



Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code: U05180
Product name: SOLMAR H130
UFI: 14A0-P09R-V00R-Q1GE

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

Intended use: Water-based cleaner for machine tools.
Uses advised against: Different uses than those intended.

1.3. Details of the supplier of the safety data sheet

Name: CENTRO DISTRIBUZIONE UTENSILI S.p.a
Full address: Via delle Gerole, 19
District and Country: 20867 CAPONAGO (MB)
ITALY
tel. +39 02 95746081
fax. + 39 02 95745182

e-mail address of the competent person

responsible for the Safety Data Sheet Supplier: info@cdu.net
CENTRO DISTRIBUZIONE UTENSILI S.p.a

1.4. Emergency telephone number

For urgent inquiries refer to: CENTRO DISTRIBUZIONE UTENSILI S.p.a +39 02 95746081
(Technical support - Office hour 8.30-12.30 - 13.30-17.30)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Skin corrosion, category 1A	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: DANGER

Hazard statements:

H314 Causes severe skin burns and eye damage.

Precautionary statements:



P260	Do not breathe fume / gas / mist / vapours / spray.
P305+P351+P338	IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): take off immediately all contaminated clothing. Rinse skin with water [or shower].
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P310	Immediately call a POISON CENTER / doctor if you feel unwell.
P264	Wash the skin thoroughly after handling.

Contains: SODIUM HYDROXIDE.

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.
The product does not contain substances with endocrine disrupting properties in concentration \geq 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	X = Conc. %	Classification (EC) 1272/2008 (CLP)
2-(2-BUTOXYETHOXY)ETHANOL		
INDEX 603-096-00-8	$3,5 \leq X < 4,5$	Eye Irrit. 2 H319
EC 203-961-6		
CAS 112-34-5		
REACH Reg. 01-2119475104-44		
2-BUTOXYETHANOL		
INDEX 603-014-00-0	$3,5 \leq X < 4,5$	Acute Tox. 3 H331, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC 203-905-0		LD50 Oral: 1200 mg/kg, LC50 Inhalation vapours: 3 mg/l
CAS 111-76-2		
REACH Reg. 01-2119475108-36		
TETRATETRAPOTASSIUM PYROPHOSPHATE		
INDEX -	$2,0 \leq X \leq 4,0$	Eye Irrit. 2 H319
EC 230-785-7		
CAS 7320-34-5		
REACH Reg. 01-2119489369-18		
SODIUM HYDROXIDE		
INDEX 011-002-00-6	$0,6 \leq X \leq 1,2$	Met. Corr. 1 H290, Skin Corr. 1A H314, Eye Dam. 1 H318
EC 215-185-5		Skin Corr. 1B H314: $\geq 2\%$, Skin Irrit. 2 H315: $\geq 0,5\%$, Eye Irrit. 2 H319: $\geq 0,5\%$
CAS 1310-73-2		
REACH Reg. 01-2119457892-27		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information for the doctor: symptomatically treatment.

SECTION 5. Firefighting measures**5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Do not breathe combustion products.

5.3. Advice for firefighters**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage**7.1. Precautions for safe handling**

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany): 10

7.3. Specific end use(s)

Water-based cleaner for machine tools.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

AUS	Österreich	Gesamte Rechtsvorschrift für Grenzwerteverordnung 2021, Fassung vom 17.06.2021
BEL	Belgique	Liste de valeurs limites d'exposition aux agents chimiques, livre VI du code du bien-être au travail
BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
CHE	Suisse / Schweiz	Valeurs limites d'exposition aux postes de travail: VME/VLE (SUVA). Grenzwerte am Arbeitsplatz: MAK (SUVA)
CYP	Κύπρος	Οι περί Αζθάλειαρ και Υγείαρ ζηην Δπγαζία (Φημικοί Παπάγνηερ) (Τποποποιητικοί) Κανονίζμοι ηος 2019. Οι περί Ασφάλειας και Υγείας στην Εργασία (Καρκινογόνοι και Μεταλλαξιογόνοι Παράγοντες) (Τροποποιητικοί) Κανονισμοί του 2020
CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
EST	Eesti	Ohtlike kemikaalide ja neid sisaldavate materjalide kasutamise töötavishoiu ja tööohutuse nõuded ning töökeskkonna keemiliste ohutegurite piinormid [RT I, 17.10.2019, 1 - jõust. 17.01.2020]
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
FIN	Suomi	HTP-VÄRDEN 2020. Koncentrationer som befunnits skadliga. SOCIAL - OCH HÄLSOVÄRDSMINISTERIETS PUBLIKATIONER 2020:25
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ ``σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιογόνους παράγοντες κατά την εργασία``»
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
IRL	Éire	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
LUX	Luxembourg	Règlement grand-ducal du 24 janvier 2020 modifiant le règlement grand-ducal du 14 novembre 2016 concernant la protection des salariés contre les risques liés à l'exposition à des agents cancérigènes ou mutagènes au travail
LTU	Lietuva	Jsakymas dėl lietuvis higienos normos hn 23:2011 „cheminių medžiagų profesinio poveikio ribiniai dydžiai. Matavimo ir poveikio vertinimo bendrieji reikalavimai“ patvirtinimo
LVA	Latvija	Grozījumi Ministru kabineta 2007. gada 15. maija noteikumos Nr. 325 "Darba aizsardzības prasības saskarē ar ķīmiskajām vielām darba vietās" (prot. Nr. 32 18. §; prot. Nr. 1 22. §)
MLT	Malta	PROTECTION OF THE HEALTH AND SAFETY OF WORKERS FROM THE RISKS RELATED TO CHEMICAL AGENTS AT WORK REGULATIONS (S.L.424.24). PROTECTION OF WORKERS FROM THE RISKS RELATED TO EXPOSURE TO CARCINOGENS OR MUTAGENS AT WORK REGULATIONS (S.L.424.22)
NOR	Norge	Forskrift om endring i forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier), 21. august 2018 nr. 1255
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
PRT	Portugal	Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
ROU	România	Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006
SWE	Sverige	Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)



SOLMAR H130

SVK	Slovensko	NARIADENIE VLÁDY Slovenskej republiky z 12. augusta 2020, ktorým sa mení a dopĺňa nariadenie vlády Slovenskej republiky č. 356/2006 Z. z. o ochrane zdravia zamestnancov pred rizikami súvisiacimi s expozíciou karcinogénnym a mutagénnym faktorom pri práci v znení neskorších predpisov
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
TUR	Türkiye	Kimyasal Maddelerle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik 12.08.2013 / 28733
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Direttiva (UE) 2022/431; Direttiva (UE) 2019/1831; Direttiva (UE) 2019/130; Direttiva (UE) 2019/983; Direttiva (UE) 2017/2398; Direttiva (UE) 2017/164; Direttiva 2009/161/UE; Direttiva 2006/15/CE; Direttiva 2004/37/CE; Direttiva 2000/39/CE; Direttiva 98/24/CE; Direttiva 91/322/CEE.
	TLV-ACGIH	ACGIH 2021

2-BUTOXYETHANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	98	20	200	40	SKIN
TRK	AUS	98	20	200	40	
VLEP	BEL	98	20	246	50	SKIN
TLV	BGR	98		246		SKIN
MAK	CHE	49	10	98	20	SKIN
TLV	CYP	98	20	246	50	SKIN
TLV	CZE	100		200		SKIN
AGW	DEU	49	10	98	20	SKIN
MAK	DEU	49	10	98	20	SKIN
TLV	DNK	98	20	196	40	SKIN
VLA	ESP	98	20	245	50	SKIN
TLV	EST	98	20	246	50	SKIN
VLEP	FRA	49	10	246	50	SKIN
HTP	FIN	98	20	250	50	SKIN
TLV	GRC	120	25			
AK	HUN	98		246		
GVI/KGVI	HRV	98	20	246	50	SKIN
VLEP	ITA	98	20	246	50	SKIN
OELV	IRL	98	20	246	50	SKIN
RD	LTU	50	10	100	20	SKIN
RV	LVA	98	20	246	50	SKIN
TLV	NOR	50	10			SKIN
TGG	NLD	100		246		SKIN
NDS/NDSch	POL	98		200		
TLV	ROU	98	20	246	50	
NGV/KGV	SWE	50	10	246	50	SKIN
NPFL	SVK	98	20	246		SKIN
MV	SVN	98	20			SKIN
ESD	TUR	98	20	246	50	SKIN
WEL	GBR	123	25	246	50	SKIN
OEL	EU	98	20	246	50	SKIN



SOLMAR H130

TLV-ACGIH 20

Predicted no-effect concentration - PNEC

Normal value in fresh water	8,8	mg/l
Normal value in marine water	0,88	mg/l
Normal value for fresh water sediment	34,6	mg/kg/d
Normal value for marine water sediment	3,46	mg/kg/d
Normal value for water, intermittent release	26,4	mg/l
Normal value of STP microorganisms	463	mg/l
Normal value for the food chain (secondary poisoning)	20	mg/kg
Normal value for the terrestrial compartment	2,33	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Effects on consumers

Effects on workers

Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		26,7 mg/kg bw/d		6,3 mg/kg bw/d				
Inhalation	147 mg/m3	426 mg/m3		59 mg/m3	246 mg/m3	1091 mg/m3		98 mg/m3

2-(2-BUTOXYETHOXY)ETHANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	67,5	10	101,2	15	Häufigkeit pro Schicht:4x
TRK	AUS	67,5	10	101,2	15	
VLEP	BEL	67,5	10	101,2	15	
TLV	BGR	67,5	10	101,2	15	
MAK	CHE	67	10	101,2	15	
VME/VLE	CHE	67	10	101,2	15	
TLV	CZE	70	10,36	100	14,8	
AGW	DEU	67	10	100	15	INHAL aerosol and vapour
MAK	DEU	67	10	100,5	15	Hinweis
TLV	DNK	68	10	20	136	
VLA	ESP	67,5	10	101,2	15	
VLEP	FRA	68	10	101,2	15	
HTP	FIN	68	10			
TLV	GRC	67,5	10	101,2	15	
AK	HUN	67,5		101,2		
GVI/KGVI	HRV	67,5	10	101,2	15	
VLEP	ITA	67,5	10	101,2	15	
VL	LUX	67,5	10	101,2	15	
RD	LTU	67,5	10	101,2	15	
RV	LVA	67,5	10	101,2	15	
TLV	MLT	67,5	10	101,2	15	
TLV	NOR	68	10			
TGG	NLD	50		100		SKIN



SOLMAR H130

VLE	PRT	67,5	10	101,2	15
NDS/NDSch	POL	67		100	
TLV	ROU	67,5	10	101,2	15
NGV/KGV	SWE	68	10	101	15
NPEL	SVK	67,5	10	101,2	15
MV	SVN	67,5	10	101,2	15
ESD	TUR	67,5	10	101,2	15
WEL	GBR	67,5	10	101,2	15
OEL	EU	67,5	10	101,2	15

TLV-ACGIH		66	10		INHAL
-----------	--	----	----	--	-------

Predicted no-effect concentration - PNEC					
Normal value in fresh water				1,1	mg/l
Normal value in marine water				0,11	mg/l
Normal value for fresh water sediment				4,4	mg/kg
Normal value for marine water sediment				0,44	mg/kg
Normal value for water, intermittent release				11	mg/l
Normal value of STP microorganisms				200	mg/l
Normal value for the food chain (secondary poisoning)				56	mg/kg
Normal value for the terrestrial compartment				0,32	mg/kg

Health - Derived no-effect level - DNEL / DMEL								
	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				5 mg/kg bw/d				
Inhalation	60,7 mg/m3		40,5 mg/m3	40,5 mg/m3	101,2 mg/m3		67,5 mg/m3	67,5 mg/m3
Skin				50 mg/kg bw/d				83 mg/kg bw/d

TETRATETRAPOTASSIUM PYROPHOSPHATE					
Predicted no-effect concentration - PNEC					
Normal value in fresh water				0,05	mg/l
Normal value in marine water				0,005	mg/l
Normal value of STP microorganisms				50	mg/l

Health - Derived no-effect level - DNEL / DMEL								
	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation								44,08 mg/m3

SODIUM HYDROXIDE						
Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	2		4		INHAL aerosol
TRK	AUS	2		4		INHAL aerosol
VLEP	BEL	2				
MAK	CHE	2		2		INHAL aerosol



SOLMAR H130

VME/VLE	CHE	2	2	INHAL	aerosol
TLV	DNK	2	2 (C)		
VLA	ESP	2			
VLEP	FRA	2			
HTP	FIN		2 (C)		
AK	HUN	2	2		
GVI/KGVI	HRV		2		
VLEP	ITA	2			
OELV	IRL		2		
RV	LVA	0,5			
NDS/NDSch	POL	0,5	1		
TLV	ROU	1	3		
NGV/KGV	SWE	1	2	INHAL	fraction
NPEL	SVK	2			
WEL	GBR		2		
TLV-ACGIH			2 (C)		

Health - Derived no-effect level - DNEL / DMEL

Effects on consumers

Effects on workers

Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			1 mg/m3	VND			1 mg/m3	VND

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	clear liquid	
Colour	red	
Odour	typical	
Melting point / freezing point	Not applicable	
Initial boiling point	> 100 °C	
Flammability	Not applicable	
Lower explosive limit	Not applicable	
Upper explosive limit	Not applicable	
Flash point	Not flammable	Notes: water solution.
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
pH	> 13,5 (Sol. 100%) 11 – 12 (Sol. 1%)	Temperature: 20 °C. Temperature: 20 °C.
Kinematic viscosity	Not available	
Solubility	in water: total	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	
Density and/or relative density	1,04 - 1,06 Kg/dm ³	Temperature: 20 °C.
Relative vapour density	Not available	
Particle characteristics	Not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Information not available.

9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU) 4,49 % - 45,02 g/litre

VOC (volatile carbon) 4,49 % - 45,02 g/litre

Explosive properties Not applicable

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

SODIUM HYDROXIDE

It can be corrosive for metals. Highly reactive with aluminum, zinc, tin and alloys of these metals, with the production of flammable hydrogen gases. Contact with some organic substances can generate violent or explosive reactions.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

**2-BUTOXYETHANOL**

May form peroxides with: air. Reacts with: strong oxidising agents, strong bases.

TETRATETRAPOTASSIUM PYROPHOSPHATE

May react dangerously with: strong acids, oxidising agents.

SODIUM HYDROXIDE

Exothermic reaction in contact with water. Free hydrogen in contact with metals. It reacts violently in contact with strong acids.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

2-BUTOXYETHANOL

Avoid exposure to: high temperatures.

2-(2-BUTOXYETHOXY)ETHANOL

Avoid exposure to: heat (long period), flames, ignition sources.

SODIUM HYDROXIDE

Avoid exposure to: air, moisture, heating, low temperature.

10.5. Incompatible materials**2-BUTOXYETHANOL**

Incompatible with: strong oxidising agents, strong bases, combustible substances.

2-(2-BUTOXYETHOXY)ETHANOL

Incompatible with: strong acids, strong alkalis, strong oxidising agents.

TETRATETRAPOTASSIUM PYROPHOSPHATE

Avoid contact with: strong acids.

SODIUM HYDROXIDE

Incompatible with: acids, strong oxidising agents, chlorinated hydrocarbons, ammonia solutions. Incompatible materials: aluminium, light metals.

10.6. Hazardous decomposition products**2-BUTOXYETHANOL**

May develop: carbon oxides, aldehydes, ketones.

2-(2-BUTOXYETHOXY)ETHANOL

When heated to decomposition, it emits: carbon oxides, toxic and irritating gases and vapors, acrid fumes, aldehydes, ketones, organic acids.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008Metabolism, toxicokinetics, mechanism of action and other information

Information not available.

Information on likely routes of exposure**2-(2-BUTOXYETHOXY)ETHANOL**

WORKERS: inhalation; contact with the skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**2-(2-BUTOXYETHOXY)ETHANOL**

May be absorbed by inhalation, ingestion and skin contact; is irritating for the skin and especially for the eyes. May cause damage to the spleen. At room temperature the danger of inhalation is unlikely, due to the low vapour pressure of the substance.

Interactive effects

Information not available.



SOLMAR H130

ACUTE TOXICITY

ATE (Inhalation - vapours) of the mixture: > 20 mg/l
ATE (Oral) of the mixture: >2000 mg/kg
ATE (Dermal) of the mixture: not classified (no significant component)

2-BUTOXYETHANOL

LD50 (Dermal): > 2000 mg/kg bw/d Rat (OECD 402)
LD50 (Oral): 1200 mg/kg p.c
LC50 (Inhalation vapours): 3 mg/l

2-(2-BUTOXYETHOXY)ETHANOL

LD50 (Dermal): 2764 mg/kg dw Rabbit (OECD 402)
LD50 (Oral): 2410 mg/kg dw Male Rat (OECD 401)
LC50 (Inhalation vapours): > 29 mg/l/2h Rat

TETRATETRAPOTASSIUM PYROPHOSPHATE

LD50 (Dermal): > 2000 mg/kg Rabbit (OECD 402)
LD50 (Oral): > 2000 mg/kg Rat
LC50 (Inhalation mists/powders): > 1,1 mg/l Rat (OECD 403)

SODIUM HYDROXIDE

LD50 (Oral): > 2000 mg/kg Rat

SKIN CORROSION / IRRITATION

Corrosive for the skin. Classification according to the experimental pH value.

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage.

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class.

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class.

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class.

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

SODIUM HYDROXIDE

LC50 - for Fish

> 35 mg/l/96h

EC50 - for Crustacea

40,4 mg/l/48h Ceriodaphnia

2-(2-BUTOXYETHOXY)ETHANOL

LC50 - for Fish

1300 mg/l/96h *Lepomis macrochirus* (OECD 203)

EC50 - for Crustacea

> 100 mg/l/48h *Daphnia magna* (OECD 202)

2-BUTOXYETHANOL

LC50 - for Fish

1474 mg/l/96h *Onchorhynchus mykiss* (OECD 203)

EC50 - for Crustacea

1550 mg/l/48h *Daphnia magna* (OECD 202)

EC50 - for Algae / Aquatic Plants

911 mg/l/72h *Pseudokirchneriella subcapitata* (OECD 201)

TETRATETRAPOTASSIUM PYROPHOSPHATE

LC50 - for Fish

> 100 mg/l/96h *Oncorhynchus Mykiss* (OECD 203)

EC50 - for Crustacea

> 100 mg/l/48h *Daphnia magna* (OECD 202)

EC50 - for Algae / Aquatic Plants

> 100 mg/l/72h (OECD 201)

Chronic NOEC for Fish

> 100 mg/l 96h - *Oncorhynchus Mykiss* (OECD 203)

Chronic NOEC for Crustacea

> 100 mg/l 48h - *Daphnia magna* (OECD 202)

Chronic NOEC for Algae / Aquatic Plants

> 100 mg/l 72h (OECD 201)

12.2. Persistence and degradability

SODIUM HYDROXIDE

Solubility in water

> 10000 mg/l

Degradability: information not available

2-(2-BUTOXYETHOXY)ETHANOL

Rapidly degradable

80-93% - 28d (OECD 301C)

2-BUTOXYETHANOL

Solubility in water

1000 - 10000 mg/l

Rapidly degradable

90,4 % - 28d (OECD 301B)

TETRATETRAPOTASSIUM PYROPHOSPHATE

Degradability: information not available

12.3. Bioaccumulative potential

2-(2-BUTOXYETHOXY)ETHANOL

Partition coefficient: n-octanol/water

1 Log Kow

2-BUTOXYETHANOL

Partition coefficient: n-octanol/water

0,81 Log Kow (20°C)

12.4. Mobility in soil

Information not available.

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available.

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information**14.1. UN number or ID number**

ADR / RID, IMDG, IATA: 1824

14.2. UN proper shipping name

ADR / RID: SODIUM HYDROXIDE SOLUTION

IMDG: SODIUM HYDROXIDE SOLUTION

IATA: SODIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)

ADR / RID: Class: 8 Label: 8

IMDG: Class: 8 Label: 8

IATA: Class: 8 Label: 8

**14.4. Packing group**

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards



SOLMAR H130

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 5 L	Tunnel restriction code: (E)
	Special provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 856
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 852
	Special provision:	A3, A803	

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant.

SECTION 15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EU: None.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point 3

Contained substance

Point 55 2-(2-BUTOXYETHOXY)ETHANOL REACH Reg.: 01-2119475104-44

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

Not applicable.

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage \geq than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None.

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

Ingredients according to Regulation (EC) No. 648/2004

Less than 5%: phosphates, anionic surfactants



German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 1: Low hazard to waters.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the mixture.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1A	Skin corrosion, category 1A
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
H290	May be corrosive to metals.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).



Classification and procedure used to derive it according to Regulation (EC) 1272/2008 (CLP) in relation to mixtures:

Classification according to Regulation (EC) No. 1272/2008	Classification procedure
Skin Corr. 1A H314	Calculation method and on the basis of experimental data
Eye Dam. 1 H318	Calculation method

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
 4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2019/521 (XII Atp. CLP)
 16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
 17. Regulation (EU) 2019/1148
 18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
 19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
 20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
 21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
 22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.