

Safety Data Sheet

FEROLD GEL FERRO ANTICO

Safety Data Sheet dated 18/04/2024 version 6



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

1.1. Product identifier

Mixture identification:

Trade name: FEROLD GEL FERRO ANTICO

Trade code: LQ327240

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

Recommended use: Coatings and paints, thinners, paint removers

Smalto monocomponente

Dispersione pigmentata liquida

Impieghi per i consumatori

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

Telefono: +39031586111

First Email: safety@lechler.eu

1.4. Emergency telephone number

CAV "Osp.Ped.Bambino Gesù" Dip.Emergenza di Roma ...0668593726
Azienda Ospedaliera Università di Foggia800183459 -
Ospedale Niguarda Ca' Granda di Milano0266101029 -
Azienda Ospedaliera "A. Cardarelli" di Napoli0817472870 -
CAV Policlinico "Umberto I" di Roma0649978000 -
CAV Policlinico "A. Gemelli" di Roma063054343 -
Azienda Osp."Careggi" U.O. Tossicologica di Firenze0557947819 -
CAV Centro Nazionale di Informaz.Tossicol. di Pavia038224444 -
Azienda Ospedaliera Papa Giovanni XXIII di Bergamo.....800883300 -
Azienda Ospedaliera Integrata di Verona..... ..800011858 -

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

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

Flam. Liq. 3 Flammable liquid and vapour.

STOT RE 2 May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 2 Toxic to aquatic life with long lasting effects.

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



Warning

Hazard statements

H226	Flammable liquid and vapour.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
P314	Get medical advice/attention if you feel unwell.
P370+P378	In caso d'incendio: utilizzare sabbia secca, prodotto chimico secco o schiuma resistente all'alcool per estinguere.
P391	Collect spillage.
P403+P235	Store in a well-ventilated place. Keep cool.

Contains

Idrocarburi, C9-C12, n-alcani, isoalcani, ciclici, aromatici (2-25%)

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

None.

2.3. Other hazards

Risultati della valutazione PBT e vPvB

Secondo i criteri dell'ordinamento REACH nessuna sostanza come PBT, vPvB. Proprietà di interferenza con il sistema endocrino-Tossicità

La sostanza/miscela non contiene componenti considerati aventi proprietà di interferenza endocrina ai sensi dell'articolo 57(f) del REACH o del regolamento delegato (UE) 2017/2100 della Commissione o del regolamento (UE) 2018/605 della Commissione a livelli dello 0,1% o superiori.

Proprietà di interferenza con il sistema endocrino-Ecotossicità

La sostanza/miscela non contiene componenti considerati aventi proprietà di interferenza endocrina ai sensi dell'articolo 57(f) del REACH o del regolamento delegato (UE) 2017/2100 della Commissione o del regolamento (UE) 2018/605 della Commissione a livelli dello 0,1% o superiori.

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: FEROLD GEL FERRO ANTICO

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

Qty	Name	Ident. Numb.	Classification	Registration Number
≥12.5 - ≤15 %	Idrocarburi, C9-C11, n-alcani, isoalcani, ciclici, < 2% aromatici	EC:919-857-5	Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336, DECLP(*)	01-2119463258-33
≥5 - ≤7 %	bis(ortofosfato) di trizinc	CAS:7779-90-0 EC:231-944-3 Index:030-011-00-6	Aquatic Acute 1, H400; Aquatic Chronic 1, H410	01-2119485044-40
≥2.5 - ≤3 %	Idrocarburi, C10-C13, n-alcani, isoalcani, ciclici, < 2% aromatici	EC:918-481-9	Asp. Tox. 1, H304, DECLP(*)	01-2119457273-39
≥1 - ≤2.5 %	Idrocarburi, C9-C12, n-alcani, isoalcani, ciclici, aromatici (2-25%)	EC:919-446-0	Flam. Liq. 3, H226; STOT SE 3, H336; STOT RE 1, H372; Asp. Tox. 1, H304; Aquatic Chronic 2, H411, EUH066, DECLP(*)	01-2119458049-33
≥1 - ≤2.5 %	alluminio ortofosfato	CAS:7784-30-7 EC:232-056-9	Not classified as hazardous	01-2119971255-34-0006
≥0.5 - ≤1 %	nerofumo	CAS:1333-86-4 EC:215-609-9	Not classified as hazardous	01-2119384822-32
≥0.5 - ≤1 %	1-metossi-2-propanolo	CAS:107-98-2 EC:203-539-1 Index:603-064-00-3	Flam. Liq. 3, H226; STOT SE 3, H336	01-2119457435-35
≥0.5 - ≤1 %	ossido di zinco	CAS:1314-13-2 EC:215-222-5 Index:030-013-	Aquatic Acute 1, H400; Aquatic Chronic 1, H410, M-Chronic:1, M-Acute:1	01-2119463881-32

00-7

≥0.5 - ≤1 %	xilene	CAS:1330-20-7 EC:215-535-7 Index:601-022-00-9	Flam. Liq. 3, H226; Acute Tox. 4, H332; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 3, H412; STOT SE 3, H335	01-2119488216-32
≥0.3 - ≤0.5 %	acetato di 1-metil-2-metossietile	CAS:108-65-6 EC:203-603-9 Index:607-195-00-7	STOT SE 3, H336; Flam. Liq. 3, H226	01-2119475791-29
≥0.1 - ≤0.25 %	etilbenzene	CAS:100-41-4 EC:202-849-4 Index:601-023-00-4	Flam. Liq. 2, H225; Acute Tox. 4, H332; Asp. Tox. 1, H304; STOT RE 2, H373	01-2119489370-35
< 0.1 %	acetato di n-butile	CAS:123-86-4 EC:204-658-1 Index:607-025-00-1	Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	01-2119485493-29
< 0.1 %	(metil-2-metossietossi)propanolo	CAS:34590-94-8 EC:252-104-2	Substance with a Union workplace exposure limit.	01-2119450011-60
< 0.1 %	quarzo (SiO ₂)	CAS:14808-60-7 EC:238-878-4	Substance with a Union workplace exposure limit.	
< 0.1 %	toluene	CAS:108-88-3 EC:203-625-9 Index:601-021-00-3	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Repr. 2, H361d; STOT RE 2, H373; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 3, H412	01-2119471310-51

(*)DECLP Substance classified in accordance with Note P, Annex VI of EC Regulation (EC) 1272/2008.

The harmonised classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 shall apply.

Substances in nanoform:

nerofumo	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 (Tecnica di misurazione: STEM)
		Shape and aspect ratio:	Sfere, (:): < 3 (Tecnica di misurazione: TEM)
		Crystallinity:	Amorphous: = 100% - (Tecnica di misurazione: Diffrazione raggi X (XRD))
		Surface Treatment - Agent:	(No)
		Specific surface area:	≥ 21m ² /g ≤ 1,200m ² /g - (Tecnica di misurazione: Metodo Brunauer, Emmett and Teller (BET) con l'utilizzo di azoto)

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 immediately and dispose off safely.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

N.A.

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 caso d'incendio: utilizzare sabbia secca, prodotto chimico secco o schiuma resistente all'alcool per estinguere.

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.

Remove persons to safety.

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.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

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.

Conservare ad una temperatura compresa tra 5° e 35°C. Tenere lontano da fiamme libere e sorgenti di calore. Evitare l'esposizione diretta al sole.

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
Idrocarburi, C9-C11, n-alcani, isoalcani, ciclici, < 2% aromatici	SUVA	SWITZERLAND	Long Term: 300 mg/m ³ - 50 ppm; Breve Termine 600 mg/m ³ - 100 ppm
Idrocarburi, C10-C13, n-alcani, isoalcani, ciclici, < 2% aromatici	SUVA	SWITZERLAND	Long Term: 300 mg/m ³ - 50 ppm; Breve Termine 600 mg/m ³ - 100 ppm
alluminio ortofosfato CAS: 7784-30-7	ACGIH		Long Term: 1 mg/m ³ Irritazione delle vie aeree inferiori
nerofumo CAS: 1333-86-4	ACGIH		Long Term: 3 mg/m ³ I, A3 - Bronchitis
1-metossi-2-propanolo CAS: 107-98-2	EU		Long Term: 375 mg/m ³ - 100 ppm; Breve Termine 568 mg/m ³ - 150 ppm Behaviour Indicative 2000/39/CE
	EU		Identifica la possibilità di significativo assorbimento attraverso la pelle
	SUVA	SWITZERLAND	Long Term: 360 mg/m ³ - 100 ppm; Breve Termine 720 mg/m ³ - 200 ppm Se il valore limite di esposizione professionale viene rispettato, le lesioni al feto sono improbabili.
	VLEP	ITALY	Long Term: 375 mg/m ³ - 100 ppm; Breve Termine 568 mg/m ³ - 150 ppm La notazione 'Pelle' attribuita ai valori limite di esposizione indica possibilità di assorbimento significativo attraverso la pelle
	ACGIH		Long Term: 50 ppm; Breve Termine 100 ppm A4 - Eye and URT irr
ossido di zinco CAS: 1314-13-2	SUVA	SWITZERLAND	Long Term: 3 mg/m ³ ; Breve Termine 3 mg/m ³ Occupational Safety and Health Administration
	ACGIH		Long Term: 2 mg/m ³ ; Breve Termine 10 mg/m ³ R - Metal fume fever
xilene CAS: 1330-20-7	ACGIH		Long Term: 20 ppm A4, BEI - URT and eye irr; hematologic eff; CNS impair
	EU		Long Term: 221 mg/m ³ - 50 ppm; Breve Termine 442 mg/m ³ - 100 ppm Behaviour Indicative 2000/39/CE
	EU		Identifica la possibilità di significativo assorbimento attraverso la pelle
	SUVA	SWITZERLAND	Long Term: 435 mg/m ³ - 100 ppm Possibilità d'intossicazione per riassorbimento transcutaneo. Certe sostanze penetrano nell'organismo non soltanto tramite le vie re
	SUVA	SWITZERLAND	Breve Termine 870 mg/m ³ - 200 ppm Institut National de Recherche et de Sécurité pour la prévention des accidents du travail et des maladies professionnelles
	VLEP	ITALY	Long Term: 221 mg/m ³ - 50 ppm; Breve Termine 442 mg/m ³ - 100 ppm La notazione 'Pelle' attribuita ai valori limite di esposizione indica possibilità di assorbimento significativo attraverso la pelle
acetato di 1-metil-2-metossietile CAS: 108-65-6	EU		Long Term: 275 mg/m ³ - 50 ppm; Breve Termine 550 mg/m ³ - 100 ppm Behaviour Indicative 2000/39/CE
	EU		Identifica la possibilità di significativo assorbimento attraverso la pelle
	SUVA	SWITZERLAND	Long Term: 275 mg/m ³ - 50 ppm; Breve Termine 275 mg/m ³ - 50 ppm Se il valore limite di esposizione professionale viene rispettato, le lesioni al feto sono

			improbabili.
	VLEP	ITALY	Long Term: 275 mg/m ³ - 50 ppm; Breve Termine 550 mg/m ³ - 100 ppm La notazione 'Pelle' attribuita ai valori limite di esposizione indica possibilità di assorbimento significativo attraverso la pelle
etilbenzene CAS: 100-41-4	VLEP	ITALY	Long Term: 442 mg/m ³ - 100 ppm; Breve Termine 884 mg/m ³ - 200 ppm La notazione 'Pelle' attribuita ai valori limite di esposizione indica possibilità di assorbimento significativo attraverso la pelle
	SUVA	SWITZERLAND	Long Term: 220 mg/m ³ - 50 ppm; Breve Termine 220 mg/m ³ - 50 ppm National Institute for Occupational Safety and Health
	EU		Long Term: 442 mg/m ³ - 100 ppm; Breve Termine 884 mg/m ³ - 200 ppm Behaviour Indicative 2000/39/CE
	EU		Identifica la possibilità di significativo assorbimento attraverso la pelle
	ACGIH		Long Term: 20 ppm OTO; A3, BEI - URT & eye irr; ototoxicity; kidney eff; CNS impair
acetato di n-butile CAS: 123-86-4	SUVA	SWITZERLAND	Long Term: 480 mg/m ³ - 100 ppm; Breve Termine 960 mg/m ³ - 200 ppm Se il valore limite di esposizione professionale viene rispettato, le lesioni al feto sono improbabili.
	EU		Long Term: 241 mg/m ³ - 50 ppm; Breve Termine 723 mg/m ³ - 150 ppm Behaviour Indicative 2019/1831/UE
	ACGIH		Long Term: 50 ppm; Breve Termine 150 ppm Eye and URT irr
(metil-2-metossietossi)propanolo CAS: 34590-94-8	EU		Long Term: 308 mg/m ³ - 50 ppm Behaviour Indicative 2000/39/CE
	EU		Identifica la possibilità di significativo assorbimento attraverso la pelle
	VLEP	ITALY	Long Term: 308 mg/m ³ - 50 ppm La notazione 'Pelle' attribuita ai valori limite di esposizione indica possibilità di assorbimento significativo attraverso la pelle
	SUVA	SWITZERLAND	Long Term: 300 mg/m ³ - 50 ppm; Breve Termine 300 mg/m ³ - 50 ppm National Institute for Occupational Safety and Health
	ACGIH		Long Term: 50 ppm Liver & CNS eff
quarzo (SiO ₂) CAS: 14808-60-7	ACGIH		Long Term: 0.025 mg/m ³ R, A2 - Pulm fibrosis, lung cancer
	SUVA	SWITZERLAND	Long Term: 0.15 mg/m ³ Se il valore limite di esposizione professionale viene rispettato, le lesioni al feto sono improbabili.
	EU		Long Term: 0.1 mg/m ³ 2004/37/CE
	EU		Polvere respirabile
	EU		Agenti cancerogeni o mutageni
toluene CAS: 108-88-3	EU		Long Term: 192 mg/m ³ - 50 ppm; Breve Termine 384 mg/m ³ - 100 ppm Behaviour Indicative 2006/15/CE
	EU		Identifica la possibilità di significativo assorbimento attraverso la pelle
	SUVA	SWITZERLAND	Long Term: 190 mg/m ³ - 50 ppm ototossicità con amplificazione del rumore
	SUVA	SWITZERLAND	Breve Termine 760 mg/m ³ - 200 ppm Se il valore limite di esposizione professionale viene rispettato, le lesioni al feto sono improbabili.
	VLEP	ITALY	Long Term: 192 mg/m ³ - 50 ppm La notazione 'Pelle' attribuita ai valori limite di esposizione indica possibilità di assorbimento significativo attraverso la pelle

Biological limit values

1-metossi-2-propanolo
CAS: 107-98-2

Biological Indicator: 1-Methoxypropan-2-ol; Sampling Period: Immediately after exposure or after working hours
Value: 15 mg/L; Medium: Urine
Remark: TRGS 903 - Biological limit values

Biological Indicator: 1-methoxypropane-2-ol; Sampling Period: Fine turno
Value: 15 mg/L; Medium: Urine
Remark: Slovenia. BAT-values

Biological Indicator: 1-methoxypropanol-2; Sampling Period: Immediately after exposure or after working hours
Value: 2219 micromol per litre; Medium: Urine
Remark: Svizzera. Lista di valori BAT

Biological Indicator: 1-methoxypropanol-2; Sampling Period: Immediately after exposure or after working hours
Value: 20 mg/L; Medium: Urine
Remark: Svizzera. Lista di valori BAT

xilene
CAS: 1330-20-7

Biological Indicator: xylene; Sampling Period: Fine turno
Value: 1.5 mg/L; Medium: Blood
Remark: Croatia. Biological Exposure Limits

Biological Indicator: Methylhippuric acid; Sampling Period: Fine turno
Value: 1.5 g/l; Medium: Urine
Remark: New Zealand. Biological Exposure Indices

Biological Indicator: xylene; Sampling Period: Fine turno
Value: 1.5 mg/L; Medium: Blood
Remark: Slovakia. Biological Limit Values

Biological Indicator: sum of 2,3,4-methylhippuric acid; Sampling Period: Fine turno
Value: 2000 mg/L; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: methylhippuric acid; Sampling Period: Fine turno
Value: 3 g/l; Medium: Urine
Remark: Romania. Biological limit values

Biological Indicator: methylhippuric acid (all isomers); Sampling Period: Fine turno
Value: 2 g/l; Medium: Urine
Remark: Slovenia. BAT-values

Biological Indicator: xylene; Sampling Period: Immediately after exposure or after working hours
Value: 1.5 mg/L; Medium: Blood
Remark: TRGS 903 - Biological limit values

Biological Indicator: methylhippuric acid (all isomers); Sampling Period: Immediately after exposure or after working hours
Value: 2 g/l; Medium: Urine
Remark: TRGS 903 - Biological limit values

Biological Indicator: Methylhippuric acid; Sampling Period: Last 4 hours of shift
Value: 2 mg/L; Medium: Urine
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: total (o-, m-, p-)methylhippuric acid; Sampling Period: Fine turno; Fine settimana lavorativa
Value: 800 mg/L; Medium: Urine
Remark: Occupational exposure limits based on biological monitoring (JSOH).

Biological Indicator: methyl hippuric acid; Sampling Period: At the end of a work week / at the end of a work day / at the end of a shift
Value: 1.5 g/l; Medium: Urine
Remark: Austria. Regulation on health surveillance in the workplace 2014

Biological Indicator: xylene; Sampling Period: End of workday
Value: 1 mg/L; Medium: Blood
Remark: Austria. Regulation on health surveillance in the workplace 2014

Biological Indicator: Methylhippuric acid; Sampling Period: At the end of exposure, in 4 hours
Value: 2 mg/L; Medium: Urine
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: methyl hippuric acid; Sampling Period: After shift
Value: 5 Millimoles per liter; Medium: Urine
Remark: Finland. Biological limit values

Biological Indicator: methyl hippuric acid; Sampling Period: Immediately after exposure or after working

hours
Value: 2 g/l; Medium: Urine
Remark: Svizzera. Lista di valori BAT

etilbenzene
CAS: 100-41-4

Biological Indicator: mandelic acid; Sampling Period: after the last shift of the last day of the work week
Value: 15 g/g creatinine; Medium: Urine
Remark: Argentina. Biological Exposure Indices

Biological Indicator: Ethylbenzene; Sampling Period: after the last shift of the last day of the work week
Value: 15 g/g creatinine; Medium: Air at the end of exhalation
Remark: Argentina. Biological Exposure Indices

Biological Indicator: mandelic acid; Sampling Period: Fine turno; Fine settimana lavorativa
Value: 15 g/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: Fine turno
Value: 2000 mg/g Creatinine; Medium: Urine
Remark: Bulgaria. Biological limit values

Biological Indicator: mandelic acid; Sampling Period: Fine turno
Value: 1500 mg/g Creatinine; Medium: Urine
Remark: Chile. Biological Limit Values

Biological Indicator: Sum of mandelic acid and phenyl glyoxylic acid; Sampling Period: Fine turno
Value: 15 g/g creatinine; Medium: Urine
Remark: Maximum allowable occupational exposure limits in the workplace - Table 3. Adopted Biological Exposu

Biological Indicator: Ethylbenzene; Sampling Period: during exposure
Value: 141 micromol per litre; Medium: Blood
Remark: Croatia. Biological Exposure Limits

Biological Indicator: Ethylbenzene; Sampling Period: during exposure
Value: 1.5 mg/L; Medium: Blood
Remark: Croatia. Biological Exposure Limits

Biological Indicator: mandelic acid; Sampling Period: Fine turno; Fine settimana lavorativa
Value: 112 mol/mol creatinine; Medium: Urine
Remark: Croatia. Biological Exposure Limits

Biological Indicator: mandelic acid; Sampling Period: Fine turno; Fine settimana lavorativa
Value: 15 g/g creatinine; Medium: Urine
Remark: Croatia. Biological Exposure Limits

Biological Indicator: mandelic acid; Sampling Period: Fine turno
Value: 1500 mg/g Creatinine; Medium: Urine
Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: mandelic acid; Sampling Period: Fine turno
Value: 1100 micromoles per millimole creatinine; Medium: Urine
Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: mandelic acid; Sampling Period: After the work shift at the end of week or exposure period
Value: 5.2 Millimoles per liter; Medium: Urine
Remark: Finland. Biological limit values

Biological Indicator: mandelic acid + phenylglyoxylic acid; Sampling Period: Immediately after exposure or after working hours
Value: 250 mg/g Creatinine; Medium: Urine
Remark: TRGS 903 - Biological limit values

Biological Indicator: mandelic acid; Sampling Period: After shift
Value: 1500 mg/g Creatinine; Medium: Urine
Remark: Hungary. Permissible limit values of biological exposure (effect) indices

Biological Indicator: mandelic acid; Sampling Period: After shift
Value: 1110 micromoles per millimole creatinine; Medium: Urine
Remark: Hungary. Permissible limit values of biological exposure (effect) indices

Biological Indicator: Mandelic acid; Sampling Period: Fine turno; Fine settimana lavorativa
Value: 15 g/g creatinine; Medium: Urine
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: Ethylbenzene
Medium: Air at the end of exhalation
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure

Limits

Biological Indicator: Sum of Mandelic acid plus phenylglyoxylic acid; Sampling Period: Fine turno; Fine settimana lavorativa
Value: 7 g/g creatinine; Medium: Urine
Remark: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for work

Biological Indicator: Ethylbenzene; Sampling Period: Non critico
Medium: exhaled air
Remark: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for work

Biological Indicator: Sum of mandelic acid and phenylglyoxylic acids; Sampling Period: Fine turno
Value: 25 g/g creatinine; Medium: Urine
Remark: New Zealand. Biological Exposure Indices

Biological Indicator: Sum of mandelic acid and phenyl glyoxylic acid; Sampling Period: Fine turno
Value: 7 g/g creatinine; Medium: Urine
Remark: Portuguese Norm 1796 - Biological Exposure Indices

Biological Indicator: mandelic acid; Sampling Period: Fine settimana lavorativa
Value: 15 g/g creatinine; Medium: Urine
Remark: Romania. Biological limit values

Biological Indicator: 2- and 4-ethylphenol; Sampling Period: Fine turno
Value: 12 mg/L; Medium: Blood
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: 1600 mg/L; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: 2- and 4-ethylphenol; Sampling Period: In case of long-term exposure: after more than one shift
Value: 986 micromol per litre; Medium: Blood
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: 10590 micromol per litre; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: Fine turno
Value: 1067 mg/g Creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: Fine turno
Value: 799 micromoles per millimole creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: 2- and 4-ethylphenol; Sampling Period: In case of long-term exposure: after more than one shift
Value: 803 mg/g Creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: 2- and 4-ethylphenol; Sampling Period: In case of long-term exposure: after more than one shift
Value: 744 micromoles per millimole creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Mandelic acid and phenylglyoxylic; Sampling Period: Fine turno
Value: 250 mg/g Creatinine; Medium: Urine
Remark: Slovenia. BAT-values

Biological Indicator: Mandelic acid; Sampling Period: Fine turno; Fine settimana lavorativa
Value: 15 g/g creatinine; Medium: Urine
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Ethylbenzene
Medium: Air at the end of exhalation
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: sum of mandelic acid and phenylglyoxylic acid; Sampling Period: FSL
Value: 700 mg/g Creatinine; Medium: Urine
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: Sum of mandelic acid and phenyl glyoxylic acid; Sampling Period: Fine turno
Value: 15 g/g creatinine; Medium: Urine
Remark: ACGIH - Indicatori di Esposizione Biologica (BEI)

Biological Indicator: Mandelic acid; Sampling Period: End of workday at end of workweek
Value: 7 g/g creatinine; Medium: Urine
Remark: VE.Biological Exposure Limits

Biological Indicator: Ethylbenzene; Sampling Period: A discrezione
Medium: in exhaled air
Remark: VE.Biological Exposure Limits

toluene
CAS: 108-88-3

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 0.5 mg/L; Medium: Urine
Remark: Argentina. Biological Exposure Indices

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 16 g/g creatinine; Medium: Urine
Remark: Argentina. Biological Exposure Indices

Biological Indicator: Toluene; Sampling Period: Prior to last shift of workweek
Value: 0.05 mg/L; Medium: Blood
Remark: Argentina. Biological Exposure Indices

Biological Indicator: O-Cresol; Sampling Period: At the end of a work week / at the end of a work day / at the end of a shift
Value: 0.8 mg/L; Medium: Urine
Remark: Austria. Regulation on health surveillance in the workplace 2014

Biological Indicator: Toluene; Sampling Period: End of workday
Value: 250 µg/L; Medium: Blood
Remark: Austria. Regulation on health surveillance in the workplace 2014

Biological Indicator: Hippuric acid; Sampling Period: End of last day of the working day (recommended to avoid the first day of the week)
Value: 25 g/g creatinine; Medium: Urine
Remark: Brazil. NR7. Parameters for Biological Control of Occupational Exposure to Some Chemical Agents

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 16 mmol/mmol creatinine; Medium: Urine
Remark: Bulgaria. Biological limit values

Biological Indicator: Toluene; Sampling Period: Before shift at end of workweek
Value: 0.05 mg/L; Medium: Blood
Remark: Chile. Biological Limit Values

Biological Indicator: Toluene; Sampling Period: End of workday
Value: 30 µg/L; Medium: Urine
Remark: Chile. Biological Limit Values

Biological Indicator: Hippuric acid; Sampling Period: End of workshift (after exposure has ended)
Value: 1 mol/mol creatinine; Medium: Urine
Remark: China. Biological Occupational Exposure Limits for 15 chemicals.

Biological Indicator: Hippuric acid; Sampling Period: End of workshift (after exposure has ended)
Value: 15 g/g creatinine; Medium: Urine
Remark: China. Biological Occupational Exposure Limits for 15 chemicals.

Biological Indicator: Hippuric acid; Sampling Period: End of workshift (after exposure has ended)
Value: 11 Millimoles per liter; Medium: Urine
Remark: China. Biological Occupational Exposure Limits for 15 chemicals.

Biological Indicator: Hippuric acid; Sampling Period: End of workshift (after exposure has ended)
Value: 2 g/l; Medium: Urine
Remark: China. Biological Occupational Exposure Limits for 15 chemicals.

Biological Indicator: Toluene; Sampling Period: End of workshift (15-30 min after exposure has ended)
Value: 20 mg/m³; Medium: Air at the end of exhalation
Remark: China. Biological Occupational Exposure Limits for 15 chemicals.

Biological Indicator: Toluene
Value: 5 mg/m³; Medium: Air at the end of exhalation
Remark: China. Biological Occupational Exposure Limits for 15 chemicals.

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 3 mg/g Creatinine; Medium: Urine
Remark: Maximum allowable occupational exposure limits in the workplace - Table 3. Adopted Biological

Exposu

Biological Indicator: Toluene; Sampling Period: Fine turno

Value: 0.03 mg/L; Medium: Urine

Remark: Maximum allowable occupational exposure limits in the workplace - Table 3. Adopted Biological Exposu

Biological Indicator: Toluene; Sampling Period: Prior to last shift of workweek

Value: 0.02 mg/L; Medium: Blood

Remark: Maximum allowable occupational exposure limits in the workplace - Table 3. Adopted Biological Exposu

Biological Indicator: Toluene; Sampling Period: Fine turno

Value: 1085 micromol per litre; Medium: Blood

Remark: Croatia. Biological Exposure Limits

Biological Indicator: Toluene; Sampling Period: Fine turno

Value: 1 mg/L; Medium: Blood

Remark: Croatia. Biological Exposure Limits

Biological Indicator: Toluene; Sampling Period: during exposure

Value: 83 micromol per litre; Medium: Air at the end of exhalation

Remark: Croatia. Biological Exposure Limits

Biological Indicator: Toluene; Sampling Period: during exposure

Value: 20 ppm; Medium: Air at the end of exhalation

Remark: Croatia. Biological Exposure Limits

Biological Indicator: Hippuric acid; Sampling Period: Fine turno

Value: 158 mol/mol creatinine; Medium: Urine

Remark: Croatia. Biological Exposure Limits

Biological Indicator: Hippuric acid; Sampling Period: Fine turno

Value: 25 g/g creatinine; Medium: Urine

Remark: Croatia. Biological Exposure Limits

Biological Indicator: O-Cresol; Sampling Period: Fine turno

Value: 105 Millimoles per mole Creatinine; Medium: Urine

Remark: Croatia. Biological Exposure Limits

Biological Indicator: O-Cresol; Sampling Period: Fine turno

Value: 1 mg/g Creatinine; Medium: Urine

Remark: Croatia. Biological Exposure Limits

Biological Indicator: Hippuric acid; Sampling Period: Fine turno

Value: 1600 mg/g Creatinine; Medium: Urine

Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: Hippuric acid; Sampling Period: Fine turno

Value: 1000 micromoles per millimole creatinine; Medium: Urine

Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: O-Cresol; Sampling Period: Fine turno

Value: 15 mg/g Creatinine; Medium: Urine

Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: O-Cresol; Sampling Period: Fine turno

Value: 16 micromoles per millimole creatinine; Medium: Urine

Remark: Czech Republic. Biological Exposure Indices

Biological Indicator: Toluene; Sampling Period: Morning after working day

Value: 500 mg/L; Medium: Blood

Remark: Finland. Biological limit values

Biological Indicator: Toluene; Sampling Period: Fine turno

Value: 600 µg/L; Medium: Blood

Remark: TRGS 903 - Biological limit values

Biological Indicator: O-Cresol; Sampling Period: In case of long-term exposure: after more than one shift

Value: 1.5 mg/L; Medium: Urine

Remark: TRGS 903 - Biological limit values

Biological Indicator: O-Cresol; Sampling Period: After shift

Value: 1 mg/g Creatinine; Medium: Urine

Remark: Hungary. Permissible limit values of biological exposure (effect) indices

Biological Indicator: O-Cresol; Sampling Period: After shift

Value: 105 micromoles per millimole creatinine; Medium: Urine

Remark: Hungary. Permissible limit values of biological exposure (effect) indices

Biological Indicator: Hippuric acid
Value: 16 g/g creatinine; Medium: Urine
Remark: Israel. Safety at Work Regulations - Annex III Biological Exposure Indices

Biological Indicator: Toluene; Sampling Period: Within 2 h prior to end of shift at end of work week
Value: 0.6 mg/L; Medium: Blood
Remark: Occupational exposure limits based on biological monitoring (JSOH).

Biological Indicator: Toluene; Sampling Period: Within 2 h prior to end of shift at end of work week
Value: 0.06 mg/L; Medium: Urine
Remark: Occupational exposure limits based on biological monitoring (JSOH).

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 25 g/g creatinine; Medium: Urine
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: Toluene; Sampling Period: Fine turno
Value: 1 mg/L; Medium: venous blood
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 1 mg/g Creatinine; Medium: Urine
Remark: Kenya. Occupational Safety and Health Act (CAP.514), Schedule I, Table 3 Biological Exposure Limits

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 16 g/g creatinine; Medium: Urine
Remark: Latvia. Biological Exposure Indices

Biological Indicator: Toluene; Sampling Period: Fine turno
Value: 0.05 mg/L; Medium: Blood
Remark: Latvia. Biological Exposure Indices

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 0.5 mg/L; Medium: Urine
Remark: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for work

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 16 g/g creatinine; Medium: Urine
Remark: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for work

Biological Indicator: Toluene; Sampling Period: Prima dell'ultimo turno della settimana lavorativa
Value: 0.05 mg/L; Medium: Blood
Remark: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for work

Biological Indicator: Toluene; Sampling Period: Fine turno
Value: 0.03 mg/L; Medium: Urine
Remark: New Zealand. Biological Exposure Indices

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 3 mg/g Creatinine; Medium: Urine
Remark: New Zealand. Biological Exposure Indices

Biological Indicator: Toluene; Sampling Period: Before shift at end of workweek
Value: 0.02 mg/L; Medium: Blood
Remark: Portuguese Norm 1796 - Biological Exposure Indices

Biological Indicator: Toluene; Sampling Period: Fine turno
Value: 0.03 mg/L; Medium: Urine
Remark: Portuguese Norm 1796 - Biological Exposure Indices

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 3 mg/g Creatinine; Medium: Urine
Remark: Portuguese Norm 1796 - Biological Exposure Indices

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 2 g/l; Medium: Urine
Remark: Romania. Biological limit values

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 3 mg/L; Medium: Urine
Remark: Romania. Biological limit values

Biological Indicator: Toluene; Sampling Period: Prior to last shift of workweek
Value: 0.05 mg/L; Medium: Blood

Remark: Singapore. Biological Threshold Limit Values

Biological Indicator: Toluene; Sampling Period: Fine turno
Value: 600 µg/L; Medium: Blood
Remark: Slovakia. Biological Limit Values

Biological Indicator: Toluene; Sampling Period: Fine turno
Value: 6517 micromol per litre; Medium: Blood
Remark: Slovakia. Biological Limit Values

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 2401 mg/L; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 13399 micromol per litre; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 1600 mg/g Creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 1010 micromoles per millimole creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 143 micromol per litre; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: O-Cresol; Sampling Period: In case of long-term exposure: after more than one shift
Value: 103 mg/g Creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 108 micromoles per millimole creatinine; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: O-Cresol; Sampling Period: In case of long-term exposure: after more than one shift
Value: 1.5 mg/L; Medium: Urine
Remark: Slovakia. Biological Limit Values

Biological Indicator: Toluene; Sampling Period: Fine turno
Value: 600 micromol per litre; Medium: Blood
Remark: Slovenia. BAT-values

Biological Indicator: O-Cresol; Sampling Period: during long-term exposure: at the end of the work shift
after several consecutive workdays
Value: 1.5 mg/L; Medium: Urine
Remark: Slovenia. BAT-values

Biological Indicator: Hippuric acid; Sampling Period: Fine turno
Value: 25 g/g creatinine; Medium: Urine
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Toluene; Sampling Period: Fine turno
Value: 1 mg/L; Medium: venous blood
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 1 mg/g Creatinine; Medium: Urine
Remark: South Africa. Hazardous Chemical Substances Regulations, Biological Exposure Indices.

Biological Indicator: Toluene; Sampling Period: End of workday
Value: 0.08 mg/L; Medium: Urine
Remark: Occupational Exposure Limits for Chemical Agents in Spain - Biological Exposure Values

Biological Indicator: O-Cresol; Sampling Period: End of workday
Value: 6 mg/g Creatinine; Medium: Urine
Remark: Occupational Exposure Limits for Chemical Agents in Spain - Biological Exposure Values

Biological Indicator: Toluene; Sampling Period: prior to last shift of workweek
Value: 0.05 mg/L; Medium: Blood
Remark: Occupational Exposure Limits for Chemical Agents in Spain - Biological Exposure Values

Biological Indicator: Hippuric acid; Sampling Period: In case of long-term exposure: after more than one shift
Value: 2 g/g creatinine; Medium: Urine
Remark: Svizzera. Lista di valori BAT

Biological Indicator: O-Cresol; Sampling Period: In case of long-term exposure: after more than one shift
Value: 0.5 mg/L; Medium: Urine
Remark: Svizzera. Lista di valori BAT

Biological Indicator: toluol; Sampling Period: Immediately after exposure or after working hours
Value: 648 micromol per litre; Medium: Blood
Remark: Svizzera. Lista di valori BAT

Biological Indicator: Hippuric acid; Sampling Period: In case of long-term exposure: after more than one shift
Value: 126 mmol/mmol creatinine; Medium: Urine
Remark: Svizzera. Lista di valori BAT

Biological Indicator: O-Cresol; Sampling Period: In case of long-term exposure: after more than one shift
Value: 462 micromol per litre; Medium: Urine
Remark: Svizzera. Lista di valori BAT

Biological Indicator: toluol; Sampling Period: Immediately after exposure or after working hours
Value: 600 µg/L; Medium: Blood
Remark: Svizzera. Lista di valori BAT

Biological Indicator: Hippuric acid; Sampling Period: End of workday
Value: 16 g/g creatinine; Medium: Urine
Remark: Uruguay. Health surveillance of workers - Biological Exposure Indices (BEI).

Biological Indicator: O-Cresol; Sampling Period: End of workday
Value: 0.5 mg/L; Medium: Urine
Remark: Uruguay. Health surveillance of workers - Biological Exposure Indices (BEI).

Biological Indicator: Toluene; Sampling Period: Prior to last shift of workweek
Value: 0.02 mg/L; Medium: Blood
Remark: ACGIH - Indicatori di Esposizione Biologica (BEI)

Biological Indicator: Toluene; Sampling Period: Fine turno
Value: 0.03 mg/L; Medium: Urine
Remark: ACGIH - Indicatori di Esposizione Biologica (BEI)

Biological Indicator: O-Cresol; Sampling Period: Fine turno
Value: 3 mg/g Creatinine; Medium: Urine
Remark: ACGIH - Indicatori di Esposizione Biologica (BEI)

Biological Indicator: O-Cresol; Sampling Period: End of workday
Value: 0.5 mg/L; Medium: Urine
Remark: VE.Biological Exposure Limits

Biological Indicator: Hippuric acid; Sampling Period: End of workday
Value: 16 g/g creatinine; Medium: Urine
Remark: VE.Biological Exposure Limits

Biological Indicator: Toluene; Sampling Period: Prior to last workday of workweek
Value: 0.05 mg/L; Medium: Blood
Remark: VE.Biological Exposure Limits

Predicted No Effect Concentration (PNEC) values

bis(ortofosfato) di trizinc
CAS: 7779-90-0
Exposure Route: Fresh Water; PNEC Limit: 0.206 mg/l

Exposure Route: Marine water; PNEC Limit: 0.0061 mg/l
Exposure Route: Freshwater sediments; PNEC Limit: 117.8 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 56.5 mg/kg
Exposure Route: Soil; PNEC Limit: 35.6 mg/kg
Exposure Route: Fresh Water; PNEC Limit: 0.0206 mg/l

ossido di zinco
CAS: 1314-13-2

Exposure Route: Marine water; PNEC Limit: 0.0061 mg/l
Exposure Route: Freshwater sediments; PNEC Limit: 235.6 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 113 mg/kg
Exposure Route: Soil; PNEC Limit: 106.8 mg/kg
Exposure Route: Fresh Water; PNEC Limit: 0.32 mg/l

xilene
CAS: 1330-20-7

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 0.32 mg/l
Exposure Route: Marine water; PNEC Limit: 0.32 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 12.46 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 12.46 mg/kg
Exposure Route: Soil; PNEC Limit: 2.31 mg/kg
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 6.58 mg/l
Exposure Route: Fresh Water; PNEC Limit: 0.635 mg/kg

acetato di 1-metil-2-
metossietile
CAS: 108-65-6

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 6.35 mg/l
Exposure Route: Marine water; PNEC Limit: 0.064 mg/kg
Exposure Route: Freshwater sediments; PNEC Limit: 3.29 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 0.329 mg/kg
Exposure Route: Soil; PNEC Limit: 0.29 mg/kg
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l
Exposure Route: Fresh Water; PNEC Limit: 0.18 mg/l

acetato di n-butile
CAS: 123-86-4

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 0.36 mg/l
Exposure Route: Marine water; PNEC Limit: 0.01 mg/l
Exposure Route: Freshwater sediments; PNEC Limit: 0.98 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 0.09 mg/kg
Exposure Route: Soil; PNEC Limit: 0.09 mg/kg
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 35.6 mg/l
Exposure Route: Fresh Water; PNEC Limit: 19 mg/l

(metil-2-
metossietossi)propanolo
CAS: 34590-94-8

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 190 mg/l
Exposure Route: Marine water; PNEC Limit: 1.9 mg/l
Exposure Route: Freshwater sediments; PNEC Limit: 70.2 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 7.02 mg/kg
Exposure Route: Soil; PNEC Limit: 2.74 mg/kg
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 4168 mg/l
Exposure Route: Fresh Water; PNEC Limit: 0.68 mg/l

toluene
CAS: 108-88-3

Exposure Route: Marine water; PNEC Limit: 0.68 mg/l
Exposure Route: Freshwater sediments; PNEC Limit: 16.39 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 16.39 mg/kg
Exposure Route: Soil; PNEC Limit: 2.89 mg/kg
Exposure Route: Intermittent releases (fresh water); PNEC Limit: 0.68 mg/l
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 13.61 mg/l

Derived No Effect Level (DNEL) values

Idrocarburi, C9-C11, n-alcani, isoalcani, ciclici, < 2% aromatici
Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 208 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 871 mg/m3

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Consumer: 125 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Consumer: 185 mg/m3

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 125 mg/kg

bis(ortofosfato) di trizinc
CAS: 7779-90-0
Exposure Route: Human Inhalation; Exposure Frequency: Local Effects
Worker Professional: 5 mg/m3

Exposure Route: Human Dermal; Exposure Frequency: Local Effects
Worker Professional: 83 ppm

Exposure Route: Human Dermal; Exposure Frequency: Local Effects
Consumer: 83 ppm

Exposure Route: Human Inhalation; Exposure Frequency: Local Effects
Consumer: 2.5 mg/m3

Exposure Route: Human Oral; Exposure Frequency: Chronic Effects
Consumer: 0.83 ppm

Idrocarburi, C9-C12, n-
alcani, isoalcani, ciclici,
aromatici (2-25%)

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 44 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 330 mg/m3

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Consumer: 26 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Consumer: 71 mg/m3

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 26 mg/kg

ossido di zinco
CAS: 1314-13-2

Exposure Route: Human Inhalation; Exposure Frequency: Local Effects
Worker Professional: 5 mg/m3

Exposure Route: Human Dermal; Exposure Frequency: Local Effects
Worker Professional: 83 ppm

Exposure Route: Human Dermal; Exposure Frequency: Local Effects
Consumer: 83 ppm

Exposure Route: Human Inhalation; Exposure Frequency: Local Effects
Consumer: 2.5 mg/m3

Exposure Route: Human Oral; Exposure Frequency: Chronic Effects
Consumer: 0.83 ppm

xilene
CAS: 1330-20-7

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Consumer: 65.3 mg/m3

Exposure Route: Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 12.5 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 442 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 212 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 221 mg/m3

acetato di 1-metil-2-
metossietile
CAS: 108-65-6

Exposure Route: Human Inhalation; Exposure Frequency: Short Term (acute)
Consumer: 33 mg/m3

Exposure Route: Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 36 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Consumer: 320 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Consumer: 33 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Short Term (acute)
Worker Professional: 550 mg/m3

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 796 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 275 mg/m3

acetato di n-butile
CAS: 123-86-4

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Industry: 300 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects

Worker Industry: 600 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Industry: 300 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Industry: 600 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Industry: 11 mg/kg dry weight (d.w.)

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Worker Industry: 11 mg/kg dry weight (d.w.)

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Consumer: 35.7 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Consumer: 300 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Consumer: 35.7 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Consumer: 300 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Consumer: 6 mg/kg dry weight (d.w.)

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Consumer: 6 mg/kg dry weight (d.w.)

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 2 mg/kg dry weight (d.w.)

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 2 mg/kg dry weight (d.w.)

(metil-2-
metossietossi)propanolo
CAS: 34590-94-8

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Consumer: 37.2 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects

Exposure Route: Oral; Exposure Frequency: Long Term, systemic effects

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 308 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects

toluene
CAS: 108-88-3

Exposure Route: Human Inhalation; Exposure Frequency: Short Term (acute)
Consumer: 226 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Consumer: 226 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Consumer: 56.5 mg/m³

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 8.13 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Consumer: 226 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Short Term (acute)
Worker Professional: 384 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 384 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 192 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 192 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 384 mg/kg

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

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:

N.A.

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: colourless

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: 23°C / 60°C

Lower and upper explosion limit: N.A.

Relative vapour density: N.A.

Vapour pressure: N.A.

Density and/or relative density: 1.69 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. 3 H226

Kinematic viscosity m²/s (40°C) > 20,5 mm²/sec (40 °C)

Viscosity: = 145.00 s - Method: ISO/DIN 2431 84 - Sezione: 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
b) skin corrosion/irritation	Not classified Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	Not classified Based on available data, the classification criteria are not met
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	Not classified Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified Based on available data, the classification criteria are not met
i) STOT-repeated exposure	The product is classified: STOT RE 2(H373)
j) aspiration hazard	Not classified Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

Idrocarburi, C9-C11, n-alcani, isoalcani, ciclici, < 2% aromatici	a) acute toxicity	LD50 Oral Ratto > 5000 mg/kg	OECD Test Guideline 401
		LC50 Inhalation Ratto > 5000 mg/l 4h	OECD Test Guideline 403
		LD50 Skin Coniglio > 5000 mg/kg	OECD Test Guideline 402
	f) carcinogenicity	Carcinogenicity - Non classificato - Sostanza classificata in accordo con la nota P, dell'allegato VI del regolamento CE 1272/2008.	
Idrocarburi, C10-C13, n-alcani, isoalcani, ciclici, < 2% aromatici	a) acute toxicity	LD50 Oral Ratto > 5000 mg/kg	OECD Test Guideline 401
		LC50 Inhalation Ratto > 5 mg/l 4h	OECD Test Guideline 403
		LD50 Skin Coniglio > 5000 mg/kg	OECD Test Guideline 402
	f) carcinogenicity	Carcinogenicity - Non classificato - Sostanza classificata in accordo con la nota P, dell'allegato VI del regolamento CE 1272/2008.	
Idrocarburi, C9-C12, n-alcani, isoalcani, ciclici, aromatici (2-25%)	a) acute toxicity	LD50 Oral Ratto > 15000 mg/kg	
		LD50 Skin Coniglio > 3400 mg/kg	
	f) carcinogenicity	Carcinogenicity - Non classificato - Sostanza classificata in accordo con la nota P, dell'allegato VI del regolamento CE 1272/2008.	
nerofumo	a) acute toxicity	LD50 Oral Ratto > 8000 mg/kg	
1-metossi-2-propanolo	a) acute toxicity	LD50 Oral Ratto = 4016 mg/kg	
		LC0 Inhalation Ratto > 7000 Ppm 6h	OECD Test Guideline 403
		LD50 Skin Ratto > 2000 mg/kg	
ossido di zinco	a) acute toxicity	LD50 Oral Ratto > 5000 mg/kg	
		LC50 Inhalation Dust Ratto > 5.7 mg/l 4h	

		LD50 Skin Ratto > 2000 mg/kg	
xilene	a) acute toxicity	LD50 Oral Topo = 5627 mg/kg LC50 Inhalation Ratto = 6700 Ppm 4h LD50 Skin Coniglio > 5000 mg/kg	
acetato di 1-metil-2-metossietile	a) acute toxicity	LD50 Oral Ratto > 5000 mg/kg LC0 Inhalation Ratto > 2000 Ppm 3h LD50 Skin Coniglio > 5000 mg/kg	
etilbenzene	a) acute toxicity	LD50 Oral Ratto = 3500 mg/kg LD50 Skin Coniglio > 5000 mg/kg	
acetato di n-butile	a) acute toxicity	LD50 Oral Ratto = 10760 mg/kg LC50 Inhalation > 20 mg/l 4h LD50 Skin Coniglio > 14112 mg/kg	OECD Test Guideline 423 OECD Test Guideline 402
(metil-2-metossietossi)propanolo	a) acute toxicity	LD50 Oral Ratto = 5350 mg/kg LD50 Skin Coniglio > 2000 mg/kg	
toluene	a) acute toxicity	LD50 Oral Ratto = 5000 mg/kg LC50 Inhalation Ratto = 25.7 mg/l 4h LD50 Skin Coniglio = 12267 mg/kg	

11.2. Information on other hazards

Endocrine disrupting properties:

La sostanza/miscela non contiene componenti considerati aventi proprietà di interferenza endocrina ai sensi dell'articolo 57(f) del REACH o del regolamento delegato (UE) 2017/2100 della Commissione o del regolamento (UE) 2018/605 della Commissione a livelli dello 0,1% o superiori.

SECTION 12: Ecological information

12.1. Toxicity

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

Eco-Toxicological Information:

Toxic to aquatic life with long lasting effects.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Chronic 2(H411)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
Idrocarburi, C9-C11, n-alcani, isoalcani, ciclici, < 2% aromatici	EINECS: 919-857-5	a) Tossicità acquatica acuta : LL50 Fish Oncorhynchus mykiss (rainbow trout) > 1000 mg/L 96 H e) Tossicità per le piante : NOELR Algae Pseudokirchneriella subcapitata (greer algae) = 100 mg/L 72 H e) Tossicità per le piante : EL50 Algae Pseudokirchneriella subcapitata (green algae) > 1000 mg/L 72 H a) Tossicità acquatica acuta : EL50 Invertebrates Daphnia magna Straus > 1000 mg/kg 48h
Idrocarburi, C9-C12, n-alcani, isoalcani, ciclici, aromatici (2-25%)	EINECS: 919-446-0	a) Tossicità acquatica acuta : LC50 Fish Oncorhynchus mykiss (rainbow trout) 30 mg/L 96 H a) Tossicità acquatica acuta : EC50 Invertebrates Daphnia magna (Water flea) 22 mg/L 48 H

		e) Tossicità per le piante : EC50 Algae Pseudokirchneriella subcapitata (green algae) 10 mg/L 72 H
nerofumo	CAS: 1333-86-4 - EINECS: 215-609-9	a) Tossicità acquatica acuta : LC10 Fish Brachydanio rerio (zebrafish) = 1000 mg/L 96h a) Tossicità acquatica acuta : EC50 Invertebrates Daphnia magna (Water flea) > 5600 mg/L 48h a) Tossicità acquatica acuta : EC50 Algae Desmodesmus subspicatus (green algae) > 10000 mg/L 72h
1-metossi-2-propanolo	CAS: 107-98-2 - EINECS: 203-539-1 - INDEX: 603-064-00-3	a) Tossicità acquatica acuta : EC50 Invertebrates Daphnia magna (Water flea) 25900 mg/L 48 H e) Tossicità per le piante : EC50 Algae Selenastrum capricornutum (green algae) > 1000 mg/L 7 D
ossido di zinco	CAS: 1314-13-2 - EINECS: 215-222-5 - INDEX: 030-013-00-7	a) Tossicità acquatica acuta : EC50 Algae Pseudokirchneriella subcapitata = 0.17 mg/L 72h a) Tossicità acquatica acuta : EC50 Daphnia = 0.413 mg/L 48h a) Tossicità acquatica acuta : LC50 Fish = 0.1169 mg/L 96h
xilene	CAS: 1330-20-7 - EINECS: 215-535-7 - INDEX: 601-022-00-9	a) Tossicità acquatica acuta : LC50 Fish Oncorhynchus mykiss (rainbow trout) = 2.6 mg/L 96 H a) Tossicità acquatica acuta : IC50 Invertebrates Daphnia magna (Water flea) = 1 mg/L 24 H e) Tossicità per le piante : EC0 Algae Pseudokirchneriella subcapitata (green algae) = 0.44 mg/L 72 H b) Tossicità acquatica cronica : NOEC Fish Oncorhynchus mykiss (rainbow trout) > 1.3 mg/L 56 D e) Tossicità per le piante : Algae Pseudokirchneriella subcapitata (green algae) = 4.36 mg/L 72 H
acetato di 1-metil-2-metossietile	CAS: 108-65-6 - EINECS: 203-603-9 - INDEX: 607-195-00-7	a) Tossicità acquatica acuta : LC50 Fish Oncorhynchus mykiss (rainbow trout) 100 mg/L 96 H a) Tossicità acquatica acuta : EC50 Invertebrates Daphnia magna (Water flea) > 500 mg/L 48 H e) Tossicità per le piante : EC50 Algae Selenastrum capricornutum (green algae) > 1000 mg/L 96 H b) Tossicità acquatica cronica : NOEC Fish Oryzias latipes (Japanese medaka) = 47.5 mg/L 14 D b) Tossicità acquatica cronica : NOEC Invertebrates Daphnia magna (Water flea) >= 100 mg/L 21 D e) Tossicità per le piante : NOEC Algae Selenastrum capricornutum (green algae) >= 1000 mg/L 96 H
acetato di n-butile	CAS: 123-86-4 - EINECS: 204-658-1 - INDEX: 607-025-00-1	a) Tossicità acquatica acuta : LC50 Fish Pimephales promelas (fathead minnow) = 18 mg/L 96 H OECD Test Guideline 203 a) Tossicità acquatica acuta : EC50 Invertebrates Daphnia magna (Water flea) = 44 mg/L 48 H OECD Test Guideline 202 e) Tossicità per le piante : EC50 Algae Selenastrum capricornutum (green algae) = 397 mg/L 72 H OECD Test Guideline 201 c) Tossicità per i batteri : IC50 Microorganisms Tetrahymena pyriformis = 356 mg/L 40 H

(metil-2-metossietossi)propanolo	CAS: 34590-94-8 - EINECS: 252-104-2	a) Tossicità acquatica acuta : LC50 Fish > 10000 mg/L 96 H
		a) Tossicità acquatica acuta : EC50 Invertebrates Daphnia (water flea) > 85000 mg/L 48 H
toluene	CAS: 108-88-3 - EINECS: 203-625-9 - INDEX: 601-021-00-3	a) Tossicità acquatica acuta : LC50 Fish Oncorhynchus kisutch (coho salmon) = 5.5 mg/L 96 H
		a) Tossicità acquatica acuta : EC50 Invertebrates Ceriodaphnia dubia (water flea) = 3.78 mg/L 48 H
		e) Tossicità per le piante : EC50 Algae algae = 134 mg/L 96 H
		b) Tossicità acquatica cronica : NOEC Fish Oncorhynchus kisutch (coho salmon) = 1.39 mg/L 40 D

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 $\geq$ 0.1%

12.6. Endocrine disrupting properties

La sostanza/miscela non contiene componenti considerati aventi proprietà di interferenza endocrina ai sensi dell'articolo 57(f) del REACH o del regolamento delegato (UE) 2017/2100 della Commissione o del regolamento (UE) 2018/605 della Commissione a livelli dello 0,1% o superiori.

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-Technical name: PAINT

IMDG-Technical name: PAINT

14.3. Transport hazard class(es)

ADR-Class: 3

IATA-Class: 3

IMDG-Class: 3

14.4. Packing group

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

14.5. Environmental hazards

Most important toxic component: bis(ortofosfato) di trizinco

Toxic ingredients quantity: 2.53

Very toxic ingredients quantity: 6.02

Marine pollutant: Yes

Environmental Pollutant: Yes

IMDG-EMS: F-E, S-E

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: 3

ADR - Hazard identification number: -

ADR-Special Provisions: 163 367 650

ADR-Transport category (Tunnel restriction code): 3 (E)

Air (IATA):

IATA-Passenger Aircraft: 355

IATA-Cargo Aircraft: 366

IATA-Label: 3

IATA-Subsidiary hazards: -

IATA-Erg: 3L

IATA-Special Provisions: A3 A72 A192

Sea (IMDG):

IMDG-Stowage Code: Category A

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisions: 163 223 367 955

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)

Regolamento (UE) n. 2021/849 (ATP 17 CLP)

Regolamento (UE) 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: 48, 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)
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Product belongs to category: P5c	5000	50000
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Product belongs to category: E2	200	500
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Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

3: altamente contaminante dell'acqua

Lagerklasse according to TRGS 510:

LGK 3

SVHC Substances:

NOSVHCCOMPS

Dir. 2010/75/CE (Direttiva COV)

Volatile Organic compounds - VOCs = 21.91 %

Volatile Organic compounds - VOCs = 370.33 g/L

Estimated Total Content of Water 0.00 %

Estimated Total Solid Content 78.09 %

Classificazione in accordo con VbF

Classificazione in accordo con VbF Esente

Mal-Code (Denmark)

Mal-Code (Denmark)	Mal Factor	Unit of Measure	Revision Status / Number	Regulatory Base
5 - 6	80.040	m3 air/10 g	1993	Administrative determined MAL-Factors

Biocidi

REGOLAMENTO (CE) N. 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.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
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
3.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), 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
3.7/2	Repr. 2	Reproductive toxicity, Category 2
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
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1

4.1/C2	Aquatic Chronic 2	Chronic (long term) aquatic hazard, category 2
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. 3, H226	On basis of test data
STOT RE 2, H373	Calculation method
Aquatic Chronic 2, H411	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 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 7: Handling and storage
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 14: Transport information
- SECTION 15: Regulatory information
- SECTION 16: Other information