

1. Identification of the substance/preparation

Name of product	Metaflux PTFE Slide Spray Art-Nr. 70-77
Manufacturer/distributor	Techno-Service GmbH Detmolder Str.515, D-33605 Bielefeld Phone 0521/924440, Fax 0521-207432 Internet www.metaflux-ts.de
Advice	Phone 0521/9244420 Fax 0521/207432
Emergency advice	Phone 0521/924440

! 2. Composition/information on ingredients**! Chemical characterization**

PTFE, binder, organic solvents, propellant

Hazardous ingredients

CAS-No.	Name	[% weight]	Classification
000067-63-0	propan-2-ol	< 3	F, Xi R11-36-67
000074-98-6	propane	15 - 20	F+ R12
000106-97-8	butane	65 - 70	F+ R12
064742-49-0	Naphtha (petroleum), hydrotreated light	9 - 14	Xn; R11-38-51/53-65-67 F; N

Additional adviceClassification and labelling Xn/R65 is not required for preparations in aerosols containing $\geq 10\%$ of hydrocarbon solvents (s. Directive 96/54/EC, Annex V, No.8.4)

Use: Lubricant

R-Phrases see chapter 16

3. Special hazards information for man and environment**R-phrases**

12	Extremely flammable.
52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
67	Vapours may cause drowsiness and dizziness.

Special hazards information for humans and environment

Risk of bursting at temperatures above 50°C

Preparation is classified as hazardous in the sense of directive 1999/45/EC.

By use or accidental release formation of explosive mixtures with air.

Smoking of contaminated tobacco may cause polymer-smoke-fever

4. First aid measures**General information**

In the event of persistent symptoms receive medical treatment.

In case of inhalation

Remove the casualty into fresh air and keep him immobile.

In case of skin contact

In case of contact with skin wash off with soap and water.

In case of eye contact

Eye rinsing with water carefully while protecting unhurt eye.

In case of ingestion

If swallowed seek medical advice immediately and show the doctor packing or label.

Physician's information / possible symptoms

unknown

Physician's information / possible dangers

Smoking of contaminated tobacco wares may cause polymer-smoke-fever

Risk of aspiration by vomiting if swallowed, also without vomiting

Treatment (Advice to doctor)

Treat symptoms.

5. Fire-fighting measures

Suitable extinguishing material

Foam

Dry powder

Carbon dioxide

Extinguishing material that may not be used for safety reasons

Full water jet

Special exposure hazards arising from the substance, combustible products or resulting gases

Risk of bursting by fire heat

Risk of formation of toxic products

Special protective equipment for firefighters

Do not inhale explosion and/or combustion gases.

Additional information

Remove from fire range, otherwise cool with water spary mist to prevent from bursting by fire heat.

6. Accidental release measures

Personal precautions

Ensure adequate ventillation.

Keep away sources of ignition.

Environmental precautions

Product shall not reach the drain or soil.

Methods for cleaning up/taking up

Stem and take up with absorbent material (e.g. sand, peat, earth).

Take up mechanically and send for disposal.

Additional Information

Keep off any handling equipment with engines (source of ignition)

7. Handling and storage

Advice on safe handling

Provide good room ventilation even at ground level (vapours are heavier than air).

Advice on protection against fire and explosion

Risk of injuries and fire spreading by bursting caused by fire heat

Requirements for storage rooms and vessels

Observe National and Local regulation

Advice on storage compatibility

no

Further information on storage conditions

Storage temperature may not exceed 40°C (=104°F).

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Storage group 2B**Fire class** C**Information on storage stability**

Storage time: 24 months.

8. Exposure controls / personal protection**Additional advice on system design**

Generally not required

Ingredients with occupational exposure limits to be monitored

CAS-No.	Name	Code	[mg/m ³]	[ml/m ³]	Remark
000067-63-0	propan-2-ol	AGW	500	200	Y
000074-98-6	Propane	AGW	1800	1000	DFG
000106-97-8	Butane	AGW	2400	1000	DFG Grenzwert
64742-49-0	hydrocarbon vapours	MAK	1000	200	in Überarbeitung

Respiratory protection

Generally not required

Hand protection

If contamination is possible use chemical-resistant gloves made of nitrile (EN 374; permeation time > 480 min))

Eye protection

Generally not required

Skin protection

Generally not required

General protective measures

Do not inhale aerosols

Hygiene measures

Avoid contaminating of tobacco wares

Cloths contaminated with product should not be kept in trouser pockets.

At work do not eat, drink and smoke.

Remove soaked clothing immediately.

! 9. Physical and chemical properties**Form**
aerosol**Colour**
white**Odour**
like petrol (gasoline)**Data relevant for safety**

	Value	Temperature	at	Method	Remark
pH value in delivery state					not applicable
Acid number					not applicable
Changes in physical state solid/fluid					not applicable
Changes in physical state gas					not applicable

Safety data-sheet (91/155 EEC)

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	Value	Temperature	at	Method	Remark
Flash point	< 0 °C				informations concern to solvent
Flammable solid					not applicable
Flammable gas					not applicable
Combustion temperature					not applicable
Autoignition					not applicable
Lower explosion limit	ca. 1,5 Vol-%				informations concern to propellant only
Upper explosion limit	ca. 11 Vol-%				informations concern to propellant only
Vapour pressure	ca. 3,8 bar	20 °C			
Density	ca. 0,587 g/cm ³	20 °C			
Bulk density					not applicable
Rel. vapour density					not applicable
Solubility in water					immiscible
Solubility/other					organic solvent
Partition coefficient (log p_{OW})					not determined
Viscosity 1					not applicable
Viscosit 2					not applicable
Solvent separation test					not applicable
Solvent concentration	ca. 16,5 %				
Explosive properties	When used formation of explosive mixtures may be possible				
Additional information	no				

10. Stability and reactivity

Conditions to avoid

near ignition sources(sparks, flames, glow)

Materials to avoid

no

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Hazardous decomposition products

risk of formation of toxic, fluoric pyrolyse products

Thermal decomposition

Method no

Remark No decomposition below 260°C.

Additional information

no

11. Toxicological information**Acute toxicity/Irritability/Sensitization**

	Value/Validation	Species	Method	Remark
LD 50 acute oral				no data available
LD 50 acute dermal				no data available
LC 50 acute inhalation				no data available
Irritability skin				low
Irritability eye				low
Sensitization skin				no
Sensitization respiratory system				no

Subacute Toxicity - Carcinogenicity

	Value	Species	Method	Validation
Subacute Toxicity				no data available
Subchronic Toxicity				no data available
Chronic Toxicity				no data available
Mutagenicity				no
Reproduction-Toxicity				no
Carcinogenicity				no

Toxicity test (Additional information)

no

Experiences made from practice

Smoking of contaminated tobacco wares may cause polymer-smoke fever

Additional information

Avoid minimal contamination of tobacco wares. Smokers should wash the hands before smoking.

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12. Ecological information**Data on elimination (persistence and degradability)**

	Elimination rate	Method of analysis	Method	Validation
Physico-chemical degradability	The product doesn't reach sewage by using as destinated			
Biological degradability	The product doesn't reach sewage by using as destinated			
Degradability	The product doesn't reach sewage by using as destinated			
Biological eliminability	The product doesn't reach sewage by using as destinated			
Degradability according to WRMG	The product doesn't reach sewage by using as destinated			

Mobility and bioaccumulative potential

The product doesn't reach sewage by using as destinated

Ecotoxicological effects

	Value	Species	Method	Validation
Fish				no data available
Daphnia				no data available
Algae				no data available
Bacteria				no data available

Behaviour in sewage plant

The product doesn't reach sewage by using as destinated

Breathing inhibition of activated sludge

	Value	Method	Remark
EC 50			no

Additional ecological information

	Value	Method	Remark
OC			not determined
COD			not determined
BOD			not determined
AOX	The product contains organically halogen, it can contribute to the adsorbable organic halogen value.		

Contains following heavy metals and compounds of the 76/464/EWG

no

General regulation

VOC = 0.232 kg/can

The solvent, which is classified as "toxic for aquatic organism" is fast evaporating and does not reach open waters.

13. Disposal considerations**Waste code No.**

16 05 04

Name of waste

gases in pressure containers (including halons) containing dangerous substances

Recommendations for the product

empty cans: material recycling

filled cans: remove in accordance with local regulations

Recommendations for packaging

material recycling EWC 150104

Recommended cleansing agent

Hydrocarbon solvent

General information

Give only emptied containers to recycling

14. Transport information**Land and inland navigation transport (ADR/RID/GGVS/GGVE/ADNR)****Identification** UN 1950 AEROSOLS, 2.1**UN-No.** 1950**Class** 2 / Classification code 5F**PG** -**Remarks**

Transportation as Limited Quantities (LQ 2); Marking: UN 1950 (rhombe)

Entry in the transportation document: Transportation according chapter 3.4 ADR

Marine transport IMDG/GGV See**Proper shipping name** AEROSOLS**UN-No.** 1950**Class** 2**PG** -**Marine pollutant** No**EmS-No.** F-D,S-U**Remarks**

Entry in transportation document: limited quantities

Marks: UN 1950 (rhombe)

Air transport ICAO/IATA**Proper shipping name** Aerosols, flammable**UN/ID-No.** UN1950**Class** 2.1**PG** -**Remarks**

UN-4G/Y fibre board boxes required

Label: Flammable Gas

Marking: Aerosols, flammable UN 1950

Transport/further informations

ADR Transport Emergency Card: not required

15. Regulatory information**Classification****F+** Extremely flammable

R-phrases

- 12 Extremely flammable.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
67 Vapours may cause drowsiness and dizziness.

S-phrases

- 23.4 Do not breathe spray.
24/25 Avoid contact with skin and eyes.
35 This material and its container must be disposed of in a safe way.
51 Use only in well-ventilated areas.

Special labelling for certain preparations

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - no smoking. Keep out of the reach of children.

Without sufficient ventilation formation of explosive mixtures may be possible.

National regulations

Restriction of occupation

no

Classification according BetrSichV Extremely flammable
(german regulation)

Water hazard class

1 self-classification to German water pollution class

Other regulations, restrictions and prohibition regulations

no

16. Other information

Training advice

Use the entries of this Material Safety Data Sheet

Recommend uses and restrictions

Observe care instructions

Further information

R-Phrases from chapter 2 (not the classification of the product):

R 11: Highly flammable

R 12: Extremely flammable

R 36: Irritating to eyes

R 67: Vapours may cause drowsiness and dizziness.

R 65: Harmful: may cause lung damage if swallowed.

R 38 :Irritating to skin.

R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Sources of key data used

Material Safety Data Sheets of raw materials