
1. Identification of the substance/preparation

| | |
|---------------------------------|---|
| Name of product | Metaflux Aluminium Spray non-effacible Art-Nr. 70-52 |
| 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

Aluminium, terpene phenol resin, acrylic resin, organic solvents, propane/ butane

Hazardous ingredients

| CAS-No. | Name | [% weight] | Classification |
|----------------|--|-------------------|--------------------------------|
| 000074-98-6 | propane | 8 - 15 | F+ R12 |
| 000106-97-8 | butane | 45 - 55 | F+ R12 |
| 000141-78-6 | ethyl-acetate | 10 - 19,9 | F, Xi R11-36-66-67 |
| 064742-49-0 | Naphtha (petroleum), hydrotreated light | 10 - 19,9 | Xn; R11-38-51/53-65-67 F; N |
| 064742-82-1 | Naphtha (petroleum), hydrodesulfurized heavy | < 2,5 | Xn R10-51/53-65-66-67 |

Additional advice

Classification 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: Paint

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

When used formation of explosive gas/air mixtures may be possible

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 immediately with soap and water.

In case of eye contact

Eye rinsing with water carefully while protecting unhurt eye.

In case of ingestion

Rinse out mouth thoroughly with water.

Physician's information / possible symptoms

unknown

Physician's information / possible dangers

unknown

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.

Additional information

Cool containers at risk with water spray jet.

6. Accidental release measures

Personal precautions

Ensure adequate ventilation.

Keep away sources of ignition.

Environmental precautions

Generally not required

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 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**

no

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 | |
| 000141-78-6 | ethyl-acetate | MAK | 1500 | 400 | Y |
| 064742-82-1 | hydrocarbon vapours | MAK | 200 | 50 | |
| 64742-49-0 | hydrocarbon vapours | MAK | 1000 | 200 | |

Respiratory protection

Generally not required

required by exceeding the limit values

Filter A or environment-independent breathing apparatus

Hand protection

Use glove made of nitrile (according to EN 374) in case of prolonged and intensive contact with the skin

Eye protection

Generally not required

Skin protection

Generally not required

General protective measures

Do not inhale aerosols

Hygiene measures

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

9. Physical and chemical properties**Form**

aerosol

Colour

silver-coloured

Odour

ester-like

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 |

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| | Value | Temperature | at | Method | Remark |
|---|--|-------------|----|--------|---|
| 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. 3000 hPa | 20 °C | | | |
| Density | ca. 0,645 g/cm ³ | 20 °C | | | |
| Bulk density | | | | | not applicable |
| Rel. vapour density | | | | | not applicable |
| Solubility in water | | | | | more or less insoluble |
| 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. 29 % | | | | |
| Oxidizing properties | no | | | | |
| Explosive properties | Through use 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

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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 | not applicable | | | |

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

13. Disposal considerations

| Waste code No. | Name of waste |
|-----------------------|---|
| 08 01 11 | waste paint and varnish containing organic solvents or other dangerous substances |
| 16 05 05 | gases in pressure containers other than those mentioned in 16 05 04 |

Recommendations for the product

material recycling according to National or 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 | 1950 AEROSOLS 2 ADR |
| UN-No. | 1950 |
| Class | 2 |
| Hazard No. | 23 |
| Remarks | Entry in transportation paper: transport according to Chapter 3.4 ADR Marking: UN 1950 (rhombe) |

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

- 23.3 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.

! 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.

Name, adress and Telefone-No. of the supplier

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

The regulations of EU-Directive 98/98/EC, 1999/45/EC, 2001/58/EC and 2001/59/EC are taken into consideration

Sources of key data used

Material Safety Data Sheets of raw materials