



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 7.6

Revision Date 13.12.2024

Print Date 04.05.2025

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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

1.1 Product identifiers

Product name : MSMLS Plate 5 (Water Soluble)

Product Number : MSMLS05

Brand : Sigma

REACH No. :

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

Identified uses : Laboratory chemicals, Manufacture of substances

Uses advised against : For R&D use only. Not for pharmaceutical, household or other uses.

1.3

CHEMIKART

1.4 Emergency telephone

Emergency Phone # : 000 800 1007 141 (CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Acute toxicity, (Category 3) H301: Toxic if swallowed.

Acute toxicity, (Category 3) H331: Toxic if inhaled.

Skin corrosion, (Category 1) H314: Causes severe skin burns and eye damage.

Serious eye damage, (Category 1) H318: Causes serious eye damage.

Skin sensitization, (Category 1) H317: May cause an allergic skin reaction.

Germ cell mutagenicity, H341: Suspected of causing genetic

(Category 2)	defects.
Carcinogenicity, (Category 1B)	H350: May cause cancer.
Reproductive toxicity, (Category 1A)	H360D: May damage the unborn child.
Specific target organ toxicity - single exposure, (Category 3), Respiratory system	H335: May cause respiratory irritation.
Specific target organ toxicity - repeated exposure, (Category 1), Blood	H372: Causes damage to organs through prolonged or repeated exposure.
Short-term (acute) aquatic hazard, (Category 1)	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, (Category 3)	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word	Danger
Hazard Statements	
H301 + H331	Toxic if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360D	May damage the unborn child.
H372	Causes damage to organs (Blood) through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statements	
P260	Do not breathe dust.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard information (EU)	
EUH029	Contact with water liberates toxic gas.
	Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word	Danger
Hazard Statements	
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H360D	May damage the unborn child.
H301 + H331	Toxic if swallowed or if inhaled.
Precautionary Statements	
P260	Do not breathe dust.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard information (EU)	
EUH029	Contact with water liberates toxic gas.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

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.

Toxicological information:

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.

Caution: Physiologically highly active, therapeutically usable substance. The substance must be handled with the care required for hazardous materials.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

No components need to be disclosed according to the applicable regulations.

3,5-Diiodo-L-tyrosine dihydrate			
CAS-No.	18835-59-1	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
EC-No.	206-092-0		
	*		
potassium sorbate			
CAS-No.	24634-61-5	Eye Irrit. 2; H319	>= 1 - < 10 %
EC-No.	246-376-1		
Index-No.	019-003-00-3		
	*		
3-Hydroxysalicylic acid			
CAS-No.	303-38-8	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
EC-No.	206-139-5		
	*		
oxalacetic acid			
CAS-No.	328-42-7	Eye Irrit. 2; H319	>= 1 - < 10 %
EC-No.	206-329-8		
Registration number	01-2120761037-57-XXXX		
3,4-dihydroxycinnamic acid			
CAS-No.	331-39-5	Carc. 2; H351	>= 1 - < 10 %
EC-No.	206-361-2		
	*		
Indole-3-pyruvic acid monohydrate			
CAS-No.	392-12-1	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
EC-No.	206-874-1		
	*		
Methyl vanillate			
CAS-No.	3943-74-6	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
EC-No.	223-525-9		
	*		
Hydrocortisone 21-acetate			
CAS-No.	50-03-3	Repr. 1B; STOT RE 2; H360Df, H373	>= 1 - < 10 %
EC-No.	200-004-4		
	*		
Acetoin			
CAS-No.	513-86-0	Flam. Liq. 3; Eye Dam. 1; H226, H318	>= 1 - < 3 %
EC-No.	208-174-1		
	*		
2-Methylmalonic acid			
CAS-No.	516-05-2	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319,	>= 1 - < 10 %
EC-No.	208-219-5		

*		H335	
4-(2-Aminoethyl)phenol			
CAS-No.	51-67-2	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
EC-No.	200-115-8		
*			
sodium benzoate			
CAS-No.	532-32-1	Eye Irrit. 2; H319	>= 1 - < 10 %
EC-No.	208-534-8		
Registration number	01-2119460683-35-XXXX		
Nicotin			
CAS-No.	54-11-5	Acute Tox. 1; Acute Tox. 2; Skin Irrit. 2; Eye Dam. 1; Aquatic Chronic 2; H300, H330, H310, H315, H318, H411	>= 1 - < 2,5 %
EC-No.	200-193-3		
Index-No.	614-001-00-4		
*			
δ-Valerolactone			
CAS-No.	542-28-9	Eye Dam. 1; H318	>= 1 - < 3 %
EC-No.	208-807-1		
*			
3-methyl-2-butene-1-ol			
CAS-No.	556-82-1	Flam. Liq. 3; Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; STOT SE 3; H226, H302, H332, H314, H318, H335	>= 1 - < 3 %
EC-No.	209-141-4		
*			
Hegzadesil			
CAS-No.	593-81-7	Skin Irrit. 2; Eye Irrit. 2; H315, H319	>= 1 - < 10 %
EC-No.	209-810-0		
Registration number	01-2119492299-22-XXXX		
(R)-(-)-mandelic acid			
CAS-No.	611-71-2	Eye Dam. 1; H318	>= 1 - < 3 %
EC-No.	210-276-6		
*			
3-Hydroxybenzyl alcohol			
CAS-No.	620-24-6	Skin Irrit. 2; Eye Dam. 1; STOT SE 3; H315, H318, H335	>= 1 - < 3 %
EC-No.	210-633-6		
*			
α-(Aminomethyl)benzyl alcohol			
CAS-No.	7568-93-6	Skin Irrit. 2; Eye Irrit. 2;	>= 1 - < 10

EC-No.	231-469-1	STOT SE 3; H315, H319, H335	%
	*		
2-methylpropionic acid; isobutyric acid			
CAS-No.	79-31-2	Flam. Liq. 3; Acute Tox. 4;	>= 1 - < 3 %
EC-No.	201-195-7	Acute Tox. 3; Skin Corr.	
Index-No.	607-063-00-9	1B; Eye Dam. 1; H226, H302, H311, H314, H318	
	*		
Hydroxytoluic acid			
CAS-No.	83-40-9	Acute Tox. 4; Skin Irrit. 2;	>= 1 - < 3 %
EC-No.	201-473-8	Eye Dam. 1; STOT SE 3; H302, H315, H318, H335	
	*		
Mandelic acid			
CAS-No.	90-64-2	Eye Dam. 1; H318	>= 1 - < 3 %
EC-No.	202-007-6		
Registration number	01-2120349224-60-XXXX		
2-aminophenol			
CAS-No.	95-55-6	Acute Tox. 4; Muta. 2;	>= 1 - < 10 %
EC-No.	202-431-1	H302, H332, H341	
Index-No.	612-033-00-3		
	*		
3,4-Dihydroxybenzoic acid			
CAS-No.	99-50-3	Skin Irrit. 2; Eye Irrit. 2;	>= 1 - < 10 %
EC-No.	202-760-0	STOT SE 3; H315, H319, H335	
	*		
4-hydroxybenzoic acid			
CAS-No.	99-96-7	Eye Dam. 1; STOT SE 3;	>= 1 - < 3 %
EC-No.	202-804-9	H318, H335	
	*		
(+/-)-3,4-Dihydroxyphenylglycolic acid			
CAS-No.	14883-87-5	Skin Irrit. 2; Eye Irrit. 2;	>= 1 - < 10 %
EC-No.	238-956-8	STOT SE 3; H315, H319, H335	
	*		
5-(Dithiolan-3-yl)valeramide			
CAS-No.	940-69-2	Acute Tox. 4; H302	>= 1 - < 10 %
EC-No.	221-710-9		
	*		
3-(2-Hydroxyphenyl)propionic acid			
CAS-No.	495-78-3	Skin Irrit. 2; Eye Irrit. 2;	>= 1 - < 10 %
	*	STOT SE 3; H315, H319, H335	

3-Hydroxyanthranilic acid			
CAS-No.	548-93-6	Acute Tox. 4; Skin Irrit. 2;	>= 1 - < 10 %
EC-No.	208-962-5	Eye Irrit. 2; Carc. 2; STOT SE 3; H302, H332, H312, H315, H319, H351, H335	
	*		
Deoxynivalenol-d1			
CAS-No.	919488-17-8	Acute Tox. 2; H300	>= 1 - < 10 %
EC-No.	688-583-3		
	*		
Hydroxypyruvic acid phosphate lithium salt			
		Acute Tox. 4; H302, H312	>= 1 - < 10 %
	*		
3-Hydroxy-2-oxo-3-phenylpropanoic acid			
CAS-No.	156-39-8	Skin Irrit. 2; Eye Irrit. 2;	>= 1 - < 10 %
EC-No.	205-852-9	H315, H319	
	*		
Phenol			
CAS-No.	108-95-2	Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Muta. 2;	>= 1 - < 2,5 %
EC-No.	203-632-7	STOT RE 2; Aquatic	
Index-No.	604-001-00-2	Chronic 2; H301, H331, H311, H314, H318, H341, H373, H411	
Registration number	01-2119471329-32-XXXX	Concentration limits: >= 3 %: Skin Corr. 1B, H314; 1 - < 3 %: Skin Irrit. 2, H315; 1 - < 3 %: Eye Irrit. 2, H319;	
maleic acid			
CAS-No.	110-16-7	Acute Tox. 4; Skin Corr. 1; Eye Dam. 1; Skin Sens. 1;	>= 1 - < 3 %
EC-No.	203-742-5	STOT SE 3; H302, H312, H314, H318, H317, H335	
Index-No.	607-095-00-3	Concentration limits: >= 0,1 %: Skin Sens. 1, H317;	
Registration number	01-2119488705-25-XXXX		
acrylic acid			
CAS-No.	79-10-7	Flam. Liq. 3; Acute Tox. 4; Skin Corr. 1A; Eye Dam. 1; STOT SE 3; Aquatic	>= 1 - < 2,5 %
EC-No.	201-177-9	Acute 1; Aquatic Chronic 2; H226, H302, H332, H312, H314, H318, H335, H400, H411	
Index-No.	607-061-00-8		
	*		

		Concentration limits: >= 1 %: STOT SE 3, H335;	
hexanoic acid			
CAS-No.	142-62-1	Skin Corr. 1C; Eye Dam. 1; H314, H318 Concentration limits: > 60 %: 1C, ; 3 - 60 %: Eye Dam./Irrit. 1, ; 3 - 60 %: 2, ; 1 - 3 %: Eye Dam./Irrit. 2, ; 1 - 3 %: 2, ;	>= 1 - < 3 %
EC-No.	205-550-7		
Registration number	01-2119978228-24-XXXX		
Aniline			
CAS-No.	62-53-3	Acute Tox. 3; Eye Dam. 1; Skin Sens. 1; Muta. 2; Carc. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H301, H331, H311, H318, H317, H341, H351, H372, H400, H410 Concentration limits: >= 1 %: STOT RE 1, H372; 0,2 - < 1 %: STOT RE 2, H373; M-Factor - Aquatic Acute: 1 - Aquatic Chronic: 1	>= 1 - < 2,5 %
EC-No.	200-539-3		
Index-No.	612-008-00-7*		
tryptamine			
CAS-No.	61-54-1	Acute Tox. 4; Eye Dam. 1; Skin Sens. 1A; H302, H318, H317	>= 1 - < 3 %
EC-No.	200-510-5		
	*		
Serotonin hydrochloride			
CAS-No.	153-98-0	Acute Tox. 3; Repr. 2; H301, H361	>= 1 - < 3 %
EC-No.	628-480-2		
	*		
Dihydrocostisone			
CAS-No.	50-23-7	Repr. 1A; STOT RE 2; H360Df, H373	>= 1 - < 10 %
EC-No.	200-020-1		
	*		
propionic acid			
CAS-No.	79-09-4	Flam. Liq. 3; Skin Corr. 1B; Eye Dam. 1; STOT SE 3; H226, H314, H318, H335 Concentration limits: >= 25 %: Skin Corr. 1B, H314; 10 - < 25 %: Skin	>= 1 - < 3 %
EC-No.	201-176-3		
Index-No.	607-089-00-0		
Registration number	01-2119486971-24-XXXX		

		Irrit. 2, H315; 10 - < 25 %: Eye Irrit. 2, H319; >= 10 %: STOT SE 3, H335;	
Disodium β-glycerophosphate hydrate			
CAS-No.	154804-51-0	Eye Irrit. 2; H319	>= 1 - < 10 %
EC-No.	212-464-3		
	*		
3,4-Dihydroxyphenylacetic acid			
CAS-No.	102-32-9	Skin Irrit. 2; Eye Irrit. 2; H315, H319	>= 1 - < 10 %
EC-No.	203-024-1		
	*		
3-Amino-4-hydroxybenzoic acid			
CAS-No.	1571-72-8	Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H302, H315, H319, H335	>= 1 - < 10 %
EC-No.	216-390-2		
	*		
2-Amino-1H-pteridin-4-one			
CAS-No.	2236-60-4	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
EC-No.	218-799-1		
	*		
1,4-Naphthoquinol			
CAS-No.	571-60-8	Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; Aquatic Chronic 3; H302, H315, H318, H335, H412	>= 1 - < 2,5 %
EC-No.	209-336-4		
	*		
α-Hydroxy-β,β-dimethyl-γ-butyrolactone			
CAS-No.	599-04-2	Eye Irrit. 2; H319	>= 1 - < 10 %
EC-No.	209-963-3		
	*		
2-Ketobutyric acid			
CAS-No.	600-18-0	Skin Corr. 1B; Eye Dam. 1; H314, H318	>= 1 - < 3 %
EC-No.	209-986-9		
	*		
Ethylmalonic acid			
CAS-No.	601-75-2	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
EC-No.	210-007-2		
	*		
fumaric acid			
CAS-No.	110-17-8	Eye Irrit. 2; H319	>= 1 - < 10 %
EC-No.	203-743-0		
Index-No.	607-146-00-X		
Registration	01-2119485492-31-		

number	XXXX		
4-aminobenzoic acid			
CAS-No.	150-13-0	Aquatic Chronic 3; H412	>= 1 - < 2,5 %
EC-No.	205-753-0		
	*		
Benzylamine			
CAS-No.	100-46-9	Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; H302, H312, H314, H318	>= 1 - < 3 %
EC-No.	202-854-1		
Index-No.	612-047-00-X		
	*		
3-hydroxybenzaldehyde			
CAS-No.	100-83-4	Skin Irrit. 2; Eye Irrit. 2; H315, H319	>= 1 - < 10 %
EC-No.	202-892-9		
	*		
3,5-Diiodo-L-thyronine			
CAS-No.	1041-01-6	Aquatic Chronic 3; H412	>= 1 - < 2,5 %
EC-No.	213-867-7		
	*		
valeric acid			
CAS-No.	109-52-4	Skin Corr. 1B; Eye Dam. 1; Aquatic Chronic 3; H314, H318, H412	>= 1 - < 2,5 %
EC-No.	203-677-2		
Index-No.	607-143-00-3		
Registration number	01-2119448010-56-XXXX		
glutaric acid			
CAS-No.	110-94-1	Skin Corr. 1A; Eye Dam. 1; H314, H318	>= 1 - < 3 %
EC-No.	203-817-2		
	*		
pimelic acid			
CAS-No.	111-16-0	Eye Irrit. 2; STOT SE 3; H319, H335	>= 1 - < 10 %
EC-No.	203-840-8		
	*		
4-Hydroxy-3-methoxycinnamic acid			
CAS-No.	1135-24-6	Eye Irrit. 2; H319	>= 1 - < 10 %
EC-No.	214-490-0		
	*		
Pyrocatechol			
CAS-No.	120-80-9	Acute Tox. 3; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; Muta. 2; Carc. 1B; H301, H311, H315, H318, H317, H341, H350	>= 1 - < 3 %
EC-No.	204-427-5		
Index-No.	604-016-00-4		
Registration number	01-2119515921-43-XXXX		

Cyclopentanone			
CAS-No.	120-92-3	Flam. Liq. 3; Skin Irrit. 2;	>= 1 - < 10 %
EC-No.	204-435-9	Eye Irrit. 2; H226, H315,	
Index-No.	606-025-00-9 *	H319	
4-hydroxybenzaldehyde			
CAS-No.	123-08-0	Eye Dam. 1; STOT SE 3;	>= 1 - < 3 %
EC-No.	204-599-1	H318, H335	
Registration number	01-2120784598-32-XXXX		
Calcium phosphide			
CAS-No.	1305-99-3	Water-react 1; Acute Tox. 2;	>= 1 - < 2,5 %
EC-No.	215-142-0	Acute Tox. 1; Acute Tox. 3;	
Index-No.	015-003-00-2 *	Eye Dam. 1; Aquatic Acute 1; H260, H300, H330, H311, H318, H400 M-Factor - Aquatic Acute: 100	
2-pyridone			
CAS-No.	142-08-5	Acute Tox. 3; H301	>= 1 - < 10 %
EC-No.	205-520-3		
	*		

*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, or the annual tonnage does not require a registration.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance. First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician. After contact with skin: rinse out with polyethylene glycol 400 or a mixture of polyethylene glycol 300/ethanol 2:1 and wash with plenty of water. If neither is available wash with plenty of water. Immediately take off contaminated clothing. Call a physician immediately.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

Water Foam

5.2 Special hazards arising from the substance or mixture

Carbon oxides
Nitrogen oxides (NO_x)
Sulfur oxides
Oxides of phosphorus
Hydrogen chloride gas
Hydrogen iodide
Potassium oxides
Sodium oxides
Calcium oxide
Carbon oxides
Nitrogen oxides (NO_x)
Sulfur oxides
Oxides of phosphorus
Hydrogen chloride gas
Hydrogen iodide
Potassium oxides
Sodium oxides
Lithium oxides
Calcium oxide
Mixture with combustible ingredients.

Combustible.

Vapors are heavier than air and may spread along floors.

May not get in touch with: Water

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary. Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Use water spray to cool unopened containers. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Work under hood. Do not inhale substance/mixture. Keep workplace dry. Do not allow product to come into contact with water.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Keep locked up or in an area accessible only to qualified or authorized persons.

Never allow product to get in contact with water during storage.

Storage stability Recommended storage temperature
-20 °C

Storage class

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. protective clothing

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|---|--|
| a) Physical state | solid |
| b) Color | No data available |
| c) Odor | No data available |
| d) Melting point/freezing point | No data available |
| e) Initial boiling point and boiling range | No data available |
| f) Flammability (solid, gas) | No data available |
| g) Upper/lower flammability or explosive limits | No data available |
| h) Flash point | -40 °C |
| i) Autoignition temperature | No data available |
| j) Decomposition temperature | No data available |
| k) pH | No data available |
| l) Viscosity | Viscosity, kinematic: No data available
Viscosity, dynamic: No data available |
| m) Water solubility | No data available |
| n) Partition coefficient: n-octanol/water | No data available |
| o) Vapor pressure | No data available |
| p) Density | No data available |
| Relative density | No data available |
| q) Relative vapor density | No data available |
| r) Particle | No data available |

characteristics

s) Explosive properties No data available

t) Oxidizing properties No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

sensitive to moisture

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Violent reactions possible with:

10.4 Conditions to avoid

Heat, flames and sparks.

no information available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity

Oral: No data available

Acute toxicity estimate Inhalation - 4 h - 0,5001 mg/l - dust/mist(Calculation method)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute toxicity estimate Dermal - > 2.000 mg/kg
(Calculation method)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Remarks: Mixture causes serious eye damage.

Risk of blindness!

Respiratory or skin sensitization

Mixture may cause an allergic skin reaction.

Germ cell mutagenicity

Evidence of genetic defects.

Carcinogenicity

Possible carcinogen.

Reproductive toxicity

May harm the unborn child. Positive evidence from human epidemiological studies.

Specific target organ toxicity - single exposure

Mixture may cause respiratory irritation.

Specific target organ toxicity - repeated exposure

Mixture causes damage to organs through prolonged or repeated exposure.

- Blood

Aspiration hazard

No data available

11.2 Additional Information**Endocrine disrupting properties****Product:**

Assessment

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.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

Components**3,5-Diiodo-L-tyrosine dihydrate****Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

potassium sorbate**Acute toxicity**

LD50 Oral - Rat - male and female - > 10.500 mg/kg

Remarks: (ECHA)

The value is given in analogy to the following substances: Sorbic acid

LC50 Inhalation - Rat - 4 h - > 5,15 mg/l - dust/mist

(OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

Remarks: The value is given in analogy to the following substances: Sorbic acid

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation

(OECD Test Guideline 405)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(Regulation (EC) No. 440/2008, Annex, B.6)

Remarks: The value is given in analogy to the following substances: Sorbic acid

Germ cell mutagenicity

In vivo tests did not show mutagenic effects

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Result: negative

Test Type: Ames test

Test system: *S. typhimurium*

Result: negative

Remarks: The value is given in analogy to the following substances: Sorbic acid

Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster lung cells
Result: positive
Test Type: UDS (Unscheduled DNA synthesis assay)
Test system: mammalian cells
Result: negative
Remarks: The value is given in analogy to the following substances: Sorbic acid
Method: OECD Test Guideline 474
Species: Mouse - male and female - Bone marrow
Result: negative
Remarks: The value is given in analogy to the following substances: Sorbic acid

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3-Hydroxysalicylic acid

Acute toxicity

LD50 Oral - Rabbit - > 3.000 mg/kg
Remarks: (RTECS)
Inhalation: Irritating to respiratory system.
Dermal: No data available

Skin corrosion/irritation

Remarks: Causes skin irritation.

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

oxalacetic acid

Acute toxicity

LD50 Oral - Rat - female - 2.000 - 5.000 mg/kg

(OECD Test Guideline 423)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - In vitro study

Result: Causes serious eye irritation. - 6 h

(OECD Test Guideline 492)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3,4-dihydroxycinnamic acid

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Indole-3-pyruvic acid monohydrate**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Methyl vanillate**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

LD50 Intravenous - Mouse - 180 mg/kg

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Hydrocortisone 21-acetate**Acute toxicity**

LD50 Oral - Rat - 5.000 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Food intake (animal).

Vascular:Other changes.

(RTECS)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: S. typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

May damage the unborn child.

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

Acetoin

Acute toxicity

LD50 Oral - Rat - female - > 2.000 mg/kg

(OECD Test Guideline 423)

Inhalation: No data available

LD50 Dermal - Rabbit - > 5.000 mg/kg

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)

Result: No skin irritation

(OECD Test Guideline 439)

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

Direct Peptide Reactivity Assay (DPRA)

Result: Not a skin sensitizer.

(OECD Test Guideline 442C)

Germ cell mutagenicity

Test Type: reverse mutation assay

Test system: Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

2-Methylmalonic acid

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: Causes skin irritation.

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

4-(2-Aminoethyl)phenol**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Laboratory experiments have shown mutagenic effects.

Species: Rat

Remarks: Cytogenetic analysis

Species: Mouse

Remarks: Micronucleus test

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

sodium benzoate**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: irritating - 24 h
(OECD Test Guideline 405)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Lungs

Result: negative

Remarks: (ECHA)

Method: OECD Test Guideline 475

Species: Rat - male - Bone marrow

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Nicotin**Acute toxicity**

Acute toxicity estimate Oral - 5 mg/kg
(Expert judgment)

Acute toxicity estimate Oral - 5 mg/kg
(Expert judgment)

Acute toxicity estimate Inhalation - 0,19 mg/l - dust/mist
(Expert judgment)

Acute toxicity estimate Inhalation - 0,19 mg/l - dust/mist
(Expert judgment)

Acute toxicity estimate Dermal - 70 mg/kg
(Expert judgment)

Acute toxicity estimate Dermal - 70 mg/kg
(Expert judgment)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 24 h

(OECD Test Guideline 402)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage.

(OECD Test Guideline 405)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Micronucleus test

Test system: human lymphoblastoid cells

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

Possible risk of congenital malformation in the fetus.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

δ-Valerolactone

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3-methyl-2-butene-1-ol**Acute toxicity**

LD50 Oral - Rat - male and female - 1.591 mg/kg

(OECD Test Guideline 401)

Symptoms: Nausea, Vomiting, gastric pain

Oral: absorption

Acute toxicity estimate Inhalation - 4 h - 11,1 mg/l - vapor

(Expert judgment)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

LD50 Dermal - Rabbit - male and female - > 4.000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Remarks: Risk of blindness!

Respiratory or skin sensitization

Human experience

Result: negative

Remarks: (ECHA)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male - Red blood cells (erythrocytes)

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Acute oral toxicity - Nausea, Vomiting, gastric pain

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Hegzadesil**Acute toxicity**

LD50 Oral - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 20 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure**Aspiration hazard**

No data available

(R)-(-)-mandelic acid**Acute toxicity**

LD50 Oral - Rat - male and female - 5.000 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Remarks: No skin irritation

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irreversible effects on the eye - 24 h
(OECD Test Guideline 405)

Remarks: Causes serious eye damage.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3-Hydroxybenzyl alcohol**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

 α -(Aminomethyl)benzyl alcohol**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

LD50 Intraperitoneal - Mouse - 250 mg/kg

Skin corrosion/irritation

Remarks: Causes skin irritation.

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

2-methylpropionic acid; isobutyric acid**Acute toxicity**

LD50 Oral - Rat - male and female - 2.230 mg/kg

(OECD Test Guideline 401)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Inhalation: No data available

LD50 Dermal - Rabbit - male - 474 mg/kg

(OECD Test Guideline 402)

Acute toxicity estimate Dermal - 474 mg/kg

(ATE value derived from LD50/LC50 value)

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive - 1 h

(OECD Test Guideline 404)

Remarks: Tendency of poor wound-healing after penetration of the substance.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive - 8 Days
(Draize Test)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male and female - Red blood cells (erythrocytes)

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Hydroxytoluic acid**Acute toxicity**

LD50 Oral - Rat - 445 mg/kg

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Human

Test system: lymphocyte

Remarks: DNA inhibition

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Mandelic acid**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Eyes - Bovine cornea

Result: Causes serious eye damage. - 4 h
(OECD Test Guideline 437)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

2-aminophenol**Acute toxicity**

LD50 Oral - Rat - 951 mg/kg

Remarks: Behavioral:Tremor.

Cyanosis

LC50 Inhalation - 4 h - 1,5 mg/l - dust/mist

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

In vitro tests showed mutagenic effects

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3,4-Dihydroxybenzoic acid**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Remarks: No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

4-hydroxybenzoic acid

Acute toxicity

LD50 Oral - Rat - > 10.000 mg/kg

Remarks: Behavioral: Muscle weakness.

Lungs, Thorax, or Respiration: Dyspnea.

(RTECS)

Symptoms: Possible damages: , mucosal irritations

LD50 Dermal - Rabbit - male and female - > 2.000 mg/kg

(US-EPA)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious damage to eyes. - 1 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Micronucleus test

Test system: Chinese hamster cells

Result: negative

Remarks: (ECHA)

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster cells

Result: negative

Remarks: (ECHA)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Oral, Inhalation - May cause respiratory irritation. - Respiratory system

Acute inhalation toxicity - Possible damages: , mucosal irritations

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

(+/-)-3,4-Dihydroxyphenylglycolic acid

Acute toxicity

Oral: No data available

Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

5-(Dithiolan-3-yl)valeramide

Acute toxicity

LD50 Oral - Rat - 1.980 mg/kg

Remarks: (RTECS)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3-(2-Hydroxyphenyl)propionic acid

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3-Hydroxyanthranilic acid

Acute toxicity

Acute toxicity estimate Oral - 500,1 mg/kg

(Expert judgment)

Acute toxicity estimate Inhalation - 4 h - 1,5 mg/l - dust/mist

(Expert judgment)

Acute toxicity estimate Dermal - 1.100 mg/kg

(Expert judgment)

Skin corrosion/irritation

Remarks: Causes skin irritation.

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Deoxynivalenol-d1**Acute toxicity**

LD50 Oral - Mouse - 46 mg/kg

Remarks: Gastrointestinal:Ulceration or bleeding from small intestine.

Diarrhea

(RTECS)

The value is given in analogy to the following substances: Deoxynivalenol

Acute toxicity estimate Oral - 46 mg/kg

(Calculation method)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Guinea pig

Result: Mild skin irritation

(Draize Test)

Remarks: (RTECS)

The value is given in analogy to the following substances: Deoxynivalenol

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Hydroxypyruvic acid phosphate lithium salt**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3-Hydroxy-2-oxo-3-phenylpropanoic acid**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: Causes skin irritation.

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Phenol

Acute toxicity

Acute toxicity estimate Oral - 100,1 mg/kg

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Inhalation - 4 h - 0,51 mg/l - dust/mist

(Expert judgment)

Symptoms: Irritation, Lung edema

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

LD50 Dermal - Rat - female - 660 mg/kg

(OECD Test Guideline 402)

Acute toxicity estimate Dermal - 660 mg/kg

(ATE value derived from LD50/LC50 value)

Skin corrosion/irritation

Skin - In vitro study

Result: Causes burns.

(OECD Test Guideline 431)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive

(OECD Test Guideline 405)

Remarks: Causes serious eye damage.

Risk of blindness!

Respiratory or skin sensitization

Sensitisation test: - Guinea pig

Result: negative

Remarks: (IUCLID)

Germ cell mutagenicity

Suspected of causing genetic defects.

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: positive

Test Type: Mutagenicity (mammal cell test): micronucleus.

Test system: Chinese hamster ovary cells

Result: positive

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute inhalation toxicity - Irritation, Lung edema

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

- Nervous system, Kidney, Liver, Skin

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

maleic acid**Acute toxicity**

LD50 Oral - Rat - male and female - 1.090 mg/kg

(OECD Test Guideline 401)

Remarks: The value is given in analogy to the following substances: maleic anhydride

Symptoms: Vomiting, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute toxicity estimate Oral - 1.090 mg/kg

(ATE value derived from LD50/LC50 value)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Lung edema, Symptoms may be delayed.

Acute toxicity estimate Dermal - 1.100 mg/kg

(Expert judgment)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage.

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: positive

(OECD Test Guideline 406)

Local lymph node assay (LLNA) - Mouse

Result: positive

(OECD Test Guideline 429)

(Regulation (EC) No 1272/2008, Annex VI)

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation. - Respiratory system

Acute oral toxicity - Vomiting, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Lung edema, Symptoms may be delayed.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

acrylic acid

Acute toxicity

LD50 Oral - Rat - male - 1.000 - < 2.000 mg/kg

(OECD Test Guideline 423)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute toxicity estimate Oral - 1.000 mg/kg

(ATE value derived from LD50/LC50 value)

LC50 Inhalation - Rat - male and female - 4 h - > 5,1 mg/l - vapor

(OECD Test Guideline 403)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute toxicity estimate Dermal - 1.100 mg/kg

(Expert judgment)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Skin corrosion/irritation

Skin - Rabbit

Result: Causes severe burns.

(OECD Test Guideline 404)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes burns.

Remarks: (IUCLID)

Remarks: Causes serious eye damage.

Respiratory or skin sensitization

Sensitisation test: - Guinea pig

Result: negative

Remarks: (Lit.)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Remarks: (National Toxicology Program)

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Result: negative

Test Type: unscheduled DNA synthesis assay

Test system: rat hepatocytes

Result: negative

Method: OECD Test Guideline 475

Species: Rat - male and female - Bone marrow

Result: negative

Species: Mouse - male and female - Intrauterine

Result: negative

Remarks: (ECHA)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory Tract

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Specific target organ toxicity - repeated exposure**Aspiration hazard**

No data available

hexanoic acid**Acute toxicity**

LD50 Oral - Rat - 3.000 mg/kg

Remarks: (RTECS)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, After a latency period:, Inhalation may lead to the formation of oedemas in the respiratory tract.

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

Remarks: The value is given in analogy to the following substances: sebacic acid

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive after 1 to 4 hours of exposure - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Bovine cornea

Result: Corrosive - 10 min

(OECD Test Guideline 437)

Remarks: Causes serious eye damage.

Remarks: Lacrimal irritation due to vapours.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, After a latency period:, Inhalation may lead to the formation of oedemas in the respiratory tract.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Aniline**Acute toxicity**

LD50 Oral - Rat - 250 mg/kg

Remarks: (RTECS)

LC50 Inhalation - Rat - 4 h - 3,3 mg/l - vapor

Remarks: (Lit.)

(Regulation (EC) No 1272/2008, Annex VI)

LC50 Inhalation - Rat - 4 h - 3,3 mg/l - vapor

Remarks: (Lit.)

(Regulation (EC) No 1272/2008, Annex VI)

LD50 Dermal - Rabbit - 840 mg/kg

Remarks: (Lit.)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

Remarks: (Lit.)

Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

May cause allergic skin reaction. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Germ cell mutagenicity

Suspected of causing genetic defects.

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: positive

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster lung cells

Result: positive

Test Type: unscheduled DNA synthesis assay

Test system: rat hepatocytes

Result: negative

Remarks: (ECHA)

Method: OECD Test Guideline 474

Species: Rat - male - Bone marrow

Result: positive

Method: OECD Test Guideline 475

Species: Mouse - male and female - Bone marrow

Result: positive

Method: OECD Test Guideline 475

Species: Rat - male - Bone marrow

Result: positive
Method: OECD Test Guideline 478
Species: Rat - male
Result: negative

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

- Blood

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

tryptamine

Acute toxicity

LD50 Oral - Rat - female - 300 - 2.000 mg/kg

(OECD Test Guideline 423)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - EPISKIN Human Skin Model Test

Result: No skin irritation

(OECD Test Guideline 439)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irreversible effects on the eye

(OECD Test Guideline 405)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: Causes sensitization.

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Serotonin hydrochloride**Acute toxicity**

LD50 Oral - Mouse - 60 mg/kg

Remarks: (RTECS)

The value is given in analogy to the following substances: 3-(2-aminoethyl)indol-5-ol

Acute toxicity estimate Oral - 60 mg/kg

(ATE value derived from LD50/LC50 value)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

Suspected human reproductive toxicant

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Dihydrocostisone**Acute toxicity**

LD50 Oral - Rat - 5.000 mg/kg

Remarks: (RTECS)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

In vivo tests did not show mutagenic effects

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

May damage the unborn child. Positive evidence from human epidemiological studies.

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

- Adrenal gland, Bone marrow

Aspiration hazard

No data available

propionic acid**Acute toxicity**

LD50 Oral - Rat - male and female - 3.455,1 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 1 h - > 19,7 mg/l - vapor

(OECD Test Guideline 403)

LD50 Dermal - Rat - female - 3.235 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive

Remarks: (ECHA)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage. - 24 h

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: sister chromatid exchange assay

Test system: Chinese hamster lung cells

Result: negative

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 474

Species: Chinese hamster - male and female - Bone marrow

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory Tract

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

Disodium β -glycerophosphate hydrate

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)

Result: No skin irritation - 15 min

(OECD Test Guideline 439)

Remarks: The value is given in analogy to the following substances: β -glycerophosphate disodium salt

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.
(ECHA)

The value is given in analogy to the following substances: β -glycerophosphate disodium salt

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Remarks: The value is given in analogy to the following substances: β -glycerophosphate disodium salt

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

3,4-Dihydroxyphenylacetic acid

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: Causes skin irritation.

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3-Amino-4-hydroxybenzoic acid

Acute toxicity

Oral: No data available

LD50 Oral - Rat - 798,2 mg/kg

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

2-Amino-1H-pteridin-4-one**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

1,4-Naphthoquinol**Acute toxicity**

Oral: No data available

Inhalation: Irritating to respiratory system.

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

 α -Hydroxy- β,β -dimethyl- γ -butyrolactone**Acute toxicity**

LD50 Oral - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye irritation.

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test

Test system: *S. typhimurium*

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

2-Ketobutyric acid**Acute toxicity**

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Symptoms: burns of mucous membranes
Dermal: No data available

Skin corrosion/irritation

Remarks: Causes skin burns.

Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity - burns of mucous membranes

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Ethylmalonic acid

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: Causes skin irritation.

The value is given in analogy to the following substances: 2-Methylmalonic acid

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

The value is given in analogy to the following substances: 2-Methylmalonic acid

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

The value is given in analogy to the following substances: 2-Methylmalonic acid

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

fumaric acid**Acute toxicity**

LD50 Oral - Rat - male and female - 9.300 mg/kg

(OECD Test Guideline 401)

Symptoms: After uptake of large quantities:, Irritation of mucous membranes, Nausea

LC50 Inhalation - Rat - male and female - 4 h - > 1,306 mg/l - dust/mist

(OECD Test Guideline 403)

Remarks: (highest concentration to be prepared)

Symptoms: Possible damages:, Irritation symptoms in the respiratory tract.

LD50 Dermal - Rabbit - female - 20.000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster lung cells

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Remarks: (National Toxicology Program)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - After uptake of large quantities:, Irritation of mucous membranes, Nausea

Acute inhalation toxicity - Possible damages:, Irritation symptoms in the respiratory tract.

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

4-aminobenzoic acid

Acute toxicity

LD50 Oral - Rat - male and female - ≥ 5.000 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: *S. typhimurium*

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Result: positive

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

Benzylamine

Acute toxicity

LD50 Oral - Rat - male - 1.127 mg/kg

(OECD Test Guideline 401)

Acute toxicity estimate Oral - 1.127 mg/kg

(ATE value derived from LD50/LC50 value)

LC50 Inhalation - Rat - male and female - 3 h - > 0,65 mg/l - vapor

(OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - 1.350 mg/kg

(OECD Test Guideline 402)

Acute toxicity estimate Dermal - 1.350 mg/kg

(ATE value derived from LD50/LC50 value)

Skin corrosion/irritation

Skin - Rabbit

Result: Causes burns.

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive

(OECD Test Guideline 405)

Remarks: Causes serious eye damage.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Result: negative

Test Type: Micronucleus test

Test system: Chinese hamster lung cells

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male - Bone marrow

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

3-hydroxybenzaldehyde

Acute toxicity

Symptoms: Possible damages:, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Symptoms: Possible damages:, mucosal irritations

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - Possible damages:, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity - Possible damages:, mucosal irritations

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

3,5-Diiodo-L-thyronine

Acute toxicity

LD50 Oral - Rat - female - > 2.000 mg/kg

(OECD Test Guideline 423)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Eyes - EpiOcular

Result: No eye irritation

(OECD Test Guideline 492)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative
(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test
Test system: S. typhimurium
Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

valeric acid

Acute toxicity

LD50 Oral - Rat - male and female - 4.600 mg/kg
(OECD Test Guideline 401)
Inhalation: No data available
LD50 Dermal - Rat - male and female - > 2.000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit
Result: Causes burns.
(OECD Test Guideline 404)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Eyes - Rabbit
Result: Corrosive
Remarks: (ECHA)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Method: OECD Test Guideline 474
Species: Mouse - male and female
Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

glutaric acid**Acute toxicity**

LD50 Oral - Mouse - 6.000 mg/kg

Remarks: (RTECS)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Symptoms: Possible damages:, mucosal irritations

Dermal: No data available

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)

Result: Corrosive

(OECD Test Guideline 431)

Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity - Possible damages:, mucosal irritations

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

pimelic acid**Acute toxicity**

LD50 Oral - Rat - 7.000 mg/kg

Remarks: (RTECS)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.
(ECHA)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

4-Hydroxy-3-methoxycinnamic acid**Acute toxicity**

LD50 Oral - Rat - 2.500 mg/kg

Remarks: (RTECS)

The value is given in analogy to the following substances: trans-cinnamic acid

The value is given in analogy to the following substances: Cinnamic acid

Inhalation: Irritating to respiratory system.

Dermal: No data available

Skin corrosion/irritation

Skin - in vitro test

Result: No skin irritation - 3 - 60 min

(OECD Test Guideline 431)

Remarks: The value is given in analogy to the following substances: trans-cinnamic acid

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

(ECHA)

The value is given in analogy to the following substances: trans-cinnamic acid

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Remarks: The value is given in analogy to the following substances: trans-cinnamic acid

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Pyrocatechol**Acute toxicity**

LD50 Oral - Rat - male - 300 mg/kg

Remarks: (ECHA)

Inhalation: No data available

LD50 Dermal - Rat - male and female - 600 mg/kg
(OECD Test Guideline 402)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 24 h
(Draize Test)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage. - 24 - 72 h
(Draize Test)

Remarks: (ECHA)

Respiratory or skin sensitization

Freund's complete adjuvant test - Guinea pig

Result: positive

Remarks: (ECHA)

Germ cell mutagenicity

Suspected of causing genetic defects.

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: positive

Species: Rat - male

Result: positive

Remarks: (ECHA)

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Cyclopentanone**Acute toxicity**

LD50 Oral - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male - 4 h - > 19,5 mg/l - vapor

(OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 4 h

(OECD Test Guideline 404)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

4-hydroxybenzaldehyde

Acute toxicity

LD50 Oral - Rat - 3.980 mg/kg

(OECD Test Guideline 401)

Symptoms: Possible damages:, mucosal irritations

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Eyes - Bovine cornea

Result: Causes serious eye damage. - 4 h

(OECD Test Guideline 437)

Respiratory or skin sensitization

Direct Peptide Reactivity Assay (DPRA) - In vitro study

Result: negative

(OECD Test Guideline 442C)

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Acute inhalation toxicity - Possible damages:, mucosal irritations

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Calcium phosphide

Acute toxicity

Oral: No data available

Acute toxicity estimate Inhalation - 4 h - 0,01 mg/l - dust/mist

(Expert judgment)

Acute toxicity estimate Dermal - 500 mg/kg

(Expert judgment)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

2-pyridone**Acute toxicity**

LD50 Oral - Rat - 124 mg/kg

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

SECTION 12: Ecological information

12.1 Toxicity

Mixture

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : 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

Very toxic to aquatic life with long lasting effects.

Components

Components

3,5-Diiodo-L-tyrosine dihydrate

No data available

potassium sorbate

Toxicity to fish	static test LC50 - Danio rerio (zebra fish) - > 1.000 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 982 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - 77 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following substances: Sorbic acid static test NOEC - Pseudokirchneriella subcapitata - 56 mg/l - 72 h (OECD Test Guideline 201)

Remarks: The value is given in analogy to the following substances: Sorbic acid

Toxicity to bacteria static test EC50 - activated sludge - > 100 mg/l - 72 h
(OECD Test Guideline 209)
Remarks: The value is given in analogy to the following substances: Sorbic acid

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) semi-static test NOEC - Daphnia magna (Water flea) - 50 mg/l - 21 d
(OECD Test Guideline 211)
Remarks: The value is given in analogy to the following substances:
The value is given in analogy to the following substances: Sorbic acid

3-Hydroxysalicylic acid

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 447 mg/l - 48 h
Remarks: (ECOTOX Database)

oxalacetic acid

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 31,19 mg/l - 72 h
(OECD Test Guideline 201)
static test NOEC - Pseudokirchneriella subcapitata (green algae) - 3,28 mg/l - 72 h
(OECD Test Guideline 201)

3,4-dihydroxycinnamic acid

No data available

Indole-3-pyruvic acid monohydrate

No data available

Methyl vanillate

No data available

Hydrocortisone 21-acetate

Toxicity to bacteria

Acetoin

Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - > 2.200 mg/l - 96 h
LC0 - Leuciscus idus (Golden orfe) - 2.200 mg/l - 48 h

Toxicity to bacteria

2-Methylmalonic acid

No data available

4-(2-Aminoethyl)phenol

No data available

sodium benzoate

Toxicity to fish

flow-through test LC50 - Pimephales promelas (fathead minnow) - 484 mg/l - 96 h
(US-EPA)

Toxicity to daphnia
and other aquatic
invertebrates

static test LC50 - Daphnia magna (Water flea) - > 100 mg/l - 96 h
Remarks: (ECHA)

Toxicity to algae

static test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h
(OECD Test Guideline 201)

Toxicity to
fish(Chronic toxicity)

semi-static test LC50 - Danio rerio (zebra fish) - 1.400 - 1.500 mg/l - 24 h
Remarks: (ECHA)

Nicotin

Toxicity to fish

static test LC50 - Oncorhynchus mykiss (rainbow trout) - 4 mg/l - 96 h
Remarks: (ECOTOX Database)

Toxicity to daphnia
and other aquatic
invertebrates

semi-static test EC50 - Daphnia magna (Water flea) - 3 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae

static test ErC50 - Desmodesmus subspicatus (green algae) - 37 mg/l - 72 h
(OECD Test Guideline 201)

Toxicity to bacteria

static test NOEC - activated sludge - 27 mg/l - 28 Days
Remarks: (ECHA)

Toxicity to daphnia
and other aquatic
invertebrates(Chronic
toxicity)

semi-static test NOEC - Daphnia pulex (Water flea) - 0,02 mg/l - 16 d
(OECD Test Guideline 211)

δ-Valerolactone

No data available

3-methyl-2-butene-1-ol

Toxicity to fish

static test LC50 - Leuciscus idus (Golden orfe) - 46,4 mg/l - 96 h
(DIN 38412 part 15)

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 144 mg/l - 48 h (Directive 67/548/EEC, Annex V, C.2.)
---	--

Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - > 500 mg/l - 72 h (DIN 38412)
-------------------	--

Hegzadesil

Toxicity to fish	static test LC50 - Leuciscus idus (Golden orfe) - > 500 mg/l - 96 h (DIN 38412)
------------------	--

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 259,13 mg/l - 48 h (Regulation (EC) No. 440/2008, Annex, C.2) Remarks: The value is given in analogy to the following substances: trimethylamine
---	--

Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - 150 mg/l - 72 h (DIN 38412)
-------------------	--

(R)-(-)-mandelic acid

No data available

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
---	--

3-Hydroxybenzyl alcohol

No data available

α -(Aminomethyl)benzyl alcohol

No data available

2-methylpropionic acid; isobutyric acid

Toxicity to fish	static test LC50 - Leuciscus idus (Golden orfe) - 146,6 mg/l - 96 h (DIN 38412 part 15)
------------------	--

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 51,25 mg/l - 48 h (DIN 38412)
---	--

Toxicity to algae	static test EbC50 - Desmodesmus subspicatus (green algae) - 45,1 mg/l - 72 h (DIN 38412)
-------------------	---

Toxicity to bacteria	EC50 - Pseudomonas putida - 57 mg/l - 17 h Remarks: (IUCLID)
----------------------	---

Hydroxytoluic acid

No data available

Mandelic acid

No data available

Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test NOEC - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)

2-aminophenol

Toxicity to fish	LC50 - Leuciscus idus (Golden orfe) - 0,1 mg/l
Toxicity to daphnia and other aquatic invertebrates	EC0 - Daphnia magna (Water flea) - 1 mg/l EC50 - Daphnia magna (Water flea) - 35 mg/l - 24 h

3,4-Dihydroxybenzoic acid

No data available

4-hydroxybenzoic acid

Toxicity to fish	flow-through test LC50 - Oryzias latipes - 92,8 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 1.000 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - > 1.000 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to fish(Chronic toxicity)	flow-through test LC50 - Oryzias latipes - > 100 mg/l - 14 d (OECD Test Guideline 204)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test NOEC - Daphnia magna (Water flea) - > 100 mg/l - 21 d (OECD Test Guideline 202)

(+/-)-3,4-Dihydroxyphenylglycolic acid

No data available

5-(Dithiolan-3-yl)valeramide

No data available

3-(2-Hydroxyphenyl)propionic acid

No data available

3-Hydroxyanthranilic acid

No data available

Deoxynivalenol-d1

No data available

Hydroxypyruvic acid phosphate lithium salt

No data available

3-Hydroxy-2-oxo-3-phenylpropanoic acid

No data available

Phenol

Toxicity to fish	flow-through test LC50 - Onchorhynchus clarki - 8,9 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Ceriodaphnia dubia (water flea) - 3,1 mg/l - 48 h (US-EPA)
Toxicity to algae	static test EC50 - Pseudokirchneriella subcapitata (algae) - 61,1 mg/l - 96 h (US-EPA)
Toxicity to bacteria	static test IC50 - microorganisms - 21 mg/l - 24 h Remarks: (ECHA)
Toxicity to fish(Chronic toxicity)	semi-static test NOEC - Fish - 0,077 mg/l - 60 d Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test NOEC - Daphnia magna (Water flea) - 0,16 mg/l - 16 d Remarks: (ECHA)

maleic acid

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 42,81 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 74,35 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC10 - Pseudomonas putida - 44,6 mg/l - 18 h (DIN 38 412 Part 8) Remarks: The value is given in analogy to the following substances: maleic anhydride
Toxicity to daphnia and other aquatic	EC50 - Daphnia magna (Water flea) - 77 mg/l - 21 d Remarks: The value is given in analogy to the following

invertebrates(Chronic toxicity) substances:
(ECHA)
The value is given in analogy to the following substances:
maleic anhydride

acrylic acid

Toxicity to fish	flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 27 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	flow-through test EC50 - Daphnia magna (Water flea) - 95 mg/l - 48 h (US-EPA)
Toxicity to algae	IC50 - Desmodesmus subspicatus (green algae) - 0,13 mg/l - 72 h (Regulation (EC) No. 440/2008, Annex, C.3) Remarks: (IUCLID)
	EC10 - Desmodesmus subspicatus (green algae) - 0,03 mg/l - 72 h (Regulation (EC) No. 440/2008, Annex, C.3) Remarks: (ECHA)
Toxicity to bacteria	static test NOEC - activated sludge - 100 mg/l - 30 min (ISO 8192)
Toxicity to fish(Chronic toxicity)	flow-through test NOEC - Oryzias latipes - $\geq 10,1$ mg/l - 45 d (OECD Test Guideline 210)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	flow-through test NOEC - Daphnia magna (Water flea) - 3,8 mg/l - 21 d (US-EPA)

hexanoic acid

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 88 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - 72 mg/l - 48 h (OECD Test Guideline 202) Remarks: The value is given in analogy to the following substances: heptanoic acid; oenanthic acid
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - 56,4 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following substances: heptanoic acid; oenanthic acid
Toxicity to daphnia	semi-static test NOEC - Daphnia magna (Water flea) - 17,9

and other aquatic invertebrates(Chronic toxicity)	mg/l - 21 d (OECD Test Guideline 211) Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: heptanoic acid; oenanthic acid
---	--

Aniline

Toxicity to fish	flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 10,6 mg/l - 96,0 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - 0,16 mg/l - 48 h (US-EPA)
Toxicity to algae	static test ErC50 - Chlorella pyrenoidosa - 175 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	EC50 - activated sludge - 2.500 mg/l - 10 min Remarks: (Lit.)
Toxicity to fish(Chronic toxicity)	flow-through test NOEC - Pimephales promelas (fathead minnow) - 0,39 mg/l - 32 d Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	flow-through test NOEC - Daphnia magna (Water flea) - 0,01 mg/l - 21 d (US-EPA)

tryptamine

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 12,91 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 3,85 mg/l - 72 h (OECD Test Guideline 201)

Serotonin hydrochloride

No data available

Dihydrocostisone

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
---	--

propionic acid

Toxicity to fish	static test LC50 - Leuciscus idus (Golden orfe) - > 10.000 mg/l - 96 h (DIN 38412)
------------------	---

Remarks: The value is given in analogy to the following substances: calcium dipropionate

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h (Directive 67/548/EEC, Annex V, C.2.) Remarks: The value is given in analogy to the following substances: calcium dipropionate
---	--

Toxicity to algae	static test EC50 - Desmodesmus subspicatus (green algae) - > 500 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following substances: calcium dipropionate
-------------------	---

Toxicity to bacteria	EC50 - Pseudomonas putida - 60 mg/l - 17 h (DIN 38412) Remarks: (IUCLID)
----------------------	--

Disodium β -glycerophosphate hydrate

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202) Remarks: The value is given in analogy to the following substances: β -glycerophosphate disodium salt
---	---

Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following substances: β -glycerophosphate disodium salt
-------------------	---

3,4-Dihydroxyphenylacetic acid

No data available

3-Amino-4-hydroxybenzoic acid

No data available

2-Amino-1H-pteridin-4-one

No data available

1,4-Naphthoquinol

No data available

α -Hydroxy- β , β -dimethyl- γ -butyrolactone

Toxicity to daphnia and other aquatic	EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
---------------------------------------	--

invertebrates Remarks: No toxicity at the limit of solubility.

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 63 mg/l - 72 h
(OECD Test Guideline 201)

2-Ketobutyric acid

No data available

Ethylmalonic acid

No data available

fumaric acid

Toxicity to fish semi-static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates semi-static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - > 100 mg/l - 72 h
(OECD Test Guideline 201)

static test NOEC - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h
(OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - > 300 mg/l - 3 h
(OECD Test Guideline 209)

4-aminobenzoic acid

Toxicity to daphnia and other aquatic invertebrates LC50 - Daphnia - 10,32 mg/l - 48 h
Remarks: (ECHA)
The value / statement given is based on a (Q)SAR approach

Toxicity to bacteria microtox test EC50 - Photobacterium phosphoreum - 27,4 mg/l - 30 min
Remarks: (Lit.)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) NOEC - Daphnia - 0,337 mg/l - 21 d
Remarks: (ECHA)
The value / statement given is based on a (Q)SAR approach

Benzylamine

Toxicity to fish static test LC50 - Leuciscus idus (Golden orfe) - > 100 mg/l - 96 h
(DIN 38412 part 15)

Toxicity to daphnia and other aquatic static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h

invertebrates (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - *Desmodesmus subspicatus* (green algae) - 50 mg/l - 72 h (OECD Test Guideline 201)

3-hydroxybenzaldehyde

No data available

3,5-Diiodo-L-thyronine

Toxicity to daphnia and other aquatic invertebrates static test EC50 - *Daphnia magna* (Water flea) - > 24,02 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - *Desmodesmus subspicatus* (green algae) - > 20,89 mg/l - 72 h (OECD Test Guideline 201)

valeric acid

Toxicity to fish LC50 - *Pimephales promelas* (fathead minnow) - 77 mg/l - 96 h
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - *Daphnia magna* (Water flea) - 88,1 mg/l - 48 h (OECD Test Guideline 202)
Remarks: (in analogy to similar products)

Toxicity to algae static test ErC50 - *Pseudokirchneriella subcapitata* (green algae) - 29,3 mg/l - 72 h (OECD Test Guideline 201)

glutaric acid

Toxicity to daphnia and other aquatic invertebrates static test EC50 - *Daphnia magna* (Water flea) - 6.840 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - *Pseudokirchneriella subcapitata* (green algae) - 738 mg/l - 72 h (OECD Test Guideline 201)
static test NOEC - *Pseudokirchneriella subcapitata* (green algae) - 320 mg/l - 72 h (OECD Test Guideline 201)

pimelic acid

No data available

4-Hydroxy-3-methoxycinnamic acid

Toxicity to daphnia and other aquatic invertebrates semi-static test EC50 - *Daphnia magna* (Water flea) - 32 mg/l - 48 h (OECD Test Guideline 202)

Remarks: The value is given in analogy to the following substances: trans-cinnamic acid

Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 19 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following substances: trans-cinnamic acid
-------------------	--

Pyrocatechol

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 9,22 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - 1,09 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	ErC50 - Chlorella vulgaris (Fresh water algae) - 22 mg/l - 96 h (OECD Test Guideline 201)

Cyclopentanone

Toxicity to fish	semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - > 1.000 mg/l - 3 h (OECD Test Guideline 209)

4-hydroxybenzaldehyde

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 41,1 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 37,93 mg/l - 72 h (OECD Test Guideline 201)

Calcium phosphide

No data available

2-pyridone

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 3316

IMDG: 3316

IATA: 3316

14.2 UN proper shipping name

ADR/RID: CHEMICAL KIT (acrylic acid)

IMDG: CHEMICAL KIT (acrylic acid)

IATA: Chemical kit (acrylic acid)

14.3 Transport hazard class(es)

ADR/RID: 9

IMDG: 9

IATA: 9

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

14.6 Special precautions for user

Tunnel restriction code : (E)

Further information : No data available

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Pyrocatechol

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards H2 ACUTE TOXIC

involving dangerous substances.

E1 ENVIRONMENTAL HAZARDS

O3 OTHER HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements

H226	Flammable liquid and vapor.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H361	Suspected of damaging fertility or 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.
EUH029	Contact with water liberates toxic gas.
EUH032	Contact with acids liberates very toxic gas.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the mixture

Acute Tox.3	H301
Acute Tox.3	H331
Skin Corr.1	H314
Eye Dam.1	H318
Skin Sens.1	H317
Muta.2	H341
Carc.1B	H350
Repr.1A	H360D
STOT SE3	H335
STOT RE1	H372
Aquatic Acute1	H400
Aquatic Chronic3	H412

Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

Further information

Copyright 2020 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Copyright 2020 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

CHEMIKART