

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2020

Revision: 12.10.2020

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

- **1.1 Product identifier**
- **Trade name:** *Metaflux 70-87 PTFE 100 Spray*
- **UFI:** *8J60-N076-900G-3DEN*
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
*No further relevant information available.*
- **Application of the substance / the mixture** *Lubricant*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*Techno Service GmbH  
Detmolder Strasse 515  
D-33605 Bielefeld  
Germany  
++49 521 924440  
www.metaflux.de  
info@metaflux.de*
- **Further information obtainable from:**  
*Sales Department  
++49 521 92444-0*
- **1.4 Emergency telephone number:**  
*+49 700124112112 or +1 872 5888271 (TSF) 24 h*

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
*Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.  
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.*

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
*The product is classified and labelled according to the CLP regulation.*
- **Hazard pictograms**



GHS02

- **Signal word** *Danger*
- **Hazard statements**  
*H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.  
H412 Harmful to aquatic life with long lasting effects.*
- **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.  
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.  
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.  
P501 Dispose of contents / container as special waste.*
- **2.3 Other hazards** *Smoking of contaminated tobacco may cause polymer-smoke-fever ·*
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

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### SECTION 3: Composition/information on ingredients

#### 3.2 Chemical characterisation: Mixtures

##### Description:

Mixture of substances listed below with nonhazardous compounds or compounds with no duty to declare.

##### Dangerous components:

CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32	butane, pure ⚠ Flam. Gas 1, H220; Press. Gas (Comp.), H280	50-100%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21	propane ⚠ Flam. Gas 1, H220; Press. Gas (Liq.), H280	10-25%
CAS: 64742-49-0 EC number: 920-750-0 Reg.nr.: 01-2119473851-33	Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cycloalkanes ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H336	2.5-10%
CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27	isobutane (<0,1% butadiene) ⚠ Flam. Gas 1, H220; Press. Gas (Comp.), H280	2.5-10%

Additional information: For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing agents:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

#### 5.2 Special hazards arising from the substance or mixture

Risk of bursting in case of fire heat

In case of fire, the following can be released:

Hydrogen fluoride (HF)

Carbon monoxide (CO)

Fluorinated pyrolysis products

#### 5.3 Advice for firefighters

##### Protective equipment:

Do not inhale explosion gases or combustion gases.

Mouth respiratory protective device.

Additional information Cool endangered receptacles with water spray.

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

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- **6.3 Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Recommended storage temperature:** 15 - 35°C, max. 50°C
- **Storage class:** German storage class: 2B (Aerosols)
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

### Ingredients with limit values that require monitoring at the workplace:

#### 106-97-8 butane, pure

WEL (Great Britain)	Short-term value: 1810 mg/m <sup>3</sup> , 750 ppm Long-term value: 1450 mg/m <sup>3</sup> , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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#### 67-63-0 Propan-2-ol

WEL (Great Britain)	Short-term value: 1250 mg/m <sup>3</sup> , 500 ppm Long-term value: 999 mg/m <sup>3</sup> , 400 ppm
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### · DNELs

#### 64742-49-0 Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cycloalkanes

Oral	DNEL Endverbraucher/ Consumers /Consommateur	699 mg/kg BW/ day (.) chronisch - systemische Wirkungen
Dermal	DNEL - Endverbraucher/ Consumers /Consommateur	699 mg/kg BW/day (.) chronisch - systemische Wirkungen
	DNEL Arbeiter / Workers/ Travailleur	773 mg/kg BW/day (.) chronisch - systemische Wirkungen
Inhalative	DNEL Endverbraucher/ Consumers /Consommateur	608 mg /m <sup>3</sup> (.) chronisch - systemische Wirkungen
	DNEL Arbeiter / Workers/ Travailleur	2,035 mg /m <sup>3</sup> (.) chronisch - systemische Wirkungen

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.

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- Keep away from tobacco products.
- **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.
  - **Protection of hands:**
  - **Material of gloves** If contamination is possible, use gloves made of nitrile according EN 374
  - **Penetration time of glove material** > 480 min / 0,4 mm thickness
  - **Eye protection:**



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

· <b>Form:</b>	Aerosol
· <b>Colour:</b>	Whitish
· <b>Odour:</b>	Recognisable

· **pH-value:** Not applicable.

##### · Change in condition

· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Initial boiling point and boiling range:</b>	-44 °C

· **Flash point:** Not applicable, as aerosol.

· **Ignition temperature:** 365 °C

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Risk of bursting at temperatures > 50°C. Damage of the container may lead to the formation of explosive mixtures of gas/vapors with air.

##### · Explosion limits:

· <b>Lower:</b>	1.5 Vol %
· <b>Upper:</b>	10.9 Vol %

· **Vapour pressure:** Not determined.

· **Pressure (20°C)** 3.5 - 4.5 bar

· **Density at 20 °C:** 0.59 g/cm<sup>3</sup>

##### · Solubility in / Miscibility with water:

Not miscible or difficult to mix.

##### · Viscosity:

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.

##### · Solvent content:

· <b>Organic solvents:</b>	8.5 %
· <b>VOC (EC)</b>	97.8 %
	97.80 %

· **Solids content:** 2.2 %

· **9.2 Other information** No further relevant information available.

· **Additional information** Vapors are heavier than air.

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### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Danger of toxic fluorine based pyrolysis products.  
In case of fire: Danger of toxic fluorine based pyrolysis products.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

**106-97-8 butane, pure**

Inhalative	LC50/4 h	658 mg/l (rat)
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**74-98-6 propane**

Inhalative	LC50/4 h	>20 mg/l (rat)
	LC50 /15 min	1,443 mg/l (rat)

**64742-49-0 Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cycloalkanes**

Oral	LD50	> 5,000 mg/kg (rat)
Dermal	LD50	>2,800 mg/kg (rabbit)
Inhalative	LC50/4 h	>23.3 mg/l (rat)

**75-28-5 isobutane (<0,1% butadiene)**

Inhalative	LC50/4 h	>20 mg/l (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

**64742-49-0 Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cycloalkanes**

EC 50 / 48h	3 mg / l (daphnia)
LC 50 / 96 h	>13.4 mg / l (onc)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish

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- **Additional ecological information:**
- **AOX-indication:** contains organic halogens, which contribute to the AOX-vakue
- **General notes:**  
Harmful to aquatic organisms  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
empty cans: material recycling  
filled cans: remove in accordance with local regulations

- **European waste catalogue**

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 05 00	gases in pressure containers and discarded chemicals
16 05 04*	gases in pressure containers (including halons) containing hazardous substances

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1950
- **14.2 UN proper shipping name**
- **ADR** 1950 AEROSOLS
- **IMDG** AEROSOLS
- **IATA** AEROSOLS, flammable

- **14.3 Transport hazard class(es)**

- **ADR**



- **Class** 2.5F Gases.
- **Label** 2.1

- **IMDG, IATA**



- **Class** 2.1
- **Label** 2.1

- **14.4 Packing group**
- **ADR, IMDG, IATA** Void

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· <b>14.5 Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Warning: Gases.
· <b>Hazard identification number (Kemler code):</b>	-
· <b>EMS Number:</b>	F-D,S-U
· <b>Stowage Code</b>	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· <b>Segregation Code</b>	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	IL
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	D
· <b>Remarks:</b>	Transportation as "LIMITED QUANTITIES" according 3.4 ADR is possible. Sole marking: Sign for "Limited Quantities" (rhombus with two black edges) Entry in the transportation document: Transportation according chapter 3.4 ADR Tunnel category "E" in case of a load of 8000 kg (rgross weight) or more.
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	IL
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>UN "Model Regulation":</b>	UN 1950 AEROSOLS, 2.1

### **SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P3a** FLAMMABLE AEROSOLS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **National regulations:**
- **Information about limitation of use:**  
Employment restrictions concerning juveniles must be observed.

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Employment restrictions concerning pregnant and lactating women must be observed.

Class	Share in %
NK	8.5

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Relevant phrases**

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H304 May be fatal if swallowed and enters airways.
- H336 May cause drowsiness or dizziness.
- H411 Toxic to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- DNEL: Derived No-Effect Level (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1: Flammable gases – Category 1
- Aerosol 1: Aerosols – Category 1
- Press. Gas (Comp.): Gases under pressure – Compressed gas
- Press. Gas (Liq.): Gases under pressure – Liquefied gas
- Flam. Liq. 2: Flammable liquids – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- Asp. Tox. 1: Aspiration hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
- Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **\* Data compared to the previous version altered.**

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