

Safety Data Sheet

THOR



Safety Data Sheet dated 28/6/2018, version 3
This version cancels and substitutes any previous version

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

1.1. Product identifier

Mixture identification:

Trade name: THOR

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

Recommended use:

Sealant remover spray

1.3. Details of the supplier of the safety data sheet

Company:

ERRECOM SRL

Via Industriale, 14

Corzano (BS) Italy

Tel. +39 030/9719096

Competent person responsible for the safety data sheet:

lab@errecom.it

1.4. Emergency telephone number

+39 02-6610-1029 Poison Control Center Niguarda Ca' Granda - Milano - ITALY

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

 Danger, Aerosols 1, Extremely flammable aerosol. Pressurized container: may burst if heated.

 Warning, Eye Irrit. 2, Causes serious eye irritation.

 Warning, STOT SE 3, May cause drowsiness or dizziness.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H222+H229 Extremely flammable aerosol. Pressurized container: may burst if heated.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

Special Provisions:

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None
Contains
propan-2-ol
Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. Other hazards
vPvB Substances: None - PBT Substances: None
Other Hazards:
No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances
N.A.

3.2. Mixtures
Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 60% - < 70%	propan-2-ol	Index number: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7 REACH No.: 01-21194575 58-25-XXXX	 2.6/2 Flam. Liq. 2 H225  3.3/2 Eye Irrit. 2 H319  3.8/3 STOT SE 3 H336
>= 15% - < 20%	propane	Index number: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9	 2.2/1 Flam. Gas 1 H220  2.5 Press. Gas H280
>= 10% - < 12.5%	ethanol	Index number: 603-002-00-5 CAS: 64-17-5 EC: 200-578-6 REACH No.: 01-21194576 10-43-XXXX	 2.6/2 Flam. Liq. 2 H225  3.3/2 Eye Irrit. 2 H319
>= 2.5% - < 5%	butane	Index number: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7	 2.2/1 Flam. Gas 1 H220  2.5 Press. Gas H280
>= 1% - < 2.5%	isobutane	Index number: 601-004-00-0 CAS: 75-28-5 EC: 200-857-2	 2.2/1 Flam. Gas 1 H220  2.5 Press. Gas H280

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. Wash thoroughly the body (shower or bath).

After contact with skin, wash immediately with soap and plenty of water.

Wash contaminated clothing before using them.

In case of eyes contact:

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After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

For symptoms and effects caused by substances, see section 11.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

CO2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

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Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

Store containers away from any incompatible materials, checking section 10.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

Information not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

propan-2-ol - CAS: 67-63-0

ACGIH - TWA(8h): 492 mg/m³, 200 ppm - STEL: 400 ppm - Notes: A4, BEI - Eye and URT irr, CNS impair

AGW - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³, 400 ppm

MAK - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³, 400 ppm

VLA - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³, 400 ppm

VLEP - STEL(15min): 980 mg/m³, 400 ppm

WEL - TWA(8h): 999 mg/m³, 400 ppm - STEL(15min): 1250 mg/m³, 500 ppm

TLV - TWA(8h): 980 mg/m³, 400 ppm - STEL(15min): 1225 mg/m³, 500 ppm

NDS - TWA(8h): 900 mg/m³ - STEL(15min): 1200 mg/m³

NPHV - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³

MV - TWA(8h): 500 mg/m³, 200 ppm

GVI - TWA(8h): 999 mg/m³, 400 ppm - STEL(15min): 1250 mg/m³, 500 ppm

propane - CAS: 74-98-6

ACGIH - Notes: (D, EX) - Asphyxia

ethanol - CAS: 64-17-5

ACGIH - STEL(15min): 1884 mg/m³, 1000 ppm

AGW - TWA(8h): 960 mg/m³, 500 ppm - STEL(15min): 1920 mg/m³, 1000 ppm

MAK - TWA(8h): 960 mg/m³, 500 ppm - STEL(15min): 1920 mg/m³, 1000 ppm

VLA - STEL(15min): 1910 mg/m³, 1000 ppm

VLEP - TWA(8h): 1900 mg/m³, 1000 ppm - STEL(15min): 9500 mg/m³, 5000 ppm

WEL - TWA(8h): 1920 mg/m³, 1000 ppm

TLV - TWA(8h): 1900 mg/m³, 1000 ppm

GVI - TWA(8h): 1900 mg/m³, 1000 ppm

NDS - TWA(8h): 1900 mg/m³

NPHV - TWA(8h): 960 mg/m³, 500 ppm - STEL(15min): 1920 mg/m³

butane - CAS: 106-97-8

ACGIH - STEL: 1000 ppm - Notes: (EX) - CNS impair

isobutane - CAS: 75-28-5

ACGIH - STEL: 1000 ppm - Notes: (EX) - CNS impair

DNEL Exposure Limit Values

N.A.

PNEC Exposure Limit Values

N.A.

8.2. Exposure controls

Eye protection:

Protective airtight goggles (ref. Standard EN 166).

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Suitable gloves type:

One-time gloves.

Suitable material:

CR (polychloroprene, chloroprene rubber).

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Butyl caoutchouc (butyl rubber).
NR (natural rubber, natural latex).
NBR (nitrile rubber).
Material thickness: minimum 0.12 mm.
Break through time : > 480 min

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Respiratory protection:

In case of exceeding the threshold value of the substance or one or more of the substances present in the product, it is advisable to wear a mask with type A filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration of use. (see standard EN 14387). If there are gases or vapors of a different nature and / or gases or vapors with particles (aerosols, fumes, mists, etc.), combined filters must be provided.

The use of respiratory protective equipment is necessary if the technical measures adopted are not sufficient to limit the worker's exposure to the threshold values taken into consideration. However, the protection offered by the masks is limited.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance and colour:	liquid colorless
Odour:	characteristic
Odour threshold:	N.A.
pH:	N.A.
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	N.A.
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.
Flash point:	<0 ° C
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Relative density:	0.72 g/mL (20°C)
Solubility in water:	N.A.
Solubility in oil:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	N.A.
Explosive properties:	N.A.
Oxidizing properties:	N.A.

9.2. Other information

Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.
V.O.C. (w/w):	100 %

SECTION 10: Stability and reactivity

10.1. Reactivity

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- Stable under normal conditions
- 10.2. Chemical stability
Stable under normal conditions
- 10.3. Possibility of hazardous reactions
It may catch fire on contact with powerful oxidising agents.
- 10.4. Conditions to avoid
Avoid overheating, electrostatic discharge and all sources of ignition.
- 10.5. Incompatible materials
Strong oxidizing agents.
- 10.6. Hazardous decomposition products
No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

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a) acute toxicity

Classification:

Not classified

Considerations:

Based on available data, the classification criteria are not met

b) skin corrosion/irritation

Classification:

Not classified

Considerations:

Based on available data, the classification criteria are not met

c) serious eye damage/irritation

Classification:

The product is classified: Eye Irrit. 2 H319

d) respiratory or skin sensitisation

Classification:

Not classified

Considerations:

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Classification:

Not classified

Considerations:

Based on available data, the classification criteria are not met

f) carcinogenicity

Classification:

Not classified

Considerations:

Based on available data, the classification criteria are not met

g) reproductive toxicity

Classification:

Not classified

Considerations:

Based on available data, the classification criteria are not met

h) STOT-single exposure

Classification:

The product is classified: STOT SE 3 H336

i) STOT-repeated exposure

Classification:

Not classified

Considerations:

Based on available data, the classification criteria are not met

j) aspiration hazard

Classification:

Not classified

Considerations:

Based on available data, the classification criteria are not met

Adverse health effects

Acute effects: contact with eyes causes irritation; symptoms may include: redness, edema, pain and tearing. Ingestion may cause health disorders, including abdominal pains with sting, nausea and vomiting.

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Acute effects: contact with skin may cause irritation with erythema, edema, dryness and chapped skin.

Toxicological information of the main substances found in the product:

propan-2-ol - CAS: 67-63-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 4710 mg/kg Test: LD50 - Route: Skin - Species: Rat 12800 mg/kg
Test: LC50 - Route: Inhalation - Species: Rat 76.2 mg/l - Duration: 4h
Test: LD50 - Route: Skin - Species: Rabbit 6290 mg/kg

ethanol - CAS: 64-17-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg
Test: LC50 - Route: Inhalation - Species: Mouse > 20 mg/l - Duration: 4h

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

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Classification: Not classified for environmental hazards

Considerations: Based on available data, the classification criteria are not met

Data:

propan-2-ol - CAS: 67-63-0

a) Aquatic acute toxicity:

Endpoint: EC0 - Species: Fish 10000 mg/l - Duration h: 48 - Notes: Pimephales promelas
Endpoint: LC50 - Species: Fish > 1400 mg/l - Duration h: 96 - Notes: Lepomis macrochirus
Endpoint: LC50 - Species: Fish 6550 mg/l - Duration h: 96 - Notes: Pimephales promelas

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

propan-2-ol - CAS: 67-63-0

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 0.05 - Duration: N.A. - Notes: N.A.

ethanol - CAS: 64-17-5

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 0.350000- - Duration: N.A. - Notes: N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

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- 14.1. UN number
Not classified as dangerous in the meaning of transport regulations.
ADR-UN number: 1950
IATA-Un number: 1950
IMDG-Un number: 1950
- 14.2. UN proper shipping name
ADR-Shipping Name: AEROSOLS, flammable (propan-2-ol)
IATA-Technical name: Aerosols, flammable
IMDG-Technical name: AEROSOLS FLAMMABLE (propan-2-ol)
- 14.3. Transport hazard class(es)
ADR-Class: 2
ADR-Label: 2.1
IATA-Class: 2.1
IATA-Label: 2.1
IMDG-Class: 2.1
- 14.4. Packing group
ADR-Packing Group: -
IATA-Packing group: -
IMDG-Packing group: -
- 14.5. Environmental hazards
Marine pollutant: No
- 14.6. Special precautions for user
ADR-Tunnel Restriction Code: D
IATA-Passenger Aircraft: 203
IATA-Cargo Aircraft: 203
IMDG-Technical name: AEROSOLS FLAMMABLE (propan-2-ol)
IMDG-EMS: F-D, S-U
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
N.A.

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
- Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
Restrictions related to the product:
Restriction 3
Restriction 40
Restrictions related to the substances contained:
No restriction.
- Where applicable, refer to the following regulatory provisions :
Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).

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Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):
Seveso III category according to Annex 1, part 1
Product belongs to category: P3a

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

Hazard class and hazard category	Code	Description
Flam. Gas 1	2.2/1	Flammable gas, Category 1
Aerosols 1	2.3/1	Aerosol, Category 1
Press. Gas	2.5	Gases under pressure
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3

Paragraphs modified from the previous revision:

SECTION 2: Hazards identification
SECTION 3: Composition/information on ingredients
SECTION 4: First aid measures
SECTION 7: Handling and storage
SECTION 8: Exposure controls/personal protection
SECTION 9: Physical and chemical properties
SECTION 10: Stability and reactivity
SECTION 11: Toxicological information
SECTION 12: Ecological information
SECTION 14: Transport information
SECTION 15: Regulatory information
SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Aerosols 1, H222+H229	On basis of test data
Eye Irrit. 2, H319	Calculation method
STOT SE 3, H336	Calculation method

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

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ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.