

THERMOSAN
1. Identification of the Substance/Mixture and of the Company/Firm
1.1. Product Identifier

 Trade name : **THERMOSAN**

 ISS Code : **THERSA**
1.2 Relevant identified uses of the substance or mixture and uses advised against

 Consumer, professional uses : **Descaler specific for metals and light alloys such as aluminium and aluminium-silicon**

 Uses advised against : **All those not expressly specified in the label**
1.3 Details of the Supplier on the Safety Data Sheet

FACOT CHEMICALS snc - Via Crema, 44 - 26010 CAPRALBA (CR)

 phone 0373 450642 - fax 0373 450751 - e.mail: info@facot.it

 e-mail of referee: msds@facot.it
1.4. Emergency telephone number

+39 0373 450642 (from 08.30 to 12.30 and from 14.00 to 18.00)

In section 16 of this data sheet are given the contact numbers of the Poison Centers in Italy open 24 hours a day.

2. Identification of hazards
2.1. Classification of the substance or mixture
2.1.1 Classification pursuant to Regulation (CE) No. 1272/2008

Symbols : GHS02, GHS05, GHS07, GHS09

Class codes and category of danger : Org. Perox. D, Acute Tox. 4, Skin Corr. 1A, STOT SE 3, Aquatic Chronic 1

Hazard statements codes : H242 = Heating may cause a fire.

H312 – Harmful in contact with skin.

H314 - Causes severe skin burns and severe eye lesions.

H335 - May cause respiratory irritation.

H410 = Very toxic to aquatic organisms with long-term effects. (Acute toxicity Factor M = 1).

2.1.2 Adverse effects

The product is unstable and can ignite in contact with heat sources. Harmful product: avoid contact with the skin

Corrosive product: causes severe skin burns and severe eye lesions.

The product, if inhaled, causes irritation to the respiratory system.

The product is dangerous for the environment because it is toxic to aquatic organisms with long-term effects.

2.2. Elements of label
Labelling in accordance with Regulation (CE) no. 1272/2008:

Symbols : GHS02, GHS05, GHS07, GHS09

Warning code : RISK

Hazard statements codes

H242 = Heating may cause a fire.

H312 – Harmful in contact with skin.

H314 - Causes severe skin burns and severe eye lesions.

H335 - May cause respiratory irritation.

H410 = Very toxic to aquatic organisms with long-term effects.

Other hazard statements : Not classifiable

Safety phrases
Prevention

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

P220 – Keep/Store away from clothing/.../combustible materials.

P234 – Keep only in original container.

P260 - Avoid breathing dust/fumes/gas/mist/vapours/spray.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Reaction

P301 + P330 + P331 – IF SWALLOWED: rinse mouth. DO NOT induce vomiting.

P303+P361+P353 – IN CASE OF CONTACT WITH THE SKIN (or with hair): take off immediately all contaminated clothing Rinse skin with water/shower.

P305 + P351 + P338 IF IN EYES: rinse continuously 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.

Storage

P403 – Store in a well ventilated place.

P411 + P235 – Store in a cool place at temperatures not exceeding 50°C.

P420 – Store away from other materials.

Contains: hydrogen peroxide, peracetic acid, acetic acid

2.3. Other hazards

No further data available.

3. Composition/information on ingredients
3.1. Substances

Not relevant

3.2. Mixtures

Refer to point 16 for the full text of risk phrases and hazard statements.



Substance	Concentration	Classification	CAS	EINECS	REACH
peracetic acid	> 5 < 10%	Flam. Liq. 3, H226; Org. Perox. D, H242; Acute Tox. 3, H301; Acute Tox. 4, H312; Skin Corr. 1A, H314; Acute Tox. 3, H331; STOT SE 3, H335; Aquatic Acute 1, H400	79-21-0	201-186-8	01-2119531330-56



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hydrogen peroxide	≥ 5 <8%	Ox. Liq. 1, H271; Acute Tox. 4, H302; Skin Corr. 1A, H314; Acute Tox. 4, H332; STOT SE 3, H335; Aquatic Chronic 3, H412	7722-84-1	231-765-0	01-2119485845-22
acetic acid	≥ 3 <5%	Flam. Liq. 3, H226; Skin Corr. 1A, H314	64-19-7	200-580-7	01-2119475328-30
Poly(oxy-1,2-ethanediyl), .alpha.-(carboxymethyl)-.omega.-(octyloxy)- (4-11 EO)	> 3 ≤ 5%	Eye Irrit. 2, H319	112-34-5	203-961-6	01-2119475104-44

4. First aid measures
4.1. Description of first aid measures
Inhalation:

Move the victim away from the contaminated area and let him/her rest in a well ventilated area. Seek medical attention.

Direct contact with the skin (of the pure product):

Remove contaminated clothing. Wash with tap water the areas of the body that have come into contact with the product, and also the nearby areas; rinse thoroughly. CONSULT A PHYSICIAN.

Direct contact with the eyes (of the pure product):

Rinse immediately and thoroughly for at least 15 minutes with tap water keeping the eyes open; then protect your eyes with sterile pad or a clean, dry cloth. SEEK MEDICAL ADVICE. Do not use eye drops or ointments without specific advice from your physician.

Ingestion:

 Rinse your mouth and drink plenty of water. **DO NOT INDUCE VOMITING.** Seek medical advice.

4.2. Main symptoms and effects, both acute and delayed

No data available

4.3. Indication of whether there is a need to consult a doctor immediately and special treatments

See point 4.1 Description of first aid measures.

5. Fire fighting measures
5.1. Extinguishing means
Recommended extinguishing means:

Chemical powder, foam, water spray, carbon dioxide, depending on the materials involved in the fire.

Extinguishing means to avoid

Direct water jets. Organic compounds.

5.2. Special dangers arising from the substance or mixture

Avoid contact with flammable substances: fire hazard. In case of fire in the surrounding environment, danger of decomposition with release of oxygen. In case of fire, remove the containers and take them to a safe place, if that can be done safely.

Protect from heat. In case of fire, cool containers at risk with water or dilute with running water.

5.3. Recommendations for firefighters

Use protective clothing for the respiratory tract, the eyes and the skin. The water spray can be used to disperse the vapors and protect the people involved in the extinction. It is also recommended to use breathing apparatus, especially if you work indoors and in poorly ventilated spaces. Wear protective devices specific to firefighters.

6. Accidental release measures
6.1. Personal precautions, protective equipment and procedures in case of emergency
For those who do not intervene directly

Move away from the area surrounding the spill or leak. Do not smoke.

For those who intervene directly

Always wear the required Personal Protective Equipment (see chapter 8) Move away unprotected persons.

6.2. Environmental precautions

Contain the leaks. Prevent the product from flowing into sewer systems, surface waters or groundwater and soil. If the product has leaked in large amounts in a water course or has contaminated soil or vegetation, inform the authorities.

6.3. Methods and materials for containment and remediation

Collect the product for disposal. After collection, wash with plenty of water the area and the materials involved preventing that waste materials from penetrating into sewers, surface waters or groundwater and soil.

6.4. Reference to other sections

Refer to points 8 and 13 for further information

7. Handling and storage
7.1. Precautions for safe handling

Normal precautions in handling chemicals; operate in such a way as to avoid contact and inhalation. Do not smoke, eat, do not drink during handling.

7.2. Conditions for the secure storage, including any incompatibility

Store in the original packaging in a cool, dry place. Do not expose to direct sunlight. Keep containers close when not using the preparation.

7.3. Specific end uses

Data not available.

8. Exposure controls/personal protection
8.1. Control parameters
Related to the substances contained

Peracetic acid

MAK: Carcinogenicity class: 3B; (DFG 2004).

Acetic acid

TLV: 10 ppm as TWA 15 ppm as STEL (ACGIH 2004).

MAK: IIb (undefined but data is available) (DFG 2004).

Hydrogen peroxide in solution

TLV: 1 ppm as TWA A3 (confirmed animal carcinogen with unknown relevance to humans); (ACGIH 2004).

 MAK: 0.5 ppm 7.1 mg/m³

Peak limitation category: I(1) Carcinogenicity class: 4; Pregnancy risk group: C; (DFG 2005)



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Substance: hydrogen peroxide

DNEL	Local effects Long term Workers Inhalation = 1.4 (mg/m ³)	Local effects Long term Consumers Inhalation = 0.21 (mg/m ³)
	Local effects Short term Workers Inhalation = 3 (mg/m ³)	Local effects Short term Consumers Inhalation = 1.93 (mg/m ³) PNEC
PNEC		
	Fresh water = 0.013 (mg/l)	Freshwater sediments = 0.047 (mg/kg/sediment)
	Sea water = 0.013 (mg/l)	Sea water sediment = 0.047 (mg/kg/sediment)
	Intermittent release = 0,014 (mg/l)	STP = 4,66 (mg/l)
	Ground = 0.002 (mg/kg Ground)	

8.2. Exposure controls
Personal protection measures

- a) **Eye/ face protection**
Use goggles with side shields according to EN 166. Emergency eye wash and shower equipment must be available.
- b) **Skin protection**
 - i) Protection for hands
We recommend waterproof safety gloves (neoprene, rubber) in accordance with EN374-1, EN374-2 and EN374-3. Depending on the time of contact, use gloves with suitable PI (Permeation Index)
 - ii) Other
Avoid direct contact with the skin.
- c) **Respiratory protection**
Operate in suitably ventilated areas. When performing operations in poorly ventilated areas, wear a mask with suitable filter. Use respiratory protection in accordance with UNI EN 529:2006 (Respiratory protection devices - Recommendations for selection, use, care and maintenance - Guidelines) by establishing the proper FPO value "Operational protection factor" (EN141 type A).
- d) **Thermal hazards**
Avoid exposure to naked flames.

Exposure Controls environment:

Avoid release to the environment.

9. Physical and chemical properties
9.1. Information on the basic physical and chemical properties

Physical and chemical properties	Value
Appearance	Colorless clear liquid
Odour	Characteristic pungent
Olfactory threshold	Not available
pH at 20°C	1.25 ± 0.25
Melting/freezing point	Not available
Boiling point/range	>60°C - decomposition
Flash point	>79°C
Evaporation rate	Not available
Flammability (solid/gas)	Not relevant
Upper/lower flammability limit	Not relevant
Vapor pressure (mmHg)	About 25 hPa (20°C)
Vapor density	Not available
Density at 20°C	1.150 ± 0.010 g/cm ³
Solubility	Soluble in polar solvents
Solubility in water	Complete
Partition coefficient: n-octanol/water	Not available
Self-ignition temperature	Not relevant
Decomposition temperature	Not available
Viscosity at 100°C	Not relevant
Explosive properties	Not available
Oxidizing properties	Strongly oxidizing

9.2. Other Information

No data available.

10. Stability and reactivity
10.1. Reactivity

Under normal conditions of use and storage no phenomenon of reactivity, however the mixture is strongly oxidizing and thus may generate reactions under the conditions referred to under point 10.4 and/or in contact with the materials mentioned in point 10.5

10.2. Chemical Stability

Stable under normal conditions of use and storage.

10.3. Possibility of dangerous reactions

None under recommended conditions of use. Possibility of hazardous reactions (release of oxygen and acetic acid vapors and possible trigger of fire) in the event of non-compliance with the recommended conditions of use and non-observance of the stated points of this chapter 10.

10.4. Conditions to avoid

Do not expose to heat, temperature greater than or close to 60° C tend to decompose the mixture with consequent release of oxygen and acetic acid.

10.5. Incompatible materials

Do not mix with other chemicals, in particular with: Metal salts, alkalis, reducing agents, metal powder, flammable materials, organic solvents.

10.6. Hazardous decomposition products

Under normal conditions it does not decompose. Any conditions to avoid (see 10.4) and/or contact with incompatible materials (see 10.5) can decompose the mixture and cause spontaneous combustion and/or violent reactions.



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11. Toxicological Information**11.1. Information on toxicological effects**

ATE(mix) oral = 57.142,9 mg/kg
ATE(mix) dermal = unavailable
ATE(mix) inhal = 314.3 mg/l/4h

a) Acute toxicity : harmful: avoid contact with skin
b) Skin corrosion/irritation : causes severe skin burns
c) Severe eye damage / irritation : causes serious eye damage.
d) Sensitisation of respiratory tract and the skin : on the basis of available data, the classification criteria are not met
e) Germ cell mutagenicity : based on the available data, the classification criteria are not met
f) Carcinogenicity : on the basis of available data, the classification criteria are not met]
g) Reproductive toxicity : on the basis of available data, the classification criteria are not met
h) specific target organ toxicity (STOT) single exposure : if inhaled, it irritates the respiratory tract
i) Specific target organ toxicity (STOT) - repeated exposure : on the basis of available data, the classification criteria are not met
j) Risk of aspiration : on the basis of available data, the classification criteria are not met

Related to the substances contained:

Peracetic acid

ROUTES OF EXPOSURE

: The substance can be absorbed into the body by inhalation and ingestion.

RISKS BY INHALATION

: Harmful concentrations of particles dispersed in air can also be reached quickly when dispersed by spraying.

EFFECTS OF SHORT TERM EXPOSURE

: Corrosive to eyes, skin, respiratory tract and if swallowed.
Inhalation may cause pulmonary edema (see Notes).

ACUTE RISKS/ SYMPTOMS

INHALATION Sore throat. A burning sensation. Cough. Shortness of breath. Breathing difficulties. Symptoms may be delayed (See notes).

SKIN CAN BE ABSORBED! Redness. Pain. Blisters. Skin burns.

EYES Redness. Pain. Severe deep burns.

INGESTION A burning sensation. Abdominal pain. Shock or collapse.

acetic acid

ROUTES OF EXPOSURE

: The substance can be absorbed into the body by inhalation and ingestion.

RISKS BY INHALATION

: A harmful contamination of the air will be reached rather quickly through evaporation of the substance at 20°C.

EFFECTS OF SHORT TERM EXPOSURE

: The substance and the vapours are very corrosive to the eyes the skin and the

respiratory

tract. Corrosive if swallowed. Inhalation of vapours may cause pulmonary edema (see Notes). The effects may be delayed. Medical advice is recommended.

EFFECTS OF REPEATED OR LONG-TERM EXPOSURE

: REPEATED OR PROLONGED CONTACT MAY CAUSE DERMATITIS. The substance may have effects on the gastrointestinal tract, causing digestive problems, with burning sensation and constipation.

ACUTE RISKS/ SYMPTOMS

INHALATION Sore throat. Cough. A burning sensation. Headache. Vertigo. Shortness of breath. Breathing difficulties. Symptoms may be delayed (see Notes).

SKIN Pain. Redness. Blisters. Skin burns.

EYES Redness. Pain. Severe deep burns. Vision loss.

INGESTION Abdominal pain. A burning sensation. Diarrhea. Shock or collapse. Sore throat. Vomiting.

NOTE Usually, the symptoms of pulmonary edema appear only after a few hours and are aggravated by physical effort. The patient must rest and be kept under medical observation. You must have a physician or duly authorised healthcare staff provide the appropriate therapy immediately.

hydrogen peroxide solution

ROUTES OF EXPOSURE

: The substance can be absorbed into the body by inhalation and ingestion.

RISKS BY INHALATION

: A harmful contamination of the air will be reached rather quickly through evaporation of the substance at 20°C.

EFFECTS OF SHORT TERM EXPOSURE

: The substance is corrosive to eyes and skin. Vapours are irritating to respiratory tract If swallowed, this substance can produce oxygen bubbles in blood (embolism), causing shock.

EFFECTS OF REPEATED OR LONG-TERM EXPOSURE

: The lungs can be damaged by inhaling high concentrations.
The substance may have effects on the hair, causing discoloration.

ACUTE RISKS/ SYMPTOMS

INHALATION Sore throat. Cough. Vertigo. Headache. Nausea. Shortness of breath.

SKIN Corrosive. White spots. Redness. Skin burns. Pain.

EYES Corrosive. Redness. Pain. Blurred vision. Severe deep burns.

INGESTION Sore throat. Abdominal pain. Abdominal bloating. Nausea. Vomiting.

Oral LD50 (rat) (mg/kg body weight) = 2000

LD50 Skin (rat or rabbit) (mg/kg body weight) = 4060

12. Ecological Information**12.1. Toxicity**

Very toxic to aquatic life with long lasting effects. Use according to good working practices and dispose of carefully.

12.2. Persistence and degradability

The components of the mixture degrade quickly.

12.3. Potential for bioaccumulation

Data not available.



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12.4. Mobility in ground

Data not available.

12.5. Results of PBT and vPvB evaluation

The mixture contains NO substances classified as PBT/vPvB pursuant to Regulation (CE) 1907/2006, Annex XIII

12.6. Other adverse effects

Data not available.

13. Disposal Considerations:**13.1. Methods of waste treatment**

Do not reuse empty containers. Dispose of waste in accordance with current regulations. Any waste should be disposed of in accordance with existing regulations by contacting authorized companies.

14. Transport Information**14.1. UN Number**

3149

Any ADR exemption (by affixing the label to the side) if the following characteristics are met: Combined packaging:

inner packing 1 l pack of 30 Kg

Inner packaging secured in trays with shrink or extensible film: inner package 1 l pack of 20 Kg

14.2. ONU shipping name

HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, with acids, water and not more than 5% peroxy-acetic acid, STABILIZED

14.3. Danger classes related to the transport

Class	: 5.1
Label	: 5.1 +8
Code of restriction in tunnels.	: E
Quantities limited :	: 1 L
EmS	: F-H, S-Q

**14.4. Packaging group**

II

14.5. Dangers for the environment

Product dangerous to the environment : YES



Sea contaminant : YES

14.6. Special precautions for users

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the requirements of the current edition of the A.D.R. agreement and applicable national regulations.

Products should be transported in their original packaging and in any case in packages that are made from materials resistant to their content and unlikely to cause dangerous reactions with it. People loading and unloading dangerous goods must be trained on all the risks deriving from the substance and on all actions to be taken in the event of emergencies.

14.7. Bulk transport according to Annex II of MARPOL 73/78 and the IBC code

Transport in bulk not provided

15. Regulatory Information**15.1. Standards and legislation on health, safety and environment specific for the substance or the mixture****Law Decree 09/04/208 n° 81 - TITLE IX Chapter II**

It does not contain carcinogens pursuant to Art.234 .

In order to use this product, the employer must carry out the "Risk assessment" according to the provisions of Leg. Decree 9 April 2008 n. 81. Workers exposed to this chemical agent must not be subjected to health surveillance if the outcome of the risk assessment shows that, in relation to the type and quantity of a dangerous chemical agent and the mode and frequency of exposure to this agent, there is only a "moderate risk" for health and safety of workers and that the measures provided for in the same Decree are sufficient to reduce the risk.

Law Decree of Government no. 52, dated 03 /02/1977

(Implementation of Directive 92/32/CEE on classification, packaging and labelling of dangerous substances).

Law Decree of Government no. 65, dated 14/03/2003

(Implementation of Directives 1999 /45/CE and 2001/60/CE relating to the classification, packaging and labelling of dangerous preparations).

Law Decree of Government no. 25, dated 02/02/2002

(Implementation of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at workplace).

DM of 26 02/02/ 2004

(Definition of a first list of indicative occupational exposure limit values for chemical agents).

DM of 03/04/2007

(Implementation of Directive No. 2006/8/CE of the Commission dated January 23, 2006, amending, to adapt them to technical progress, Annexes II, III and V of Directive 1999 /45/CE of the European Parliament and of the Council on the harmonization of laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations).

Regulation (CE) no. 1907/2006 Of the European Parliament and of the Council dated December 18, 2006Concerning the registration, evaluation, authorisation and restriction of chemicals (REACH), establishing a European agency for chemical substances, amending Directive 1999/45/CE and repealing Regulation (EEC) n. 793/93 Of the Council and the Regulation (CE) no 1488/94 Of the Commission and the Council Directive 76/769/EEC, the directives of the Commission 91 /155/CEE , 93 67/67 , 93 /105/CE and **Regulation (CE) no. 1272/2008 Of the European Parliament and of the Council dated December 16, 2008**

On classification, labelling and packaging of substances and mixtures, amending and revoking Directive 67/548/CEE and 1999 /45/CE and amending Regulation (CE) no. 1907/2006.

Regulation (CE) no. 790/2009 Of the Commission dated August 10, 2009

Amending, for the purposes of adaptation to technical and scientific progress, of Regulation (CE) n. 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

15.2. Chemical Safety Assessment

Chemical safety assessment not provided.



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16. Other Information.**16.1. Other Information.**

Description of hazard phrases set out in point 3

- H226 = Liquid and flammable vapors.
- H242 = Heating may cause a fire.
- H301 = Toxic if swallowed.
- H312 – Harmful in contact with skin.
- H314 = Causes severe skin burns and severe ocular lesions.
- H331 – Toxic if inhaled.
- H335 = Can irritate the respiratory tract.
- H400 = Very toxic to aquatic organisms.
- H318 = Causes serious eye damage
- H271 = May cause a fire or an explosion; highly combustible.
- H302 = Harmful if swallowed.
- H332 – Harmful if inhaled.
- H412 = Harmful to aquatic organisms with long-term effects.

Classification based on the data of all the components of the mixture

If necessary, below are the telephone numbers active 24 hour 24 of some poison centres:

(www.salute.gov.it/servizio/documenti/centri_antiveleni.pdf)

FLORENCE	Poison Center of Florence (www.antiveleni.altervista.org)	055	7947819
GENOA	Poison Centre	010	56361245
MILAN	Poison Control Center (www.centroantiveleni.org)	02	66101029
NAPLES	Cardarelli Hospital Poison Center (www.ospedalecardarelli.it/ospedale/centro-anti-veleni)	081	7472870
PADUA	Poison Centre	049	8275078
PAVIA	IRCCS Fondazione S.Maugeri (www.cavpavia.it)	0382	24444
ROME	Poison Center Gemelli Hospital (www.tox.it)	06	3054343
ROME	Poison Center, University "La Sapienza" (w3.uniroma1.it/cav_cartella)	06	49970698
TURIN	Poison Center	011	6637637

MAIN BIBLIOGRAPHIC SOURCES

- ACGIH - American Conference of Governmental Industrial Hygienists
- ECB - European Chemicals Bureau
- IARC - International Agency for Research on Cancer
- IPCS - International Programme on Chemical Safety (Cards)
- NIOSH - Registry of toxic effects of chemical substances (1983)
- OSHA - European Agency for Safety and Health at Work
- PHATOX - Pharmacological and Toxicological Data and Information Network
- WHO – World Health Organization

Safety Data Sheet as per Regulation (UE) no. 2015/830 of 29 May 2015 and subsequent amendments

The information in this safety data sheet were obtained using the best information available on the date of revision specified herein. Neither the owner Company nor the subsidiary companies will accept complaints arising from improper use of the information given herein or by improper use of the product. Pay particular attention when using the preparation because an improper use improper handling may increase the danger.

