
1. Identification of the substance/preparation

Name of product	Metaflux Ceramics Spray - white Art-Nr. 70-86
Manufacturer/distributor	Techno-Service GmbH Detmolder Str.515, D-33605 Bielefeld Phone 0521/924440, Fax 0521-207432
Advice	Verkauf Phone 0521/9244420 Fax 0521/207432
Emergency advice	Zentrale Phone 0521/924440

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

Mineral oil, inorganic solids, organic solvents, propane/butane

Hazardous ingredients

CAS-No.	Name	[% weight]	Classification
000067-63-0	propan-2-ol	10 - 15	F, Xi R11-36-67
000074-98-6	propane	15 - 20	F+ R12
000106-97-8	butane	60 - 65	F+ R12
064742-49-0	Naphtha (petroleum), hydrotreated light	15 - 19,9	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)

to CAS-No. 64742-49-0 : This material contains < 0.1 Benzene and must not be classified as carcinogenic (nota P)

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.
67	Vapours may cause drowsiness and dizziness.

Special hazards information for humans and environment

Using may cause explosive mixtures with air

! 4. First aid measures**General information**

Take affected person into fresh air.

In case of inhalation

In case of inhalation remove the casualty into fresh air and seek medical advice.

! 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

Seek medical advice immediately.

Rinse out mouth thoroughly with water.

! Physician's information / possible symptoms

Inhalation of vapors in high amounts may cause: headache

Confusion

! 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 (isolated)

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).

Additional Information

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

7. Handling and storage

Advice on safe handling

Care for thoroughly room ventilation, if necessary suck off at workplace.

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 heat and 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
000067-63-0	Propane-2-ol	MAK	500	200	Y, DFG
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)

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.

At work do not eat, drink, smoke or take drugs.

! 9. Physical and chemical properties**Form**
aerosol**Colour**
white**Odour**
alcoholic**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	< 0 °C				
Flammable solid					not applicable

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	Value	Temperature	at	Method	Remark
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. 2900 hPa	20 °C			
Density	ca. 0,71 g/cm ³	20 °C			
Bulk density					not applicable
Rel. vapour density					not applicable
Solubility in water					partially soluble
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. 32,5 %				
Shock sensitivity	not applicable				
Oxidizing properties	no				
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

No hazardous decomposition products known.

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				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			

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	Elimination rate	Method of analysis	Method	Validation
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 destinated

Breathing inhibition of activated sludge

Value	Method	Remark
EC 50		not determined

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 = 0.204 kg/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

material recycling according to National or Local regulations

Recommendations for packaging

material recycling EWC 150104

! Recommended cleansing agent

Alcohol

! 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.	2-13

Remarks

Entry in transportation document: limited quantities
 Marks: AEROSOLS UN 1950

Air transport ICAO/IATA

Proper shipping name	Aerosols, flammable
UN/ID-No.	UN1950
Class	2.1
PG	II

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

**Decree for case of interference/
remarks** not applicable

**Classification according to VbF/
remarks** not applicable

German TA LUFT remarks

not applicable

Water hazard class 1 german water pollution classification

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:

R 11: Highly 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
