

TECHNO SOLV

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 1/23/2018 Revision date: 1/23/2018 Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : TECHNO SOLV
Product code : 305001
Type of product : Detergent
Product identification : Aerosol

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : Cleaning of electrical and electronic equipment. Usable power

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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29218 BREST CEDEX 2 - FRANCE
T 02-98-43-45-44 - F 02-98-44-22-53
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1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aerosol 3 H229

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Signal word (CLP) : Warning
Hazard statements (CLP) : H229 - Pressurised container: May burst if heated.
Precautionary statements (CLP) : P102 - Keep out of reach of children.
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.
P260 - Do not breathe spray.
P271 - Use only outdoors or in a well-ventilated area.
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Extra phrases : Not to be used for any purpose other than the one the product was designed for.
For professional use only.
0,8 % by mass of the contents are flammable.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Trans-1,3,3,3-tetrafluorprop-1ène substance with a Community workplace exposure limit	(CAS-No.) 29118-24-9 (EC-No.) 471-480-0 (REACH-no) 01-0000019758-54	60 - 80	Press. Gas (Liq.), H280
Trans-1-chloro-3,3,3-trifluoropropène	(CAS-No.) 102687-65-0 (EC-No.) 700-486-0 (REACH-no) 01-2119855084-38	10 - 20	Press. Gas (Liq.), H280 Aquatic Chronic 3, H412
propan-2-ol	(CAS-No.) 67-63-0 (EC-No.) 200-661-7 (EC Index-No.) 603-117-00-0 (REACH-no) 01-2119457558-25	0.5 - 1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest. Obtain medical attention if breathing difficulty persists.
- First-aid measures after skin contact : In the event of contact with the liquid: treat resulting frostbite as a burn. Immediately remove contaminated clothing or footwear. Rinse immediately with plenty of water. If skin burns appear, call a doctor immediately.
- First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Consult an eye specialist immediately.
- First-aid measures after ingestion : Ingestion unlikely.

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

- Symptoms/effects after inhalation : CNS depression. Narcotic effect. Cardiac disorders.
- Symptoms/effects after skin contact : Contact with the liquid causes frostbite.
- Symptoms/effects after eye contact : Contact with the liquefied gas may cause severe ocular lesions.
- Symptoms/effects after ingestion : Ingestion unlikely.

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

Advice to physicians: Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : All extinguishing agents can be used.
- Unsuitable extinguishing media : None, to our knowledge.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not flammable.
- Explosion hazard : Pressurised container: May burst if heated.
- Hazardous decomposition products in case of fire : Toxic and corrosive vapours are released.

5.3. Advice for firefighters

- Precautionary measures fire : Do not enter fire area without proper protective equipment, including respiratory protection.
- Firefighting instructions : Exercise caution when fighting any chemical fire. During a fire, projections ignited aerosol that burst under excessive pressure have to be controlled. To avoid overpressure, cool aerosols with water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Measures to take in the case of crushing or piercing aerosols, causing the leaking of products contained in aerosols. Remove ignition sources. Ventilate area. Do not smoke. Provide local exhaust or general room ventilation. Evacuate and limit access.

6.1.1. For non-emergency personnel

- Emergency procedures : Do not touch spilled material. Evacuate area.

6.1.2. For emergency responders

- Protective equipment : Wear recommended personal protective equipment. Provide adequate ventilation. Remove all sources of ignition. Avoid contact with skin and eyes. Do not inhale vapour.

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6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically ventilate the spillage area.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Good ventilation of the workplace required. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Not to be used for any purpose other than the one the product was designed for. Do not breathe gas, fumes, vapour or spray. During the handling of a pallet, you have to take all precaution to avoid a start of a n accident perforation of the aerosol by a fork-lift truck. During the load and unloading of the vehicle, you have to take all the precaution to avoid a fall a aerosol. Do not spray tha aerosol neither close nor towards a flame, a white-hot body, an electrical appliance in runing, DO NOT SMOCKING. Container under pressure. Do not drill or burn even after use. Store and handle as though always a serious potential fire/explosion and health hazard exists.

Hygiene measures : Do not eat, drink or smoke during work. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep at temperature not exceeding 50 °C.

Storage conditions : Recommendations applicable to warehouses and reserves which are stored aerosols. It is recommended to de-normalize aerosols in stock . The " aerosol " or area must be set with a wire mesh of mesh max 5cm, forming a cage or using walls to avoid splashing the aerosols may ignite rest of the stock . Do not smoke.

To reduce the risk of falling, should position the pallet closest to the ground. If the packages are stacked, it should ensure that those lower layers do not crash (risk of leakage through compression).
It is recommended :
- Ventilate the premises and not store any sprays near heat sources, including sunlight, sparks and open flames
- To use the procedure of fire when working . Store in a dry, well ventilated place .

Incompatible materials : Strong oxidizing agents. Alkaline hydroxide. Alkaline earth metals.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

propan-2-ol (67-63-0)		
France	Local name	Alcool isopropylique
France	VLE (mg/m ³)	980 mg/m ³
France	VLE (ppm)	400 ppm
France	Note (FR)	Valeurs recommandées/admises
Trans-1,3,3,3-tetrafluoroprop-1ène (29118-24-9)		
EU	IOELV TWA (ppm)	800 ppm
Trans-1-chloro-3,3,3-trifluoropropène (102687-65-0)		
EU	IOELV TWA (ppm)	800 ppm

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

In case of repeated or prolonged contact wear gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer.

Eye protection:

Safety glasses

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Skin and body protection:

Skin protection appropriate to the conditions of use should be provided

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Other information:

Do not eat, drink or smoke during use. Provide local exhaust or general room ventilation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: slightly ethereal.
Odour threshold	: No data available
pH	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 0.79 (PA)
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Pressurised container: May burst if heated.
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Pressurised container: May burst if heated.

10.2. Chemical stability

The product is stable at normal handling and storage conditions. Heating may cause an explosion.

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

Heat. Open flame. Direct sunlight. Sparks. Avoid contact with hot surfaces.

10.5. Incompatible materials

Alkalis and caustic products. Strong oxidizing agents. Aerosol cases in metal, do not bring into contact with oxidize, acids or basis.

10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon dioxide. Carbon monoxide. Hydrogen halogenides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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propan-2-ol (67-63-0)	
LD50 oral rat	4700 - 5500 mg/kg
LC50 inhalation rat (mg/l)	46 - 73 mg/l/4h

Trans-1,3,3,3-tetrafluoroprop-1ène (29118-24-9)	
LC50 inhalation rat (mg/l)	> 965 mg/l/4h

Trans-1-chloro-3,3,3-trifluoropropène (102687-65-0)	
LC50 inhalation rat (ppm)	120000 ppm/4h

Skin corrosion/irritation	: Not classified pH: Not applicable
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified pH: Not applicable
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met

STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met

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Product identification	Aerosol

Potential adverse human health effects and symptoms : Contact with the liquefied gas may cause severe ocular lesions. Contact with the liquid causes frostbite.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

propan-2-ol (67-63-0)	
LC50 fish 1	>= 9640 - 10400 mg/l 96 H
EC50 Daphnia 2	2285 - 13299 mg/l 48 H

Trans-1,3,3,3-tetrafluoroprop-1ène (29118-24-9)	
EC50 Daphnia 1	> 160 mg/l
Additional information	Greenhouse GWP (CO2 = 1/100 years) = 6

Trans-1-chloro-3,3,3-trifluoropropène (102687-65-0)	
LC50 fish 1	38 mg/l oncorhynchus mykiss
EC50 Daphnia 1	82 mg/l daphnia magna
EC50 72h algae (1)	> 215 mg/l pseudokirchneriella subcapitata

12.2. Persistence and degradability

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Persistence and degradability	product persistent.

Trans-1,3,3,3-tetrafluoroprop-1ène (29118-24-9)	
Persistence and degradability	Not readily biodegradable.

Trans-1-chloro-3,3,3-trifluoropropène (102687-65-0)	
Persistence and degradability	Not readily biodegradable.

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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : Depletion potential of the ozone layer: ODP (R-11.1) = 0.

SECTION 13: Disposal considerations






13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose used or damaged aerosol cans at permitted disposal sites. Dispose in a safe manner in accordance with local/national regulations. Container under pressure. Do not drill or burn even after use.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1950	1950	1950	1950	1950
14.2. UN proper shipping name				
AEROSOLS	AEROSOLS	Aerosols, non-flammable	AEROSOLS	AEROSOLS
Transport document description				
UN 1950 AEROSOLS, 2.2, (E)	UN 1950 AEROSOLS, 2.2	UN 1950 Aerosols, non-flammable, 2.2	UN 1950 AEROSOLS, 2.2	UN 1950 AEROSOLS, 2.2
14.3. Transport hazard class(es)				
2.2	2.2	2.2	2.2	2.2
				
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : 5A
Special provisions (ADR) : 190, 327, 344, 625
Limited quantities (ADR) : 11
Excepted quantities (ADR) : E0
Packing instructions (ADR) : P207, LP02
Special packing provisions (ADR) : PP87, RR6, L2
Mixed packing provisions (ADR) : MP9
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V14
Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV12
Tunnel restriction code (ADR) : E

- Transport by sea

No data available

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- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Other information, restriction and prohibition regulations : Aerosol Generator Directive 75/324/EEC and its adaptations. Regulation 648/2004 / EC and its adaptations of detergents.

Detergent Regulation : Labelling of contents:

Component	%
halogenated hydrocarbons	>=30%

15.1.2. National regulations

France

Occupational diseases : RG 84 - Affections engendrées par les solvants organiques liquides à usage professionnel

No ICPE	Installations classées Désignation de la rubrique	Code Régime	Rayon
NEANT	NEANT		

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : Imp. DL4.

Full text of H- and EUH-statements:

Aerosol 3	Aerosol, Category 3
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product