

TersOx[®] SDS

1. Identification

1.1. Product identifier

Product Identity TersOx
Alternate Names TesOx Peroxygen, Calcium Superoxide, Calcium Peroxide, TersOx Granular, TersOx Powder

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

Intended use See Technical Data Sheet.
Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name Tersus Environmental, LLC
1116 Colonial Club Rd.
Wake Forest, NC 27587

Emergency

CHEMTREC (USA) (800) 424-9300
24 hour Emergency Telephone No. 1-703-527-3887
Customer Service: Tersus Environmental, LLC (919) 453-5577
info@tersusenv.com
www.tersusenv.com

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Ox. Sol. 2;H272 May intensify fire; oxidizer.
Skin Irrit. 2;H315 Causes skin irritation.
Eye Dam. 1;H318 Causes serious eye damage.
STOT SE 3;H335 May cause respiratory irritation.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Danger

H272 May intensify fire; oxidizer.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

[Prevention]:

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P220 Keep / Store away from clothing combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a POISON CENTER or doctor / physician.

P321 Specific treatment (see information on this label).

P332+313 If skin irritation occurs: Get medical advice / attention.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P362 Take off contaminated clothing and wash before reuse.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

[Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Calcium peroxide (Ca(O ₂)) CAS Number: 0001305-79-9	60 - 75	Ox. Sol. 2;H272 Skin Irrit. 2;H315 Eye Irrit. 2;H319 STOT SE 3;H335	[1]
Calcium hydroxide (Ca(OH) ₂) CAS Number: 0001305-62-0	25 - 40	Skin Irrit. 2;H315 Eye Dam. 1;H318 STOT SE 3;H335	[1][2]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.
 Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

Overview Notes to Medical Doctor: Modest irritation is the only expected effect, and should have no serious consequences except perhaps in the case of direct eye contact. Contaminated external surfaces should be flooded with water, and direct eye contact deserves ophthalmologic evaluation. If ingested, gastrointestinal irritation but not caustic burns are to be expected; dilution with water indicated as may be gastric evacuation via emesis or lavage if large doses or severe irritation is evident. Demulcents should be helpful. No systemic effects are expected though human toxicity data is sparse. See section 2 for further details.

Inhalation May cause respiratory irritation.

Eyes Causes serious eye damage.

Skin Causes skin irritation.

5. Fire-fighting measures

5.1. Extinguishing media

Water

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Oxygen which supports combustion.

Keep away from heat / sparks / open flames / hot surfaces - No smoking.

Keep / Store away from clothing combustible materials.

Take any precaution to avoid mixing with combustibles.

Avoid breathing dust / fume / gas / mist / vapors / spray.

5.3. Advice for fire-fighters

Evacuate all non-essential personnel. Wear protective clothing and self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers.

Oxidizer. Storage vessels involved in a fire may vent gas or rupture due to internal pressure. Damp material may decompose exothermically and ignite combustibles. Oxygen release due to exothermic decomposition may support combustion. May ignite other combustible materials. Avoid contact with incompatible materials such as heavy metals, reducing agents, acids, bases, combustibles (wood, papers, cloths, etc.). Thermal decomposition releases oxygen and heat. Pressure bursts may occur due to gas evolution. Pressurization if confined when heated or decomposing. Containers may burst violently.

ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Oxidizer. Eliminate all sources of ignition. Evacuate unprotected personnel from equipment recommendations found in Section 8. Never exceed any occupational exposure limit. Shovel or sweep material into plastic bags or vented containers for disposal. Do not return spilled or contaminated material to inventory. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs. Do not touch or walk through spilled material. Keep away from combustibles (wood, paper, oils, etc.). Do not return any product to container because of the risk of contamination.

7. Handling and storage

7.1. Precautions for safe handling

Avoid contact by using personal protective equipment. Use respiratory protective equipment when release of airborne dust is expected. If compounded with organics or combustible materials be sure to exclude moisture.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: No data available.

Keep material dry. Store in a clean cool place. Do not store near or expose to heat sources i.e., steam pipes, radiant heaters, hot hair vents or welding sparks. Avoid contact with reducing agents. Reacts with moisture. Keep container tightly closed when not in use.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0001305-62-0	Calcium hydroxide (Ca(OH) ₂)	OSHA	TWA 15 mg/m ³ (total) 5 mg/m ³ (resp)
		ACGIH	TWA: 5 mg/m ³
		NIOSH	TWA 5 mg/m ³
		Supplier	No Established Limit
0001305-79-9	Calcium peroxide (Ca(O ₂))	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0001305-62-0	Calcium hydroxide (Ca(OH) ₂)	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0001305-79-9	Calcium peroxide (Ca(O ₂))	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory	For many conditions, no respiratory protection may be needed; however, in dusty or unknown atmospheres or when exposures exceed limit values, wear a NIOSH approved respirator.
Eyes	Wear chemical safety goggles and a full-face shield while handling this product.
Skin	Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Chemical-resistant (Recommended materials: PVC, neoprene or rubber).
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Ensure showers and eyewash stations are available. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	White-yellow Solid
Odor	None
Odor threshold	Not determined
pH	Approximately 12
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	Not Measured
Flash Point	Not Measured
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure (Pa)	Not Measured
Vapor Density	Not Measured
Specific Gravity	Not Measured
Solubility in Water	Insoluble
Partition coefficient n-octanol/water (Log Kow)	Not Measured

Auto-ignition temperature	Not Measured
Decomposition temperature	Self-accelerating decomposition with oxygen release starting from 275C
Viscosity (cSt)	Not Measured
Bulk Density	500-650 g/L

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Water, acids, bases, salts of heavy metals, reducing agents, organic materials, and flammable substances.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Oxygen which supports combustion.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Calcium peroxide (Ca(O ₂)) (1305-79-9)	No data available	No data available	No data available	No data available	No data available
Calcium hydroxide (Ca(OH) ₂) (1305-62-0)	7,340.00, Rat - Category: NA	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable

Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	3	May cause respiratory irritation.
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Calcium peroxide (Ca(O ₂)) - (1305-79-9)	Not Available	Not Available	Not Available
Calcium hydroxide (Ca(OH) ₂) - (1305-62-0)	33.884, Clarias gariepinus	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN1457	UN1457	UN1457
14.2. UN proper shipping name	UN1457, Calcium peroxide, 5.1, II	Calcium peroxide	Calcium peroxide
14.3. Transport hazard DOT Hazard Class: 5.1 class(es)		IMDG: 5.1 Sub Class: Not Applicable	Air Class: 5.1
14.4. Packing group	II	II	II
14.5. Environmental hazards			
IMDG	Marine Pollutant: No		
14.6. Special precautions for user: No further information			

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.		
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.		
WHMIS Classification	D2B E C		
US EPA Tier II Hazards	Fire: No Sudden Release of Pressure: No Reactive: Yes Immediate (Acute): Yes Delayed (Chronic): No		

EPCRA 311/312 Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%):

Calcium hydroxide (Ca(OH)₂)

Calcium peroxide (Ca(O₂))

Pennsylvania RTK Substances (>1%):

Calcium hydroxide (Ca(OH)₂)

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H272 May intensify fire; oxidizer.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

We suggest that containers be either professionally reconditioned for re-use by certified firms or properly disposed of by certified firms to help reduce the possibility of an accident. Disposal of containers should be in accordance with applicable federal, state and local laws and regulations. "Empty" drums should not be given to individuals. The conditions of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Tersus Environmental be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Tersus Environmental has been advised of the possibility of such damages.

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