

**CENTRO DISTRIBUZIONE UTENSILI S.p.a**

Revision nr. 2

EN

Dated 12/09/2023

TIGER 57

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Page n. 1/14

Replaced revision:1 (Dated: 08/11/2017)

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 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: **U850400010**
Product name **TIGER 57**

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

Intended use **Concentrated descaling detergent.**
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 8.30-13.00 - 14.00-17.30)

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:

Substance or mixture corrosive to metals, category 1	H290	May be corrosive to metals.
Acute toxicity, category 4	H302	Harmful if swallowed.
Skin corrosion, category 1B	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:

H290 May be corrosive to metals.
H302 Harmful if swallowed.



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: PHOSPHORIC ACID 75%;
BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.;
ALCOHOLS, C11-13-BRANCHED, ETHOXYLATED (7 - 15 EO).

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)
PHOSPHORIC ACID 75%		
INDEX 015-011-00-6	$26,5 \leq x \leq 31,5$	Met. Corr. 1 H290, Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Classification note according to Annex VI to the CLP Regulation: B
EC 231-633-2		Skin Corr. 1B H314: $\geq 25\%$, Skin Irrit. 2 H315: $\geq 10\%$, Eye Irrit. 2 H319: $\geq 10\%$
CAS 7664-38-2		LD50 Oral: >300 mg/kg bw
REACH Reg. 01-2119485924-24		
BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.		
INDEX -	$3,5 \leq x \leq 4,5$	Acute Tox. 4 H302, Skin Corr. 1C H314, Eye Dam. 1 H318, Aquatic Chronic 3 H412
EC 287-494-3		LD50 Oral: >1350 mg/kg dw
CAS 85536-14-7		
REACH Reg. 01-2119490234-40		
ALCOHOLS, C11-13-BRANCHED, ETHOXYLATED (7 - 15 EO)		
INDEX	$2,5 \leq x < 3,5$	Acute Tox. 4 H302, Eye Dam. 1 H318
EC -		LD50 Oral: >300 mg/kg
CAS 68439-54-3		
REACH Reg. polymer		
CITRIC ACID		
INDEX 607-750-00-3	$0,50 \leq x \leq 1,75$	Eye Irrit. 2 H319, STOT SE 3 H335
EC 201-069-1		
CAS 77-92-9		
REACH Reg. 01-2119457026-42		

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.

PHOSPHORIC ACID

Acute dose-dependent effects:

Eyes: irritation, keratitis, corneal damage.

Skin: irritation, burn, corrosion.

Nose: irritation.

Upper airways: irritation.

Lungs: irritation.

Chronic effects: No data regarding chronic effects are currently available.

BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.

Causes burns to skin and eyes.

ALCOHOLS, C11-13-BRANCHED, ETHOXYLATED (7 - 15 EO)

Risk of serious eye damage.

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): 8A

7.3. Specific end use(s)

Concentrated descaling detergent.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

AUS Österreich
BEL Belgique

Gesamte Rechtsvorschrift für Grenzwerteverordnung 2021, Fassung vom 17.06.2021
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 περὶ Αζθάλειας καὶ Υγείας ζήτην Διπλάζια (Φημικοὶ Παπάγονηερ) (Τποποποιητικοὶ) Κανονισμοὶ ἡος 2019. Οι περὶ Ασφάλειας καὶ Υγείας στὴν Εργασία (Καρκινογόνοι καὶ Μεταλλαξιογόνοι Παράγοντες) (Τροποποιητικοὶ) Κανονισμοὶ τοῦ 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
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

DEU Deutschland

Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019

DNK Danmark

ESP España

Límites de exposición profesional para agentes químicos en España 2021

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

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 körök tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről

HRV HRVATSKA

PRAVILNIK O IZMJENAMA I DOPUNAMA PRAVILNIKA O ZAŠTITI RADNIKA OD IZLOŽENOSTI OPASNIMKEMIČALIJAMA 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)

LTU Lietuva

Jsakymas dėl lietuvis higienos normos hn 23:2011 „cheminių medžiagų profesinio poveikio ribiniai dydžiai.

LVA Latvija

Matavimo ir poveikio vertinimo bendrieji reikalavimai"patvirtinimo
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. §)

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



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POL Polska

SWE Sverige

SVK Slovensko

TUR Türkiye

GBR United Kingdom

EU OEL EU

TLV-ACGIH

4.16, eerste lid, van het Arbeidsomstandighedenbesluit

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 Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)

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 mutagénym faktorom pri práci v znení neskorších predpisov Kimyasal Maddelerle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik 12.08.2013 / 28733 EH40/2005 Workplace exposure limits (Fourth Edition 2020) 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.

ACGIH 2022

BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.

Predicted no-effect concentration - PNEC

Normal value in fresh water

0,27

mg/l

Normal value in marine water

0,027

mg/l

Normal value for fresh water sediment

8,1

mg/kg

Normal value for marine water sediment

6,8

mg/kg

Normal value for water, intermittent release

0,017

mg/l

Normal value of STP microorganisms

3,43

mg/l

Normal value for the terrestrial compartment

35

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

0,425 mg/kg
bw/d

Inhalation

1,3 mg/m3

7.6 mg/m3

Skin

42,5 mg/kg
bw/d119 mg/kg
bw/d

CITRIC ACID

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations
		mg/m3	ppm	
AGW	DEU	2	4 (C)	INHAL

Predicted no-effect concentration - PNEC

Normal value in fresh water

0,44

mg/l

Normal value in marine water

0,044

mg/l

Normal value for fresh water sediment

3,46

mg/kg/d

Normal value for marine water sediment

34,6

mg/kg/d

Normal value of STP microorganisms

1000

mg/l

Normal value for the terrestrial compartment

33,1

mg/kg/d

PHOSPHORIC ACID

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations
		mg/m3	ppm	
MAK	AUS	1	2	
VLEP	BEL	1	2	



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TLV	BGR	1	2		
MAK	CHE	1	2		
TLV	CYP	1	2		
TLV	CZE	1	2		
AGW	DEU	2	4	INHAL	aerosol
MAK	DEU	2	4	INHAL	aerosol
TLV	DNK	1			
VLA	ESP	1	2		
VLEP	FRA	1	0,2	2	0,5
HTP	FIN	1	2		
TLV	GRC	1	3		
AK	HUN	1	2		
GVI/KGVI	HRV	1	2		
VLEP	ITA	1	2		
OELV	IRL	1	2		
RD	LTU	1	2		
RV	LVA	1	2		
TLV	NOR	1			
TGG	NLD	1	2		
NDS/NDSch	POL	1	2		
NGV/KGV	SWE	1	3		
NPEL	SVK	1	2		
ESD	TUR	1	2		
WEL	GBR	1	2		
OEL	EU	1	2		
TLV-ACGIH		1	3		

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				0,1 mg/kg bw/d				
Inhalation			0,36 mg/m3	4,57 mg/m3	2 mg/m3		1 mg/m3	10,7 mg/m3

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.

The following should be considered when choosing work glove material (see standard EN 374): 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.



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SKIN PROTECTION

Wear category II 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 airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

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	viscous liquid	
Colour	red/pink	
Odour	typical	
Melting point / freezing point	not available	
Initial boiling point	> 100 °C	
Flammability	not applicable	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	> 125 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	1,00 – 2,00	Concentration: 100%; Temperature: 20°C
Kinematic viscosity	not available	
Solubility	in water: soluble	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	1,13 - 1,14 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) 0,02 % - 0,25 g/litre

VOC (volatile carbon) 0,01 % - 0,16 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.

BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.

Reacts with: alkalis, alkaline earth metals.

PHOSPHORIC ACID

Reacts with: strong alkalis.

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.

PHOSPHORIC ACID

Avoid contact with: cyanides, toxic gases. Develops hydrogen on contact with: metals.

10.4. Conditions to avoid

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

BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.

Avoid exposure to: naked flames, sparks, sources of ignition.

PHOSPHORIC ACID

Avoid exposure to: daylight, high temperatures.

10.5. Incompatible materials

BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.

Incompatible materials: metals. Incompatible with: oxidising agents.

PHOSPHORIC ACID

Incompatible with: strong alkalis, aldehydes, strong caustics, sulphides, ammonia, peroxides.

10.6. Hazardous decomposition products

ALCOHOLS, C11-13-BRANCHED, ETHOXYLATED (7 - 15 EO)

When heated to decomposition releases: carbon monoxide, carbon dioxide.

BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.

When heated to decomposition releases: sulphurous anhydride, hydrogen sulfide, carbon oxides, sulphur oxides.

PHOSPHORIC ACID

When heated to decomposition releases: phosphoryl oxides.

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 1272/2008

Metabolism, toxicokinetics, mechanism of action and other information

Information not available.

Information on likely routes of exposure

Information not available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available.

Interactive effects

Information not available.

ACUTE TOXICITY

ATE (Inhalation) of the mixture: not classified (no significant component)
ATE (Oral) of the mixture: 1213,89 mg/kg
ATE (Dermal) of the mixture: not classified (no significant component)

ALCOHOLS, C11-13-BRANCHED, ETHOXYLATED (7 - 15 EO)

LD50 (Dermal): > 2000 mg/kg Rabbit
LD50 (Oral): > 300 mg/kg Rat

BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.

LD50 (Dermal): > 2000 mg/kg dw Rat (OECD 402)
LD50 (Oral): > 1350 mg/kg dw Rat (OECD 401)

CITRIC ACID

LD50 (Oral): 3000 mg/kg Rat

PHOSPHORIC ACID

LD50 (Oral): > 300 mg/kg bw Rat (OECD 423)

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**

ALCOHOLS, C11-13-BRANCHED, ETHOXYLATED (7 - 15 EO)

LC50 - for Fish	> 1 mg/l/96h Cyprinus carpio (OECD 203)
EC50 - for Crustacea	> 1 mg/l/48h Daphnia magna (OECD 202)
EC50 - for Algae / Aquatic Plants	> 1 mg/l/72h Desmodesmus subspicatus (OECD 201)
Chronic NOEC for Algae / Aquatic Plants	10 mg/l Lepidium sativum (OECD 208)

BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.

LC50 - for Fish	> 1 mg/l/96h Lepomis macrochirus
EC50 - for Crustacea	> 1 mg/l/48h Daphnia magna (OECD 202)
EC50 - for Algae / Aquatic Plants	47,3 mg/l/72h Scenedesmus subspicatus
Chronic NOEC for Fish	1 mg/l 28d - Lepomis macrochirus (OECD 204)
Chronic NOEC for Algae / Aquatic Plants	> 4 mg/l 28d

PHOSPHORIC ACID

LC50 - for Fish	3 mg/l/96h Lepomis macrochirus
EC50 - for Crustacea	> 100 mg/l/48h Daphnia magna (OECD 202)
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Desmodesmus subspicatus (OECD 201)
Chronic NOEC for Algae / Aquatic Plants	100 mg/l/72h Desmodesmus subspicatus (OECD 201)

12.2. Persistence and degradability

ALCOHOLS, C11-13-BRANCHED, ETHOXYLATED (7 - 15 EO)

Solubility in water	Miscible
Rapidly degradable	> 60% - 28d (OCSE 301B)

BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.

Solubility in water	Miscible
Rapidly degradable	>70% - 28d (OECD 301A)

CITRIC ACID

Solubility in water	> 10000 mg/l
Rapidly degradable	97 % - 28d (OECD TG 301B)

PHOSPHORIC ACID

Solubility in water	Soluble
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Degrades under anaerobic conditions. Phosphoric acid dissociates in water into the ions H_3O^+ , $H_2PO_4^-$, HPO_4^{2-} , which cannot be further degraded.
Degradability: the study is not applicable as the substance is inorganic.

12.3. Bioaccumulative potential

BENZENESULFONIC ACID, 4-C10-13-SEC-ALKYL DERIVS.

Partition coefficient: n-octanol/water	3,4 Log Kow
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CITRIC ACID

BCF	3,2
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PHOSPHORIC ACID

This substance is highly soluble and dissociates in water.
Phosphoric acid is absorbed in the form of phosphate anions.

12.4. Mobility in soil

PHOSPHORIC ACID

It reacts chemically with the alkaline components in the soil forming more or less soluble compounds (depending on the final pH). This substance is highly soluble and dissociates in water.

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: 1760

14.2. UN proper shipping name

ADR / RID: CORROSIVE LIQUID, N.O.S. (PHOSPHORIC ACID; ALKYL SULPHONIC ACID)

IMDG: CORROSIVE LIQUID, N.O.S. (PHOSPHORIC ACID; ALKYL SULPHONIC ACID)

IATA: CORROSIVE LIQUID, N.O.S. (PHOSPHORIC ACID; ALKYL SULPHONIC ACID)

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



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ADR / RID, IMDG, IATA: II

14.5. Environmental hazards

ADR / RID: NO

IMDG: NO

IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 1 L	Tunnel restriction code: (E)
	Special provision: 274		
IMDG:	EMS: F-A, S-B	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 30 L	Packaging instructions: 855
	Passengers:	Maximum quantity: 1 L	Packaging instructions: 851
	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 - 40

Contained substance

Point 75

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.



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Regulation (EC) No. 648/2004

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

Less than 5%: anionic surfactants, non-ionic surfactants.

Perfumes.

The surfactant(s) contained in this formulation complies with the biodegradability criteria established by Regulation (EC) No. 648/2004 relating to detergents.

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

WGK 2: 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. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Skin Corr. 1C	Skin corrosion, category 1C
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

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

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- 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 in accordance with Regulation (EC) 1272/2008 (CLP) in relation to mixtures:

Classification according to Regulation (EC) No. 1272/2008	Classification procedure
Met. Corr. 1 H290	Expert judgment
Acute Tox. 4 H302	Calculation method
Skin Corr. 1B H314	Calculation method
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 / 05 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.