SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

PUER – Oxygen stain remover and bleaching powder

Creation date	01st June 2018		
Revision date	09th March 2021	Version	2.0

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

1.1. Product identifier — PUER – Oxygen stain remover and bleaching powder

Substance / mixture	substance
Chemical name	Sodium percarbonate
CAS number	15630-89-4
EC (EINECS) number	239-707-6
Registration number	01-2119457268-30-XXXX
Other substance name	Bleaching powder and oxygen-based stain remover.

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

Substance's intended use

The product is intended for sale to the consumer and the professional/industrial use. Cleaning agent.

The use descriptors

PC 35	Washing and cleaning products
C	Consumer use

Substance uses advised against

The product should not be used in ways other then those referred in Section 1.

Main intended use

PC-DET-1.2	Laundry detergents - household use

1.3. Details of the supplier of the safety data sheet

Manufacturer

Name or trade name	TIERRA VERDE s.r.o.
Address	Makovského nám. 2, Brno, 61600 Czech Republic
Identification number (CRN)	28280725
VAT Reg No	CZ28280725
Phone	+420 511119820
E-mail	info@tierraverde.cz
Web address	www.tierraverde.cz

Competent person responsible for the safety data sheet

Name	TIERRA VERDE s.r.o.
E-mail	info@tierraverde.cz

1.4. Emergency telephone number

European emergency number: 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the substance in accordance with Regulation (EC) No 1272/2008

The substance is classified as dangerous.

Ox. Sol. 2, H272
Acute Tox. 4, H302
Eye Dam. 1, H318

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse physico-chemical effects

May intensify fire; oxidiser.

Most serious adverse effects on human health and the environment

Harmful if swallowed. Causes serious eye damage.

2.2. Label elements

Hazard pictogram

Signal word

Danger

Dangerous substance

Sodium percarbonate
(EC: 239-707-6; CAS: 15630-89-4)

Hazard statements

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H318	Causes serious eye damage.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P280	Wear protective gloves/eye protection.
P501	Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.
P305+P351+P338+ P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER.

Supplemental information

>=30 % oxygen-based bleaching agents

Requirements for child-resistant fastenings and tactile warning of danger

Container must carry a tactile warning of danger.

2.3. Other hazards

Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

Mixture of substances and additives specified below.

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
	substance main component			
CAS: 15630-89-4 EC: 239-707-6 Registration number: 01-2119457268-30-XXXX	Sodium percarbonate	>85	Ox. Sol. 2, H272 Acute Tox. 4, H302 Eye Dam. 1, H318 Specific concentration limit: Eye Dam. 1, H318: C ≥ 25 % Eye Irrit. 2, H319: 7,5 % < C < 25 % Acute Tox. 4, H302: C ≥ 25 %	
Index: 011-005-00-2 CAS: 497-19-8 EC: 207-838-8	natrii carbonas	<10	Eye Irrit. 2, H319	

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists.

If in eyes

Do not rub your eyes – it could lead to mechanical damage of the cornea. Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.

If swallowed

DO NOT INDUCE VOMITING! Rinse out the mouth with water and provide 2-5 dL of water. Provide medical treatment

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

If inhaled

Inhaling dust can cause corrosion of the breathing system.

If on skin

Not expected.

If in eyes

Causes serious eye damage.

If swallowed

Corrosion of the digestion system can occur.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide sufficient ventilation. May intensify fire; oxidiser. Remove all ignition sources. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Prevent contact with skin and eyes.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Place the product mechanically in an appropriate manner. Dispose of the collected material according to the instructions in the section 13.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in concentrations exceeding the occupational exposure limits. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. Use of antistatic clothes and footwear is recommended. Prevent contact with skin and eyes. No smoking. Do not eat, drink or smoke when using this product. Wash hands and exposed parts of the body thoroughly after handling. Take any precaution to avoid mixing with combustibles. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight.

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

DNEL

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Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	10 mg/m³	Local chronic effects	
Consumers	Inhalation	10 mg/m³	Local acute effects	

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Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	5 mg/m³	Local chronic effects	
Workers	Dermal	12.8 mg/kg bw	Local chronic effects	
Consumers	Dermal	6.4 mg/kg bw	Local chronic effects	

PNEC

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Route of exposure	Value	Determining method
Freshwater environment	0.035 mg/l	
Seawater	0.035 mg/l	
Microorganisms in wastewater treatment plants	16.24 mg/l	

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

Respiratory protection

Use a mask with anti-dust filter when the exposition limits of the substances are exceeded or at the place with insufficient ventilation.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	solid
Color	white
Odour	without fragrance
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	data not available
Flammability	Incite burning
Lower and upper explosion limit	data not available
Flash point	data not available
Auto-ignition temperature	data not available
Decomposition temperature	140 °C
pH	10,4-10,6 (0,01% solution at 25 °C)
Kinematic viscosity	data not available
Solubility in water	147 g/l 20 °C, 175 g/l (30 °C)
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	
Density	data not available
Relative density	2,01 - 2,16

9.2. Other information

Explosive properties	The product does not have explosive properties.

Active oxygen content: 13.0 - 13.5%
Humidity: max 1.0%
Particle size:> 0.1 mm (95%)

SECTION 10: Stability and reactivity

10.1. Reactivity

not available

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

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

No toxicological data is available for the mixture.

Acute toxicity

Harmful if swallowed.

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Route of exposure	Parameter	Value	Time of exposure	Species	Sex	Source
Oral	LD_{50}	4090 mg/kg		Rat (Rattus norvegicus)		
Inhalation (aerosols)	LD_{50}	2300 mg/l	2 hour	Rat (Rattus norvegicus)		
Skin	LD_{50}	2210 mg/kg		Mouse		
Intraperitoneally	LD_{50}	117 mg/kg		Mouse		

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Route of exposure	Parameter	Value	Time of exposure	Species	Sex	Source
Oral	LD_{50}	1034 mg/kg		Rat (Rattus norvegicus)		
Dermal	LD_{50}	>2000 mg/kg		Rabbit		
Inhalation	LD_{50}	>170 mg/m³	4 hour	Rat (Rattus norvegicus)		peroxid vodíku
Inhalation	LD_{50}	1200 mg/m³		Rat (Rattus norvegicus)		pro uhličitan sodný

Sodium percarbonate

Route of exposure	Parameter	Value	Time of exposure	Species	Sex	Source
Oral	LD_{50}	1034 mg/kg		Rat (Rattus norvegicus)		
Oral	LD_{50}	2200 mg/kg		Mouse	F	
Oral	LD_{50}	2050 mg/kg		Mouse	M	
Dermal	LD_{50}	>2000 mg/kg		Rabbit		
Inhalation (aerosols)	LC_{50}	=>170 mg/m³	4 hour	Rat (Rattus norvegicus)		
Inhalation (aerosols)	LC_{50}	=1200 mg/m³		Rat (Rattus norvegicus)		

Skin corrosion/irritation

Based on available data the classification criteria are not met.

Serious eye damage/irritation

Causes serious eye damage.

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Route of exposure	Result	Time of exposure	Species
Eye	Corrosive	72 hour (10 mg)	Rabbit
Eye	Corrosive	48 hour (50 mg)	Rabbit

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

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.

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. Based on available data the classification criteria are not met.

11.2. Information on other hazards

not available

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

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Parameter	Value	Time of exposure	Species	Environment
LC_{50}	70.7 mg/l	96 hour	Fishes (Pimephales promelas)	
NOEC	7.4 mg/l	96 hour	Fishes (Pimephales promelas)	
EC_{50}	4.9 mg/l	48 hour	Crustaceans (Daphnia pulex)	

12.2. Persistence and degradability

Data not available.

12.3. Bioaccumulative potential

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

not available

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

16 03 03	inorganic wastes containing hazardous substances *
15 02 02	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances *

Packaging waste type code

15 01 10	packaging containing residues of or contaminated by hazardous substances *

(*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

SECTION 14: Transport information

14.1. UN number or ID number

UN 3378

14.2. UN proper shipping name

SODIUM CARBONATE PEROXYHYDRATE

14.3. Transport hazard class(es)

5.1 Oxidazing substances

14.4. Packing group

III - substances presenting low danger

14.5. Environmental hazards

not available

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not available

Additional information

Hazard identification No.	**50**
UN number	**3378**
Classification code	O2
Safety signs	5.1

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended. REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents, as ammended.

15.2. Chemical safety assessment

not available

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

Guidelines for safe handling used in the safety data sheet

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P280	Wear protective gloves/eye protection.
P501	Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.
P305+P351+P338+ P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EC	Identification code for each substance listed in EINECS
EC_{50}	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC_{50}	Concentration causing 50% blockade
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry

LC_{50}	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD_{50}	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEC	Lowest observed adverse effect concentration
LOAEL	Lowest observed adverse effect level
log Kow	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution From Ships
NOAEC	No observed adverse effect concentration
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
NOEL	No observed effect level
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative

Acute Tox.	Acute toxicity
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Ox. Sol.	Oxidising solid

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

Version 2.0 replaces the MSDS version from 01.10.2020. The changes were made in sections 2, 15 and 16.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.