



SAFETY DATA SHEET

Thermo Fire - Safety fuel paste

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.
According to Regulation (EC) No 1907/2006, Annex II, as amended.
Commission Regulation (EU) 2020/878 of 18 June 2020.

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

1.1. Product identifier

Product name Thermo Fire - Safety fuel paste
EU REACH registration notes Ethanol: 01-2119457610-43-002

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

Identified uses Food heater gel.
Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Nouvel AG
Industrie Grund 3
6234 Triengen
CH-Switzerland
Tel.: +41 41 935 55 55

Contact person info@nouvel.ch

1.4. Emergency telephone number

Emergency telephone 24h: 145 (from abroad: +41 44 251 51 51) Tox Info Suisse, Zürich

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)
Physical hazards Flam. Sol. 2 - H228
Health hazards Not Classified
Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Warning
Hazard statements H228 Flammable solid.

Precautionary statements P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.



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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Ethanol CAS number: 64-17-5 EC number: 200-578-6 Lists: REACH ANNEX XVII.(40)	75%
Classification Flam. Liq. 2 - H225	
Triethylamine CAS number: 121-44-8 EC number: 204-469-4	<1%
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Corr. 1A - H314 Eye Dam. 1 - H318 STOT SE 3 - H335	

The full text for all hazard statements is displayed in Section 16.

Composition comments The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	General first aid, rest, warmth and fresh air. Do not give victim anything to drink if they are unconscious. Get medical attention if any discomfort continues.
Inhalation	Move affected person to fresh air at once. Place unconscious person on their side in the recovery position and ensure breathing can take place. If respiratory problems, artificial respiration / oxygen. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Keep affected person warm and at rest. Show this Safety Data Sheet to the medical personnel. Never give liquid to an unconscious person.
Skin contact	Take off immediately all contaminated clothing. Wash skin thoroughly with soap and water. Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Make sure to remove any contact lenses before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention promptly if symptoms occur after washing.

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

Inhalation	Vapours may cause headache, fatigue, dizziness and nausea.
Ingestion	Nausea, vomiting. Dizziness.
Skin contact	Prolonged contact may cause redness, irritation and dry skin.
Eye contact	Severe irritation.



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

Specific treatments Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use alcohol-resistant foam, carbon dioxide or dry powder to extinguish. Dry chemicals, sand, dolomite etc.

Unsuitable extinguishing media Do not use water, if avoidable.

5.2. Special hazards arising from the substance or mixture

Specific hazards In case of fire: Very toxic gases or vapours.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Hydrogen cyanide (HCN). Nitrous gases (NOx).

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Fight fire remotely due to the risk of explosion. Containers close to fire should be removed or cooled with water. Cool containers exposed to flames with water until well after the fire is out. Contain and collect extinguishing water.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Avoid inhalation of vapours. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Keep combustible materials away from spillage. Remove spillage with vacuum cleaner or collect with a shovel and broom, or similar. Move containers from spillage area. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Static electricity and formation of sparks must be prevented. Eye wash facilities and emergency shower must be available when handling this product. Avoid inhalation of vapours. Avoid contact with skin and eyes. Do not wear contact lenses. During application and drying, solvent vapours will be emitted. Provide adequate ventilation.



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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry and cool place. Store at temperatures between 15°C and 30°C. Store away from the following materials: Oxidising materials. Acids. Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.
Suitable container materials: HDPE; High-density polyethylene. PET; Polyethylene terephthalate. PP; Polypropylene. Polyethylene. Tin plate. Steel.

Storage class Flammable solid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Ethanol

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

Triethylamine

Long-term exposure limit (8-hour TWA): WEL 2 ppm 8 mg/m³

Short-term exposure limit (15-minute): WEL 4 ppm 17 mg/m³

Sk

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

Ethanol (CAS: 64-17-5)

DNEL

Workers - Inhalation; : 1900 mg/m³
Workers - Dermal; Long term systemic effects: 343 mg/kg/day
Workers - Inhalation; Long term systemic effects: 950 mg/m³
General population - Inhalation; : 950 mg/m³
General population - Dermal; Long term systemic effects: 206 mg/kg/day
General population - Inhalation; Long term systemic effects: 114 mg/m³
General population - Oral; Long term systemic effects: 87 mg/kg/day

PNEC

- Fresh water; 0,96 mg/l
- marine water; 0,79 mg/l
- Intermittent release; 2,75 mg/l
- Sediment (Freshwater); 3,6 mg/kg
- Sediment (Marinewater); 2,9 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection Contact lenses should not be worn when working with this chemical. Wear approved safety goggles.



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Hand protection	Wear protective gloves. To protect hands from chemicals, wear gloves that are proven to be impervious to the chemical and resist degradation. It is recommended that gloves are made of the following material: Nitrile rubber.
Other skin and body protection	Wear apron or protective clothing in case of contact.
Hygiene measures	Wash promptly if skin becomes contaminated. When using do not eat, drink or smoke. Promptly remove any clothing that becomes contaminated. Take off contaminated clothing and wash it before reuse.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Wear self-contained breathing apparatus. In case of possible exposure to degradation products, use suitable respiratory protection. Wear self-contained breathing apparatus with full facepiece.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Gel.
Colour	Colourless.
Odour	Characteristic.
pH	pH (concentrated solution): 7.5 - 8.5
Melting point	No information available.
Initial boiling point and range	79°C
Flash point	16°C Closed cup.
Evaporation rate	No information available.
Flammability (solid, gas)	Flammable solid
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 3.3 % Upper flammable/explosive limit: 19 %
Vapour pressure	44 mm Hg @ 20°C
Vapour density	No information available.
Relative density	No information available.
Bulk density	0.84 kg/l @ 25°C
Solubility(ies)	Completely soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	451°C
Decomposition Temperature	No information available.
Viscosity	3570 Pa s @ 25°C
Explosive properties	There are no chemical groups present in the product that are associated with explosive properties.
Oxidising properties	There are no chemical groups present in the product that are associated with oxidising properties.

9.2. Other information

Volatile organic compound	This product contains a maximum VOC content of 85 %.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability No particular stability concerns.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None known.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid contact with acids. Oxidising agents.

10.5. Incompatible materials

Materials to avoid Acids - oxidising.

10.6. Hazardous decomposition products

Hazardous decomposition products Heating may generate the following products: Toxic gases or vapours. Carbon monoxide (CO). Hydrogen cyanide (HCN). Nitrous gases (NOx).

SECTION 11: Toxicological information

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

Other health effects Does not contain any substances known to be carcinogenic.

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo

Based on available data the classification criteria are not met.



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Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Not relevant. Solid.

Inhalation

Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion

Gastrointestinal symptoms, including upset stomach.

Skin contact

Repeated exposure may cause skin dryness or cracking. Irritating to skin.

Eye contact

May cause eye irritation. Redness. Pain.

11.2. Information on other hazards

Information on other hazards No information available.

Toxicological information on ingredients.

Ethanol

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 6200 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ 7060 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ 124,7 mg/l, Inhalation, 760 mm Hg, Rat

Carcinogenicity

IARC carcinogenicity IARC Group 1 Carcinogenic to humans.

Triethylamine

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 730 mg/kg, Oral, Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

ATE dermal (mg/kg) 1,100.0



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Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC50 3496 ppm, Inhalation, Rat

ATE inhalation (vapours mg/l) 11.0

ATE inhalation (dusts/mists mg/l) 1.5

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity Based on available data the classification criteria are not met.

Ecological information on ingredients.

Ethanol

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 24 hours: 11200 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC₅₀, 96 hour: 13.000 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 5012 mg/l, Ceriodaphnia dubia
EC₅₀, 48 hour: 9.300 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 275 mg/l, Chlorella pyrenoidosa
EC₅₀, 72 hour: 5.000 mg/l, Algae

Acute toxicity - microorganisms EC₅₀, 4 hours: 5,8 g/l, Paramaecium caudatum

Acute toxicity - terrestrial LC₅₀, 48 hours: 0,1-1 mg/cm², Eisenia Fetida (Earthworm)

Triethylamine

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hour: 330 mg/l, Fish

Acute toxicity - aquatic plants LC₅₀, 48 hour: 200 mg/l, Algae

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

Ethanol

Persistence and degradability The substance is readily biodegradable.



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12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.

Ethanol

Partition coefficient log Kow: -0,31

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Absorb in vermiculite, dry sand or earth and place into containers. Empty containers must not be punctured or incinerated because of the risk of an explosion. Do not empty into drains.

SECTION 14: Transport information

14.1. UN number or ID number

UN No. (ADR/RID) 1325

UN No. (IMDG) 1325

UN No. (ICAO) 1325

UN No. (ADN) 1325

14.2. UN proper shipping name

Proper shipping name (ADR/RID) FLAMMABLE SOLID, ORGANIC, N.O.S. (ETHANOL)

Proper shipping name (IMDG) FLAMMABLE SOLID, ORGANIC, N.O.S. (ETHANOL)

Proper shipping name (ICAO) FLAMMABLE SOLID, ORGANIC, N.O.S. (ETHANOL)

Proper shipping name (ADN) FLAMMABLE SOLID, ORGANIC, N.O.S. (ETHANOL)



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14.3. Transport hazard class(es)

ADR/RID class	4.1
ADR/RID classification code	F1
ADR/RID label	4.1
IMDG class	4.1
ICAO class/division	4.1
ADN class	4.1

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ADN packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
 No.

14.6. Special precautions for user

EmS	F-A, S-G
ADR transport category	2
Emergency Action Code	1Z
Hazard Identification Number (ADR/RID)	40
Tunnel restriction code	(E)
Limited quantities (ADR)	5 kg

14.7. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk according to IMO instruments Not applicable.

SECTION 15: Regulatory information

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

National regulations	Health and Safety at Work etc. Act 1974 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
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EU legislation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
Authorisations (SI 2020 No. 1577 Annex XIV)	No specific authorisations are known for this product.
Authorisations (Annex XIV Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (SI 2020 No. 1577 Annex XVII)	No specific restrictions on use are known for this product.
Restrictions (Annex XVII Regulation 1907/2006)	No specific restrictions on use are known for this product.
Seveso Directive - Control of major accident hazards	Not relevant.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. CAS: Chemical Abstracts Service. ATE: Acute Toxicity Estimate. LC50: Lethal Concentration to 50 % of a test population. LD50: Lethal Dose to 50% of a test population (Median Lethal Dose). EC ₅₀ : 50% of maximal Effective Concentration. PBT: Persistent, Bioaccumulative and Toxic substance. vPvB: Very Persistent and Very Bioaccumulative.
Classification abbreviations and acronyms	Flam. Sol. = Flammable solid Eye Irrit. = Eye irritation
Key literature references and sources for data	Source: European Chemicals Agency, http://echa.europa.eu/ This SDS is prepared based on the information and documents received from product owner. CRAD or/and SDS author shall not be responsible for incorrect prepared of SDS and pecuniary loss or intangible damages because of deficient or wrong information and documents which comes from product owner.
Classification procedures according to SI 2019 No. 720 and Regulation (EC) No. 1272/2008	Flam. Sol. 2 - H228: : Expert judgement.
Revision comments	SDS has been revised under the current regulations.



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Revision date	01/01/2023
Revision	09
Supersedes date	15/10/2015
SDS number	7396
Hazard statements in full	H225 Highly flammable liquid and vapour. H228 Flammable solid. H302 Harmful if swallowed. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H332 Harmful if inhaled. H335 May cause respiratory irritation.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.