

Safety Data Sheet according to EC-Regulation 91/155/EEC

1. Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

Metaflux 70-57 Kupfer-Spray/ Copper-Spray

Use of the substance/preparation

Coating

Company/undertaking identification

TECHNO-SERVICE GmbH Detmolder Str. 515 D-33605 Bielefeld
Telephone ++49-521-924440 Telefax ++49-521-207432

Emergency telephone / Office for advice

Advisory office in case of poisoning:

Tel. --

Telephone number of the company in case of emergencies:

Tel. --

2. Composition/information on ingredients

2.1 Chemical name	content %	symbol	R- phrases	EINECS, ELINCS	CAS
Xylene	1 - < 12,5	Xn/Xi	10-20/21-38	215-535-7	1330-20-7
Acetone	1 - 15	F/Xi	11-36-66-67	200-662-2	67-64-1
Naphtha (petroleum), hydrodesulfurized heavy	1 - < 2,5	Xn/N	10-51-53-65- 66-67	265-185-4	64742-82-1
Naphtha (petroleum), hydrotreated heavy	1 - < 10	Xn	10-65	265-150-3	64742-48-9

For complete wording of the R-phrases, refer to point 16.

3. Hazards identification

3.1 To people

See point 11 and 15.

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

Product is extremely flammable.

Vapours may cause drowsiness and dizziness

When using: development of explosive vapour/air mixture possible.

3.2 To the environment

See point 12.

Hydrocarbons can be harmful to water.

4. First aid measures

4.1 Inhalation

Supply person with fresh air and consult doctor according to symptoms.

Keep Data Sheet available.

4.2 Eye contact

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Keep Data Sheet available.

4.3 Skin contact

Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

4.4 Ingestion

Do not induce vomiting. Consult doctor immediately.

Keep Data Sheet available.

4.5 Special resources necessary for first aid

n.g.

5. Fire-fighting measures

5.1 Suitable extinguishing media

Dry extinguisher

CO2

5.2 Extinguishing media which must not be used for safety reasons

High volume water jet

5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

In case of fire the following can develop:

Danger of explosion by prolonged heating.

Decomposition products

Gases hazardous to health

5.4 Special protective equipment for fire-fighters

Protective respirator with independent air supply

According to size of fire

Full protection, if necessary

5.5 Further information

Dispose of contaminated extinction water according to official regulations.

6. Accidental release measures

Refer to point 13. and for personal protection refer to point 8.

6.1 Personal precautions

Remove possible causes of ignition - do not smoke.

Ensure sufficient supply of air.

Avoid inhalation, and contact with eyes or skin.

6.2 Environmental measures

If leakage occurs, dam up.

6.3 Methods for cleaning up

If spray or gas escapes, ensure ample fresh air is available.

Active substance:

Collect using absorbant material (e.g. Universal binding medium), and dispose of according to point 13.

7. Handling and storage

7.1 Handling

Tips for safe handling:

See point 6.1

Handle only when appropriate ventilation system is activated.

Observe directions on label and instructions for use.

Keep away from sources of ignition - Do not smoke.

Ensure good ventilation.

Only use working methods according to operating instructions.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

7.2. Storage

Requirements for storage rooms and containers:

Not to be stored in gangways or stair wells.

Do not store with flammable or self-igniting materials.

Observe regulations for keeping separated.

Store products only unopened, in original packing.

Observe special regulations for aerosols.

Observe TRG 300 (German regulation).

Special storage conditions:

See point 10.2

Protect from direct sunlight and warming.

8. Exposure controls/personal protection

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AG values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Chemical Name Xylene			
WEL-TWA: 50 ppm (220 mg/m ³) (WEL), 50 ppm (221 mg/m ³) (EC)	WEL-STEL: 100 ppm (441 mg/m ³) (WEL), 100 ppm (442 mg/m ³) (EC)		---
BMGV: 650 mmol methyl hippuric acid/mol creatinine in urine, post shift (Xylene, o-, m-, p- or mixed isomers) (BMGV)	Other information: Sk (WEL)		
Chemical Name Acetone			
WEL-TWA: 500 ppm (1210 mg/m ³) (WEL, EC)	WEL-STEL: 1500 ppm (3620 mg/m ³) (WEL)		---
BMGV: ---	Other information: ---		
Chemical Name Naphtha (petroleum), hydrodesulfurized heavy			
WEL-TWA: 70 ppm (350 mg/m ³) (AG)	WEL-STEL: 4 (AG)		---
BMGV: ---	Other information: ---		
Chemical Name Naphtha (petroleum), hydrotreated heavy			
WEL-TWA: 200 ppm (1000 mg/m ³) (AG)	WEL-STEL: 4 (AG)		---
BMGV: ---	Other information: ---		
Chemical Name Butane			
WEL-TWA: 600 ppm (1450 mg/m ³)	WEL-STEL: 750 ppm (1810 mg/m ³)		---
BMGV: ---	Other information: ---		
Chemical Name Copper			
WEL-TWA: 1 mg/m ³ (dusts and mists, as Cu)	WEL-STEL: 2 mg/m ³ (dusts and mists, as Cu)		---
BMGV: ---	Other information: ---		
Chemical Name n-butyl acetate			
WEL-TWA: 150 ppm (724 mg/m ³)	WEL-STEL: 200 ppm (966 mg/m ³)		---
BMGV: ---	Other information: ---		

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AG = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BG = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

- | | |
|---|---|
| 8.1 Respiratory protection:
Gas mask filter A (EN 141) | If OES or MEL is exceeded. |
| 8.2 Hand protection:
Rubber gloves (EN 374). | Recommended |
| 8.3 Eye protection: | Tight fitting protective goggles (EN 166) with side protection, with danger of projections. |
| 8.4 Skin protection: | Protective working garments (e.g. safety shoes EN 344, long- sleeved protective working garments) |

Additional information on hand protection - No tests have been performed.
Selection made for preparations according to the best available knowledge and information on the ingredients.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of preparations the resistance of glove materials cannot be calculated in advance so it has to be tested before use. The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

9. Physical and chemical properties

Physical state:	Aerosol
Substance:	Liquid
Colour:	Copper
Odour:	n.v.
pH-value undiluted:	n.v.
Boiling point/range (°C):	-48 - -1 *
Melting point/range (°C):	n.v.

Flash point (°C):	n.g.
Flammability (solid/gas):	Yes
Vapour pressure:	3,5 - 4,2 bar/20°C, 8,5 - 9,5 bar/50°C
* Butane	
* Propane	

10. Stability and reactivity

10.1 Conditions to avoid

See point 7

Pressure increase will result in danger of bursting.

Heating, open flame, ignition sources

10.2 Materials to avoid

See point 7

Avoid contact with oxidizing agents.

Avoid contact with other chemicals.

10.3 Hazardous decomposition products

See point 5.3

10.4 Additional information

Stabilizers necessary: k.D.v.

Stabilizers available: k.D.v.

11. Toxicological information

11.1 Acute toxicity and immediate effects

Ingestion, LD50 rat oral (mg/kg): n.v.

Inhalation, LC50 rat inhal.(mg/l/4h): n.v.

Skin contact, LD50 rat dermal (mg/kg): n.v.

Eye contact: n.v.

11.2 Delayed and chronic effects

Sensitization: n.g.

Carcinogenicity: n.g.

Mutagenicity: n.g.

Reproductive toxicity: n.g.

Narcosis: Possible

11.3. Further information

No classification according to calculation procedure.

12. Ecological information

Water hazard class (Germany): 2

Self classification: Yes (VwVwS)

Persistence and degradability: n.v.

Readily biodegradable (>70% OECD 301E *, 91%/28d **)

Behaviour in sewage plants: n.v.

Aquatic toxicity: n.v.

Toxicity to fish:

LC50 Leuciscus idus 141 mg/l *

LC50 Lepomis macrochirus 8300 mg/l/96h **

Toxicity to daphnia:

EC50 Daphnia magna 72,8 mg/l/24h *

EC50 Daphnia magna 12600 - 12700 mg/l/48h **

Toxicity to algae:

EC0 Scenedesmus quadricauda 320 mg/l *

IC5 Scenedesmus quadricauda 7500 mg/l/8d **

Ecological toxicity: n.v.

Toxicity to bacteria:

EC0 Pseudomonas putida 115 mg/l *

EC5 Microcystis aeruginosa 530 mg/l/8d **

EC5 Pseudomonas putida 1700 mg/l/16h **

* n-butyl acetate

** Acetone

13. Disposal considerations

13.1. for the material / preparation / residue

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances.

16 05 04 gases in pressure containers (including halons) containing dangerous substances

20 01 99 other fractions not otherwise specified

Recommendation:

Pay attention to local and national official regulations

E.g. dispose at suitable refuse site.

13.2 for contaminated packing material

See point 13.1

Pay attention to local and national official regulations

14. Transport information

General statements

UN-Number: 1950

Road/Rail-transport (ADR/RID)

Class/packing-group: 2/-

UN 1950 AEROSOLS

Classification code: 5F

LQ: 2

Transport by sea

IMDG-code: 2/- (class/packing-group)

EmS: F-D, S-U

Marine Pollutant: Yes

AEROSOLS

Copper Metal Powder

Transport by air

IATA: 2.1/-/ (class/secondary danger/packing-group)

Aerosols, flammable

Additional information:

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

15. Regulatory information

Classification according to Dangerous Product Regulations incl. EC Directives (67/548/EEC and 1999/45/EC)



Symbols: F+

Indications of danger: Extremely flammable

R-phrases:

12 Extremely flammable.

67 Vapours may cause drowsiness and dizziness.

Without adequate ventilation, formation of explosive mixtures may be possible.

S-phrases:

9 Keep container in a well-ventilated place.

23.f Do not breathe vapour/spray.

35 This material and its container must be disposed of in a safe way.

(46) If swallowed, seek medical advice immediately and show this container or label.

51 Use only in well-ventilated areas.

Additions: n.a.

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.

Observe restrictions: Yes
Observe youth employment law (German regulation).

16. Other information

These details refer to the product as it is delivered.

Storage class VCI (Germany): 2 B
Revised points: 1, 2, 8, 12, 15

The following phrases represent the prescribed R-phrases for the ingredients (designated in point 2).

10 Flammable.

20/21 Harmful by inhalation and in contact with skin.

38 Irritating to skin.

11 Highly flammable.

36 Irritating to eyes.

66 Repeated exposure may cause skin dryness or cracking.

67 Vapours may cause drowsiness and dizziness.

51 Toxic to aquatic organisms.

53 May cause long-term adverse effects in the aquatic environment.

65 Also harmful: may cause lung damage if swallowed.

Legend:

n.a. = not applicable / n.v., k.D.v. = not available / n.g. = not checked

OES = Occupational exposure standard / MEL = Maximum exposure limit / BMGV = Biological monitoring guidance value

AG = "Arbeitsplatzgrenzwert" (workplace limit value, Germany) / BG = "Biologischer Grenzwert" (biological limit value, Germany)

VbF = Regulations for flammable liquids (Austria)

WGK = water hazard class (Germany) - WGK 3 = very hazardous, WGK 2 = hazardous, WGK 1 = slightly hazardous to water

VOC = Volatile organic compounds / AOX = Adsorbable organic halogen compounds

VwVwS = Administrative Order relating to substances hazardous to water (Germany)

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.