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

1.1. Product identifier

help:ex discolor f

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

Use of the substance/mixture

Ready-to-use special cleaner (alkaline) for the subsequent removal of stubborn discolorations such as tar, coffee, tea stains from removable dental restorations.

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet

Company name:	Renfert GmbH
Street:	Untere Giesswiesen 2
Place:	D-78247 Hilzingen
Telephone:	+49 7731 8208-0
E-mail:	info@renfert.com
Contact person:	Frau Andris
E-mail:	silke.andris@renfert.com
Internet:	www.renfert.com

1.4. Emergency telephone number:

IRL: 01 809 2566 (Healthcare Professionals) | GB: 0044 151 951 3317 (Health and Safety Executive (HSE) Chemicals)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Met. Corr. 1; H290
Skin Corr. 1; H314
Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

2-aminoethanol

Signal word: Danger

Pictograms:

Hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

Precautionary statements

P280	Wear protective gloves and 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.
P310	Immediately call a POISON CENTER/doctor.
P390	Absorb spillage to prevent material damage.

Additional advice on labelling

The classification is based on the pH value (EC regulation No. 1272/2008).

2.3. Other hazards

To follow: TRGS 907, scientifically based information. (2-aminoethanol)
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Cleaning agent, alkaline

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
141-43-5	2-aminoethanol			< 5 %
	205-483-3	603-030-00-8	01-2119486455-28	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, STOT SE 3, Aquatic Chronic 3; H332 H312 H302 H314 H318 H317 H335 H412			
34590-94-8	(2-methoxymethylethoxy) propanol			< 10 %
	252-104-2		01-2119450011-60	
1310-58-3	potassium hydroxide			< 2 %
	215-181-3	019-002-00-8	01-2119487136-33	
	Met. Corr. 1, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1; H290 H302 H314 H318			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
141-43-5	205-483-3	2-aminoethanol	< 5 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 2504 mg/kg; oral: LD50 = 1089 mg/kg STOT SE 3; H335: >= 5 - 100		
1310-58-3	215-181-3	potassium hydroxide	< 2 %
	oral: LD50 = 333 mg/kg Skin Corr. 1A; H314: >= 5 - 100 Skin Corr. 1B; H314: >= 2 - < 5 Skin Irrit. 2; H315: >= 0,5 - < 2 Eye Irrit. 2; H319: >= 0,5 - < 2		

Labelling for contents according to Regulation (EC) No 648/2004

< 5 % phosphonates, < 5 % non-ionic surfactants.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off immediately all contaminated clothing and wash it before reuse.

After inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

After contact with skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

After contact with eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

After ingestion

Rinse mouth. Do NOT induce vomiting. Call a physician immediately.

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

Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

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

Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to the escape of irritating gases and vapours.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Do not inhale explosion and combustion gases.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Use personal protection equipment.
Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Handle and open container with care.
Wear personal protection equipment (refer to section 8).
Avoid contact with skin, eyes and clothes.
Do not eat, drink or smoke when using this product.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately.
Wash hands before breaks and after work.
Avoid contact with eyes and skin.
Keep away from food, drink and animal feedingstuffs.

Further information on handling

To follow: TRGS 907, scientifically based information. (2-aminoethanol)

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep only in the original container in a cool, well-ventilated place.
Keep container tightly closed.

Hints on joint storage

Do not store together with: Acid

Further information on storage conditions

Recommended storage temperature: 5°C / 41°F - 40°C / 104°F

7.3. Specific end use(s)

Please refer to our internet website for more information. www.renfert.com
To avoid risks to human health and the environment, comply with the instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
34590-94-8	(2-Methoxymethylethoxy)-l-propanol	50	308		TWA (8 h)	
141-43-5	2-Aminoethanol	1	2.5		TWA (8 h)	
		3	7.6		STEL (15 min)	
141-43-5	Ethanolamine (2-Aminoethanol)	1	2.5		TWA (8 h)	
		3	7.6		STEL (15 min)	
1310-58-3	Potassium hydroxide	-	2		STEL (15 min)	

8.2. Exposure controls

Appropriate engineering controls

Safe handling: see section 7

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye protection/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
Suitable material: NR (natural rubber, Natural latex), Butyl caoutchouc (butyl rubber)
Thickness of the glove material: 0,5 mm
Breakthrough time: >= 8 h
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Skin protection

Wear suitable protective clothing.
Remove contaminated, saturated clothing immediately.

Respiratory protection

Provide adequate ventilation.
Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	blue	
Odour:	earthy	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		> 100 °C
Flammability:		not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		not applicable
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined
pH-Value (at 20 °C):		11,5 - 14
Viscosity / kinematic:		not determined
Water solubility:		completely miscible
Partition coefficient n-octanol/water:		not determined
Vapour pressure: (at 20 °C)		23 hPa
Density (at 20 °C):		1,01 - 1,03 g/cm³
Relative vapour density:		not determined

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

not explosive according to EU A.14

Further Information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

Violent reaction with: Acid
May be corrosive to metals.

10.4. Conditions to avoid

No special measures are necessary.

10.5. Incompatible materials

Violent reaction with: Acid
May be corrosive to metals.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

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

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 5000 mg/kg; ATE (dermal) > 5000 mg/kg; ATE (inhalation vapour) > 50 mg/l; ATE (inhalation dust/mist) > 12,5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
141-43-5	2-aminoethanol				
	oral	LD50 1089 mg/kg	Rat	ECHA	
	dermal	LD50 2504 mg/kg	Rabbit	ECHA	
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			
1310-58-3	potassium hydroxide				
	oral	LD50 333 mg/kg	Rat	ECHA	OECD 425

Irritation and corrosivity

Skin corrosion/irritation: Causes severe skin burns and eye damage. (On basis of test data)
Serious eye damage/eye irritation: Causes serious eye damage. (On basis of test data)

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects 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.

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Further information

The product has not been tested. The statement is derived from the properties of the single components.
To avoid risks to human health and the environment, comply with the instructions for use.

SECTION 12: Ecological information

12.1. Toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
141-43-5	2-aminoethanol						
	Acute fish toxicity	LC50	349 mg/l	96 h	Oncorhynchus mykiss	ECHA	
	Acute algae toxicity	ErC50	2,8 mg/l	72 h	Desmodesmus subspicatus	ECHA	
	Acute crustacea toxicity	EC50	65 mg/l	48 h	Daphnia magna	ECHA	

12.2. Persistence and degradability

The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

The product has not been tested. The statement is derived from the properties of the single components. Do not allow uncontrolled discharge of product into the environment.
To avoid risks to human health and the environment, comply with the instructions for use.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

hazardous waste: Dispose of waste according to applicable legislation.
Consult the appropriate local waste disposal expert about waste disposal.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 1719

14.2. UN proper shipping name: CAUSTIC ALKALI LIQUID, N.O.S. (2-Amino-ethanol und Kaliumhydroxid Mischung)

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1719
14.2. UN proper shipping name:	CAUSTIC ALKALI LIQUID, N.O.S. (2-Amino-ethanol and potassiumhydroxide mixture)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1719
14.2. UN proper shipping name:	CAUSTIC ALKALI LIQUID, N.O.S. (2-Amino-ethanol and potassiumhydroxide mixture)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Further information: see section 6, 7, 8

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Directive 2010/75/EU on industrial emissions: not applicable

Additional information

REGULATION (EU) 2024/590 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 February 2024 on substances that deplete the ozone layer, and repealing Regulation (EC) No 1005/2009: not applicable

REGULATION (EU) 2019/1021 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on persistent organic pollutants: not applicable

Regulation (EU) No. 649/2012 of the European parliament and of the council concerning the export and import of dangerous chemicals: not applicable

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D): 1 - slightly hazardous to water

SECTION 16: Other information

Changes

Abs. 15, 16 * Data changed compared with the previous version.

Abbreviations and acronyms

Met. Corr: Substance or mixture corrosive to metals
Acute Tox: Acute toxicity
Skin Corr: Skin corrosion
Eye Dam: Eye damage
Skin Sens: Skin sensitisation
STOT SE: Specific target organ toxicity - single exposure
Aquatic Chronic: Chronic aquatic hazard
PBT: persistent and bioaccumulative and toxic
vPvB: Very persistent and very bioaccumulative
CAS: Chemical Abstracts Service (division of the American Chemical Society)
ATE: Acute Toxicity Estimate
LD50: lethal dose, 50%
LC50: lethal concentration, 50%
ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement concernant le transport international ferroviaire de marchandises Dangereuses (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
VOC: volatile organic compound(s)

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data

Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.
Restricted to professional users.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)