-single exposure	The product is classified: STOT SE 3(H335)
i) STOT-repeated exposure	The product is classified: STOT RE 1(H372)

j) aspiration hazard	Not classified	
	Based on available data, the classification criteria are not met	

Toxicological information on main components of the mixture:

styrene	a) acute toxicity	LD50 Oral Rat = 5000 mg/kg	
		LC50 Inhalation Rat = 11.8 mg/l 4h	
		LD50 Skin Rat > 2000 mg/kg	OECD Test Guideline 402
Talc (Mg3H2(SiO3)4)	a) acute toxicity	LD50 Oral > 5000 mg/kg bw	
titanium dioxide	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg	
		LD50 Skin Rabbit > 5000 mg/kg	
ethyl acetate	a) acute toxicity	LD50 Oral Rat = 5620 mg/kg	
		LC50 Inhalation Rat = 56 mg/l 4h	
		LD50 Skin Rabbit > 18000 mg/kg	
butanone	a) acute toxicity	LC50 Inhalation Rat > 5000 mg/l	
		LD50 Oral Rat = 2054 mg/kg	
Carbon black	a) acute toxicity	LD50 Oral Rat > 8000 mg/kg	

11.2. Information on other hazards

Endocrine disrupting properties:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
styrene	CAS: 100-42-5 - EINECS: 202-851-5 - INDEX: 601-026-00-0	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas (fathead minnow) = 4.02 mg/L 96 H
		a) Aquatic acute toxicity : EC50 Invertebrates Daphnia magna (Water flea) = 4.7 mg/L 48 H
		e) Plant toxicity : EC10 Algae Pseudokirchneriella subcapitata (microalgae) = 0.28 mg/L 96 H
		b) Aquatic chronic toxicity : NOEC Invertebrates Daphnia magna (Water flea) = 1.01 mg/L 21 D
		e) Plant toxicity : EC50 Algae Pseudokirchneriella subcapitata (microalgae) = 4.9 mg/L 72 H
titanium dioxide	CAS: 13463-67-7 - EINECS: 236-675-5 - INDEX: 022-006-00-2	a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96h
		a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48h
ethyl acetate	CAS: 141-78-6 - EINECS: 205-500-4 - INDEX:	a) Aquatic acute toxicity : LC50 Fish = 230 mg/L 96 H

	607-022-00-5	
		a) Aquatic acute toxicity : EC50 Invertebrates Daphnia (water flea) > 2500 mg/L 24 H
		e) Plant toxicity : EC50 Algae > 100 mg/L 72 H
butanone	CAS: 78-93-3 - EINECS: 201-159-0 - INDEX: 606-002-00-3	a) Aquatic acute toxicity : LC50 Fish pimephales promelas = 2993 mg/L 96h OECD 203
		a) Aquatic acute toxicity : EC50 Invertebrates daphnia magna = 308 mg/L 48h OECD 202
		a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 2029 mg/L 96h OECD 201
Carbon black	CAS: 1333-86-4 - EINECS: 215-609-9	a) Aquatic acute toxicity : LC10 Fish Brachydanio rerio (zebrafish) = 1000 mg/L 96h
		a) Aquatic acute toxicity : EC50 Invertebrates Daphnia magna (Water flea) > 5600 mg/L 48h
		a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus (green algae) > 10000 mg/L 72h

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration >= 0.1%

12.6. Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number or ID number

1263

14.2. UN proper shipping name

ADR-Shipping Name: PAINT

IATA-Shipping Name: PAINT

IMDG-Shipping Name: PAINT

14.3. Transport hazard class(es)

ADR-Class: 3

IATA-Class: 3

IMDG-Class: 3

14.4. Packing group

ADR-Packing Group: II

IATA-Packing group: II

IMDG-Packing group: II

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

IMDG-EMS: F-E, S-E

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: 3

ADR - Hazard identification number: 33

ADR-Special Provisions: 163 367 640D 650

ADR-Transport category (Tunnel restriction code): 2 (D/E)

Air (IATA):

IATA-Passenger Aircraft: 353

IATA-Cargo Aircraft: 364

IATA-Label: 3

IATA-Subsidiary hazards: -

IATA-Erg: 3L

IATA-Special Provisions: A3 A72 A192

Sea (IMDG):

IMDG-Stowage and handling: Category B

IMDG-Segregation: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisions: 163 367

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 CLP)

Regulation (EU) n. 2020/878

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3, 40

Restrictions related to the substances contained: 28, 29, 69, 75

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1	Lower-tier threshold (tonnes)	Upper-tier threshold (tonnes)
Product belongs to category: P5c	5000	50000

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

2: Hazard to waters

German Lagerklasse according to TRGS 510:

LGK 3

SVHC Substances:

No SVHC substances present in concentration >= 0.1%

DIRECTIVE 2010/75/EU (VOC directive)

Volatile Organic compounds - VOCs = 26.46 %

Volatile Organic compounds - VOCs = 396.90 g/L

Estimated Total Content of Water 0.00 %

Estimated Total Solid Content 73.54 %

Classification according to VbF

Classification according to VbF A I - Flash point less than 21 °C, at 15 °C not miscible in water

Mal-Code (Denmark)

Mal-Code (Denmark)	Mal Factor	Unit of Measure	Revision Status / Number	Regulatory Base
4 - 6	3164	m3 air/10 g	1993	Administrative determined MAL-Factors

Biocides

REGULATION (EC) No 528/2012

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H372	Causes damage to organs (hearing organs) through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.6/2	Flam. Liq. 2	Flammable liquid, Category 2
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
3.1/3/Inhal	Acute Tox. 3	Acute toxicity (inhalation), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.10/1	Asp. Tox. 1	Aspiration hazard, Category 1
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1

3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.7/2	Repr. 2	Reproductive toxicity, Category 2
3.8/1	STOT SE 1	Specific target organ toxicity — single exposure, Category 1
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/1	STOT RE 1	Specific target organ toxicity — repeated exposure, Category 1
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Flam. Liq. 2, H225	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1A, H317	Calculation method
Repr. 2, H361d	Calculation method
STOT SE 3, H335	Calculation method
STOT RE 1, H372	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: KAFH
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- SECTION 14: Transport information