

DETERM spray

1. Identification of the Substance/Mixture and of the Company/Firm

1.1. Product Identifier

Trade name : **DETERM spray**
ISS Code : **DETAL**

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

Consumer uses : **Cleaner for water heaters - exhaust side – 400 ml spray**
Uses advised against : **All those not expressly specified in the label**

1.3 Details of the Supplier on the Safety Data Sheet

FACOT CHEMICALS s.n.c. - Via Crema, 44 - 26010 CAPRALBA (CR) - ITALY
tel. +39 0373 450642-3 Fax +39 0373 450751 - email: info@facot.it www.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 within the meaning of Regulation (CE) No. 1272/2008:

Symbols : GHS02, GHS07
Class codes and category of danger : Flam. Aerosol 1, Eye Irrit. 2
Hazard statements codes : H222 - Highly flammable aerosol.
H319 - Causes serious eye irritation.
H229 - Pressurized container: may burst if heated.

2.1.2 Adverse effects

Aerosol that ignites easily even at low temperatures, risk of fire. The product, if brought into contact with the eyes, causes significant irritation that may persist for more than 24 hours. Repeated inhalation of vapors may cause drowsiness and dizziness. Pressurised container. Protect from sunlight and do not expose to temperatures higher than 50 °C. Overheated aerosol containers explode and may be projected at distance violently with consequent fire hazard.

2.2. Elements of label

Labelling in accordance with Regulation (CE) no. 1272/2008:

Symbols : GHS02, GHS07
Warning codes : Danger

Hazard statements codes:

H222 - Highly flammable aerosol.
H319 - Causes serious eye irritation.
H229 - Pressurized container: may burst if heated.

Safety phrases:

General

P102 - Keep out of the reach of children.
P103 - Read the label before use.

Prevention

P210 - Keep away from heat sources, hot surfaces, sparks, naked flames or other sources of ignition. Do not smoke.
P211 - Do not spray on naked flames or other ignition source.
P251 - Do not pierce or burn, even after use.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Reaction

P305 + P351 + P338 IF IN EYES: rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313 - If the eye irritation persists, seek medical advice.

Storage

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

2.3. Other hazards

Overheated aerosol containers explode and may be projected at distance violently with consequent fire hazard. Do not operate in areas insufficiently ventilated and underground spaces. Gases are heavier than air and may accumulate dangerously.

3. Composition/information on ingredients

3.1. Composition/information on ingredients

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

Substance	Concentration	Classification	CAS	EINECS	REACH
Butane	> 3 < 5%	Flam. Gas 1, H220; Press. Gas, H280	106-97-8	203-448-7	01-2119474691-32
Isobutane	> 3 < 5%	Flam. Gas 1, H220; Press. Gas, H280	75-28-5	200-857-2	01-2119485395-27
Propane	> 3 < 5%	Flam. Gas 1, H220; Press. Gas, H280	74-98-6	200-827-9	01-2119486944-21
Ammonium nitrate	> 3 < 5%	GHS03 Ox. Sol. 1 - H271	6484-52-2	229-347-8	--
Ammonium oxalate	> 3 < 5%	GHS07 Acute Tox. 4 - H302, H312	1113-38-8	214-202-3	--

4. First aid measures

4.1. Description of first aid measures

Inhalation

Ventilate the room. Seek medical advice if feeling unwell.

Direct contact with the skin (the pure product)

Wash thoroughly with soap and water, rinsing carefully.



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Direct contact with the eyes (the pure product)

Wash immediately and thoroughly for about 15 minutes with tap water holding eyelids open. Resort to specialized medical treatment.

Ingestion

Do not induce vomiting and do not administer anything unless expressly indicated by the physician, which should be contacted promptly. In waiting for the doctor keep the injured at rest.

4.2. Main symptoms and effects, both acute and delayed

Data not 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:**

Atomized water, CO₂, foam, chemical powders, depending on the materials involved in the fire.

Extinguishing means to avoid

Direct jets of water.

5.2. Special dangers arising from the substance or mixture

Overheated aerosol containers explode and may be projected at distance violently with consequent fire hazard. Product under pressure in sealed metal case (pressure test max 15 bar). Cool down the containers with water spray trying to move them away from fire. Overheated aerosol containers explode and may be projected at distance violently (protect your head with safety helmet).

5.3. Recommendations for firefighters

Use protective devices for the respiratory tract. Safety helmet and full protective equipment. The water spray can be used to protect the people involved in the extinction. It is also recommended to use breathing apparatus, especially if you work indoors in poorly ventilated spaces and in any case if you use halogen-based extinguishers. Cool the containers with water jets.

6. Measures in case of accidental release.**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. Remember that overheating may project the spray at considerable distance.

For those who intervene directly

Given the tightness of the spray, significant leaks are very unlikely to occur. However, if any container is damaged and may leak, isolate the spray in question bringing it outdoors or covering it with inert and non-combustible material (e.g. sand, ground, vermiculite) and be careful to avoid any ignition point that could constitute a serious fire hazard. Prevent the spilled product from reaching watercourses and drains, keep away any source of ignition, the vapors will propagate at ground level and may give rise to risks of intoxication or explosion in underground areas (basements, pits etc.). Wear gloves and protective clothing. Eliminate all naked flames and any sources of ignition. Do not smoke. Provide adequate ventilation. Evacuate the danger area and, possibly, consult an expert.

6.2. Environmental precautions

Isolate the spray covering it with inert non-combustible material (e.g. sand, earth, vermiculite).

Prevent the spilled product from reaching watercourses and drains, keep away any source of ignition, the vapors will propagate at ground level and may give rise to risks of intoxication or explosion in underground areas (basements, pits etc.).

6.3. Methods and materials for containment and remediation

Consign it exclusively to specialized companies. Contain and absorb the liquid poured, with inert materials absorbing (sand, soil, sepiolite, other specific products) and store the damaged containers in sealed containers.

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**

The vapors are heavier than air and may spread at ground level and form explosive mixtures with air. Prevent the accumulation of concentrations that are flammable or explosive in the air. Pressurised container. Protect from sunlight and do not expose to temperatures higher than 50 °C. Do not pierce or incinerate even after use. Do not spray on flames or hot objects. Use in sufficiently ventilated areas.

7.2. Conditions for the secure storage, including any incompatibility

Keep the containers in vertical and safe position avoiding the possibility of falls or impact. Pressurised container. Keep in ventilated places, in the original packing to protect from heat sources and from sunlight. Always keep in well ventilated rooms. Keep away from open flames, sparks and heat sources. Avoid direct exposure to the sunlight. Keep away from flames and sparks. Avoid the accumulation of electrostatic charges.

7.3. Specific end uses**Consumer uses**

Pressurised container. Do not pierce or incinerate even after use. Do not spray on flames or hot objects. Use in sufficiently ventilated areas. Pressurised container. Keep in ventilated places, in the original packing to protect from heat sources and from sunlight.

8. Exposure controls/personal protection**8.1. Control parameters****Concerning the substances contained**

Butane, isobutane

TLV: (aliphatic hydrocarbon gases, Alkane C1-C4) 1000 ppm (as TWA) (ACGIH 2005).

MAK: 1000 ppm 2400 mg/m³ Peak limitation category: II(4) Pregnancy risk group: D (DFG 2006). Propane

TLV: (Aliphatic hydrocarbons) 1000 ppm as TWA (ACGIH 2005).

MAK: 1000 ppm 1800 mg/m³ Peak limitation category: II(4) Pregnancy risk category: D (DFG 2006).



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8.2. Exposure controls

Personal protection measures

- a) Eye/ face protection
Use safety goggles in compliance with EN-166
- b) Skin protection
 - i) Protection for hands
When handling the product, use protective gloves resistant to chemical products (EN374-1/EN374-2/EN374-3).
To determine the permeation index, contact the manufacturer of the gloves.
 - ii) Other
Avoid direct contact with the skin. Preferably use garments in antistatic cotton.
- c) Respiratory protection
Operate in suitably ventilated areas. In the presence of vapors/aerosols and/or if the product is used indoors, in spaces poorly ventilated, 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"
- d) Thermal hazards
Protect from sunlight and do not expose to temperatures higher than 50 °C.

Checks of the environmental exposure

Minimize product release to the environment

9. Physical and chemical properties

9.1. Information on the physical and chemical properties fundamental

Physical and chemical properties	Value
Appearance	Colourless liquid in gaseous suspension
Odour	Characteristic
Olfactory threshold	Not available
pH at 20°C	Not relevant
Melting/Freezing point	Not relevant/not available
Initial point/boiling range	~ 100°C
Flash point of the liquid phase	Not available
Flammability of the propellant	Highly flammable
Upper/lower flammability or explosive limits	1.8 ÷ 9.5 % by volume
Vapor pressure	Not available
Vapor density	Not available
Relative density	0.810 ± 0.005
Solubility	Not available
Water solubility	Soluble
Partition coefficient: n-octanol/water	Not available
Self-ignition temperature	Not available
Decomposition temperature	Not available
Volume of the container	520 ml
Volume of the product	400 ml
Pressure at 20°C	3.5 ± 0.3 bar
Pressure at 50°C	Not available
Spray test pressure	15 bar
Auto-flammability	~ 360°C

9.2. Other Information

VOC (Volatile organic compounds) Not available

10. Stability and reactivity

10.1. Reactivity

Under normal conditions of use and following the procedures recommended use, there is no risk of reactivity.

10.2. Chemical Stability

The aerosol remains stable for a minimum period of 36 months; under normal conditions of storage no dangerous reactions may occur if the container is not hermetically sealed.

10.3. Possibility of dangerous reactions

There are no dangerous reactions in the normal conditions of use and by following the procedures recommended.

10.4. Conditions to avoid

In order to avoid that the metal of the container may deteriorate, keep away from products with acidic or basic reaction.

Be careful to high temperatures, because at temperatures higher than 50 °C the pressure inside the container increases and can cause spray deformation and even explosion.

10.5. Incompatible materials

Substances or preparations strongly acidic, basic and oxidants in general.

10.6. Hazardous decomposition products

In the case of thermal decomposition harmful fumes may be released.

11. Toxicological Information

11.1. Information on toxicological effects

ATE(mix) oral = 10.000.0 mg/kg
ATE(mix) dermal = 22.000.0 mg/kg
ATE(mix) inhal = 0.0 mg/l/4 h

- a) Acute toxicity : not applicable
- b) Skin corrosion/irritation : not applicable
- c)



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- d) Serious eye lesions / irritation : if brought into contact with the eyes, causes significant irritation that may persist for more than 24 hours.
- e) Sensitisation of respiratory tract and the skin : not applicable
- f) Germ cell mutagenicity : not applicable
- g) Carcinogenicity : not applicable
- h) Reproductive toxicity : not applicable
- i) Specific toxicity to target organs (STOT) single exposure : not applicable
- j) Specific toxicity to target organs (STOT) repeated exposure : not applicable
- k) Aspiration hazard : not applicable

Information relating to substances contained:

Butane /Propane/Isobutane

ROUTES OF EXPOSURE

BY INHALATION

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

: Following a leak, the liquid will evaporate very quickly replacing the air is causing a serious risk of asphyxiation in closed spaces.

EFFECTS OF SHORT TERM EXPOSURE

: Contact with rapidly evaporating liquid may cause frostbite. The substance may cause effects on the central nervous system

ACUTE RISKS/ SYMPTOMS

INHALATION Somnolence. State of unconsciousness.

SKIN THE CONTACT WITH THE LIQUID CAUSES FREEZING.

EYES THE CONTACT WITH THE LIQUID CAUSES FREEZING.

NOTES Check the oxygen content before entering the area. High concentrations in the atmosphere cause oxygen deficiency with loss of consciousness or death.

12 Ecological Information**12.1. Toxicity**

Data not available.

12.2. Persistence and degradability

Does not contain surfactants.

12.3. Potential for bioaccumulation

Data not available.

12.4. Mobility in ground

Data not available.

12.5. Results of PBT and vPvB evaluation

No chemical safety report is required.

12.6. Other adverse effects

Data not available.

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

Waste must be disposed of in compliance with the regulations by delivering empty containers to an authorised waste disposal centre equipped to safely handle pressurized containers containing flammable liquids and debris. The empty container heated to temperatures above 70° C can burst. Operate in accordance with the local and national regulations in force.

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

1950

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**

Flammable AEROSOLS

14.3. Danger classes related to the transport

Class : 2

Label : 2.1

Code of restriction in tunnels. : D

Quantities limited : 1 L

EmS : F-D, S-U

**14.4. Packaging group**

Not provided

14.5. Environmental hazards

Product hazardous to environment: Sea

contaminant NO NO

14.6. Special precautions for users

Packages must not be thrown or subjected to impact. The containers must be stacked in the vehicles or containers so as to prevent leak or fall.

When objects are loaded on pallets, and these pallets are stacked, every layer of pallets must be evenly distributed over the layer underneath interposing, if necessary, a material of appropriate strength.

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 April 9, 2008 No 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, 2006

Concerning 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 as well as the Council Directive 76/769/CEE, the Directives of the Commission 91/155/CEE, 93/67/CEE, 91/155/CEE, 93/67/CEE, 93/105/CE and 2000/21/CE.

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 The Council on classification, labelling and packaging of substances and mixtures.

Council Directive 75/324/CEE dated May 20, 1975, implemented with Directives 2013/10/UE dated March 19, 2013

On the harmonization of the laws of the Member States relating to aerosols.

15.2. Chemical Safety Assessment

Chemical safety assessment not provided.

16 Other Information

16.1. Other Information

Description of hazard phrases set out in point 3

- H220 = Highly flammable gas.
- H280 = Contains gas under pressure; may explode if heated.
- H272 = May intensify fire; oxidizer.
- H319 = Causes severe eye irritation.
- H302 = Harmful if swallowed.
- H312 = Harmful in contact with skin.

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	Poisons Information Center of Florence	www.antiveleni.altervista.org	055	7947819
GENOA	Poison Centre		010	56361245
MILAN	Poison Center	www.centroantiveleni.org	02	66101029
NAPLES	Poison Centre Cardarelli Hospital	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 Centre Policlinico Gemelli	www.tox.it	06	3054343
ROME	Poison Center, University "La Sapienza"	www.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) 2015/830 of 29 May 2015 and subsequent amendments

This safety data sheet fully replaces all previous versions.

The information on this safety data sheet were obtained from the best data available on the market on the date of review indicated. Neither the company owner of this data sheet nor the subsidiary companies will accept complaints arising from improper use of the information given here or by improper use of the product. Pay particular attention to the use of preparations because improper use can increase the danger.

