

1. Identification of the substance/preparation

Name of product	Metaflux Open Gear and Chain Spray Art-Nr. 70-07
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**

High performance grease, hydrocarbon solvent, propellant

Hazardous ingredients

CAS-No.	Name	[% weight]	Classification
000074-98-6	propane	5 - 15	F+ R12
000106-97-8	butane	40 - 50	F+ R12
064742-49-0	Naphtha (petroleum), hydrotreated light	< 15	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)

intended use: as 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.

Special hazards information for humans and environment

Using may cause explosive mixtures with air

Risk of bursting at temperatures above 50°C

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

4. First aid measures**General information**

Take affected person into fresh air.

In case of inhalation

Remove the casualty into fresh air and keep him immobile.

In case of skin contact

wash 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

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

Special protective equipment for firefighters

Use breathing apparatus with independent air supply (in closed rooms)

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

Keep away sources of ignition.

Environmental precautions

Product shall not reach the drain or soil.

Methods for cleaning up/taking up

Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust).

Additional Information

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

7. Handling and storage

Advice on safe handling

Ensure good room ventilation

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

Protect from direct solar radiation.

Storage group 2B

Fire class C

Information on storage stability

Storage time: 24 months.

8. Exposure controls / personal protection

Additional advice on system design

use only in well-ventilated area

Ingredients with occupational exposure limits to be monitored

CAS-No.	Name	Code	[mg/m ³]	[ml/m ³]	Remark
000074-98-6	propane	MAK	1800	1000	
000106-97-8	butane	MAK	2400	1000	
64742-49-0	hydrocarbon vapours	MAK	1000	200	

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

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

9. Physical and chemical properties

Form aerosol	Colour black	Odour like petrol (gasoline)
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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
Flash point					not applicable for aerosol cans
Flammable solid					not applicable
Flammable gas					not applicable
Combustion temperature					not applicable
Autoignition					not applicable

	Value	Temperature	at	Method	Remark
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	2500 - 3000 hPa	20 °C			
Density	ca. 0,682 g/cm ³	20 °C			
Bulk density					not applicable
Rel. vapour density					not applicable
Solubility in water					nearly insoluble
Solubility/other					organic solvent
Solvent concentration	ca. 11 %				
Oxidizing properties not in the sence of the Dangerous Preparations Directives					
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

Hazardous decomposition products

not by destinated use

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

Value/Validation	Species	Method	Remark
LC 50 acute inhalation			no data available
Irritability skin			Sometimes short-term reddening of skin may occur.
Irritability eye			schwach reizend
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 no negative experience			
Additional information no			

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 has not been tested. Because of the product's consistency and low solubility in water bioavailability is not likely.

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 destined

Breathing inhibition of activated sludge

Value	Method	Remark
EC 50		no data available

Additional ecological information

Value	Method	Remark
OC		not determined
COD		not determined
BOD		not determined
AOX	no	

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

no

General regulation

VOC = 0.179 kg/ 400 ml aerosol can

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.

S-phrases

23.3 Do not breathe vapour.
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

Observe employment restrictions for young people.

Observe employment restrictions for mothers-to-be and nursing mothers.

Classification according BetrSichV Extremely flammable
(german regulation)

Water hazard class 1 classification according german water pollution law

Other regulations, restrictions and prohibition regulations

no

16. Other information

Training advice

Use the entries of this Material Safety Data Sheet

Recommendend 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 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