



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

- **1.1 Product identifier**
- **Trade name: Fleckenentferner Color-Ex**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Cleaning material/ Detergent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Cleanfix
Reinigungssysteme AG
Stettenstrasse
9247 Henau
Tel. +41 (0)71 955 47 47
Fax +41 (0)71 955 47 60
- **Further information obtainable from:**
info@cleanfix.com
Tel. +41 (0)71 955 47 47
Fax +41 (0)71 955 47 60
- **1.4 Emergency telephone number:**
Centre suisse d'information toxicologique, Zurich
+41 (0)44 251 51 51 ou 145 (depuis la Suisse)
Schweizerisches Toxikologisches Informationszentrum, Zürich
+41 (0)44 251 51 51 oder aus der Schweiz: Tel 145
Centro Svizzero d'informazione tossicologica
+41 (0)44 251 51 51 o dalla Svizzera: Tel 145


SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
- 

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.
- 

GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.
- 

GHS07

Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS02, GHS07, GHS09
- **Signal word** Warning
- **Hazard-determining components of labelling:**
2-butoxyethanol
Benzyl alcohol
- **Hazard statements**
H226 Flammable liquid and vapour.

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H332 Harmful if inhaled.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P102 Keep out of reach of children.
 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 [or shower].
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.
 · **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 112-34-5 EINECS: 203-961-6 Reg.nr.: 01-2119475104-44	2-(2-butoxyethoxy)ethanol ⚠ Eye Irrit. 2, H319	25-50%
EC number: 919-446-0 Reg.nr.: 01-2119471991-29	Naphtha (petroleum), heavy alkylate ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411	25%
CAS: 111-76-2 EINECS: 203-905-0 Reg.nr.: 01-2119475108-36	2-butoxyethanol ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	10-20%
CAS: 100-51-6 EINECS: 202-859-9 Reg.nr.: 01-2119492630-38	Benzyl alcohol ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	10-20%
CAS: 3470-98-2 EINECS: 222-437-8 Reg.nr.: 01-2120062728-48	1-Butylpyrrolidin-2-one ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	2.5-5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Call for a doctor immediately.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:** 3
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

112-34-5 2-(2-butoxyethoxy)ethanol

WEL	Short-term value: 101.2 mg/m ³ , 15 ppm Long-term value: 67.5 mg/m ³ , 10 ppm
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111-76-2 2-butoxyethanol

WEL Short-term value: 246 mg/m³, 50 ppm
Long-term value: 123 mg/m³, 25 ppm
Sk, BMGV

· DNELs**111-76-2 2-butoxyethanol**

Oral	DNEL long term systemic effects	3.2 mg/kg bw/day (general population)
	DNEL short term systemic effects	13.4 mg/kg (general population)
Dermal	DNEL long term systemic effects	38 mg/kg bw/day (general population) 75 mg/kg bw/day (workers)
	DNEL short term systemic effects	44.5 mg/kg (general population) 89 mg/kg (workers)
Inhalative	DNEL long term systemic effects	49 mg/m ³ (general population) 98 mg/m ³ (workers)
	DNEL short term local effects	123 mg/m ³ (general population) 246 mg/m ³ (workers)
	DNEL short term systemic effects	426 mg/m ³ (general population) 633 mg/m ³ (workers)

· PNECs**111-76-2 2-butoxyethanol**

PNEC	3.13 mg/l (ground)
	9.1 mg/l (intermittent release)
	463 mg/l (sewage plant)
PNEC aqua	8.8 mg/l (fresh water) 0.88 mg/l (sea water)
	PNEC sediment
PNEC ground	3.13 mg/kg (ground)

100-51-6 Benzyl alcohol

PNEC	2.3 mg/l (intermittent release)
	39 mg/l (sewage plant)
PNEC aqua	1 mg/l (fresh water) 0.1 mg/l (sea water)
	PNEC sediment
PNEC ground	

· Ingredients with biological limit values:**111-76-2 2-butoxyethanol**

BMGV 240 mmol/mol creatinine
Medium: urine
Sampling time: post shift
Parameter: butoxyacetic acid

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls**· Personal protective equipment:****· General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**

EN 374



Protective gloves

· **Material of gloves**

Rubber gloves

Recommended thickness of the material: ≥ 0.5 mm

· **Penetration time of glove material ≥ 8 h**

· **Eye protection:**



Tightly sealed goggles

EN166

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

· Form:	Fluid
· Colour:	Colourless
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	100 °C

· **Flash point:** 46 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 225 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

· Lower:	0.7 Vol %
· Upper:	13 Vol %

· **Vapour pressure at 20 °C:** 1.2 hPa

· Density at 20 °C:	0.906 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

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- | | |
|--|--|
| · Solubility in / Miscibility with water: | Fully miscible. |
| · Partition coefficient: n-octanol/water: | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| Organic solvents: | 60.1 % |
| Water: | 2.0 % |
| · 9.2 Other information | No further relevant information available. |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if inhaled.

- **LD/LC50 values relevant for classification:**

Naphtha (petroleum), heavy alkylate

Oral	LD50	> 6,000 mg/kg (Rat)
Dermal	LD50	> 3,000 mg/kg (Rabbit)

111-76-2 2-butoxyethanol

Oral	LD50	1,746 mg/kg (Rat)
Dermal	LD50	2,270 mg/kg (rab)
Inhalative	LC50/4 h	2-20 mg/l (Rat)

100-51-6 Benzyl alcohol

Oral	LD50	1,230 mg/kg (Rat)
Dermal	LD50	2,000 mg/kg (Rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

111-76-2 2-butoxyethanol

EC50 (24h)	1,720 mg/l (<i>Daphnia magna</i>)
EC50 (7d)	>100 mg/l (<i>Scenedesmus subspicatus</i>)
LC50 (96h)	1,490 mg/l (<i>Lepomis macrochirus</i>)

100-51-6 Benzyl alcohol

EC50 (24h)	400 mg/l (<i>Daphnia magna</i>)
LC50 (96h)	10 mg/l (<i>Lepomis macrochirus</i>)

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue

20 00 00	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00	separately collected fractions (except 15 01)
20 01 29*	detergents containing hazardous substances

Uncleaned packaging:

Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number

ADR, IMDG, IATA

UN1993

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· **14.2 UN proper shipping name**
· **ADR** 1993 FLAMMABLE LIQUID, N.O.S. (C9-12-Iso-alkanes), ENVIRONMENTALLY HAZARDOUS
· **IMDG** FLAMMABLE LIQUID, N.O.S. (C9-12-Iso-alkanes), MARINE POLLUTANT
· **IATA** FLAMMABLE LIQUID, N.O.S. (C9-12-Iso-alkanes)

· **14.3 Transport hazard class(es)**· **ADR, IMDG**

· **Class** 3 Flammable liquids.
· **Label** 3

· **IATA**

· **Class** 3 Flammable liquids.
· **Label** 3

· **14.4 Packing group**· **ADR, IMDG, IATA** III· **14.5 Environmental hazards:**

· **Marine pollutant:** No
Symbol (fish and tree)
· **Special marking (ADR):** Symbol (fish and tree)

· **14.6 Special precautions for user**

Warning: Flammable liquids.
· **Hazard identification number (Kemler code):** 30
· **EMS Number:** F-E S-E
· **Stowage Category** A

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **ADR**

· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **Transport category**· **Tunnel restriction code** 3
D/E· **IMDG**

· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 1993 FLAMMABLE LIQUID, N.O.S. (C9-12-ISO-ALKANES), 3, III, ENVIRONMENTALLY HAZARDOUS

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SECTION 15: Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

Seveso category

E2 Hazardous to the Aquatic Environment

P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 55

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

National regulations:

Regulation (EC) No 648/2004 on detergents / Labelling for contents

aliphatic hydrocarbons

≥15 - <30%

non-ionic surfactants

≥5 - <15%

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H411 Toxic to aquatic life with long lasting effects.

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity - oral – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

* Data compared to the previous version altered.