

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.11.2020

Revision: 19.11.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** *METAFLUX 70-3500 ROST-I-SOL®-Spray*
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** *Coating material*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*Techno Service GmbH
Detmolder Strasse 515
D-33605 Bielefeld
Germany
+49 521 924440
www.metaflux.de
info@metaflux.de*
- **Further information obtainable from:**
*Sales Department
+49 521 92444-0*
- **1.4 Emergency telephone number:**
+49 70024112112 or +1 872 5888271 (TSF) 24h

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** *Danger*
- **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
- **Precautionary statements**

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe vapours/spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of contents / container as special waste.
- **Additional information:**
Without sufficient ventilation formation of explosive mixtures may be possible.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*

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· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**· **Description:** Polymeric filmformers, additives, organic solvents, water, propellant.· **Dangerous components:**

CAS: 115-10-6 EINECS: 204-065-8	dimethyl ether ⚠ Flam. Gas 1, H220; Press. Gas C, H280	50-100%
CAS: 64-17-5 EINECS: 200-578-6 Reg.nr.: 01-2119457610-43	ethanol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319	10-25%
CAS: 111-76-2 EINECS: 203-905-0 Reg.nr.: 01-2119475108-36	2-butoxyethanol ⚠ Acute Tox. 4, H302; ⚠ Acute Tox. 4, H312; ⚠ Acute Tox. 4, H332; ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2, H319	≥0.1-≤2.5%
CAS: 1336-21-6 EINECS: 215-647-6 Reg.nr.: 01-2119488876-14	ammonia ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400	≥0.1-≤0.25%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**· **General information:**

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.· **After skin contact:**

Generally the product does not irritate the skin.

Wash with water and soap

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Seek medical treatment.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**· **Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.· **5.2 Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

Risk of bursting in case of fire heat

· **5.3 Advice for firefighters**· **Protective equipment:**

Mouth respiratory protective device.

Wear fully protective suit.

· **Additional information** Cool endangered receptacles with water spray.

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SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Particular danger of slipping on leaked/spilled product.

Keep sources of ignition (flames, sparks, etc.) away. Do not use engines near by (potential source of ignition)

Ensure adequate ventilation

· 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Absorb liquid components with liquid-binding material.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Avoid inhalation and contact with the skin and the eyes.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

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

Do not spray onto a naked flame or any incandescent material.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles:

Observe official regulations on storing packagings with pressurised containers.

· Information about storage in one common storage facility: Store away from oxidising agents.

· Further information about storage conditions: Keep container tightly sealed.

· Recommended storage temperature: 15 - 35°C, max. 50°C

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

115-10-6 dimethyl ether

WEL (Great Britain) Short-term value: 958 mg/m³, 500 ppm

Long-term value: 766 mg/m³, 400 ppm

IOELV (EU)

Long-term value: 1920 mg/m³, 1000 ppm

64-17-5 ethanol

WEL (Great Britain) Long-term value: 1920 mg/m³, 1000 ppm

111-76-2 2-butoxyethanol

WEL (Great Britain) Short-term value: 246 mg/m³, 50 ppm

Long-term value: 123 mg/m³, 25 ppm

Sk, BMGV

IOELV (EU)

Short-term value: 246 mg/m³, 50 ppm

Long-term value: 98 mg/m³, 20 ppm

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· DNELs**111-76-2 2-butoxyethanol**

Oral	DNEL Endverbraucher/ Consumers /Consommateur	13.4 mg/kg BW/ day (.)
Dermal	DNEL - Endverbraucher/ Consumers /Consommateur	44.5 mg/kg BW /day (.)
	DNEL Arbeiter / Workers/ Travailleur	89 mg/kg BW /day (.)
Inhalative	DNEL Endverbraucher/ Consumers /Consommateur	426 mg /m3 (.)
	DNEL Arbeiter / Workers/ Travailleur	246 mg /m3 (.)

· Ingredients with biological limit values:**111-76-2 2-butoxyethanol**

BMGV (Great Britain)	240 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: butoxyacetic acid
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· Additional information: The lists valid during the making were used as basis.**· 8.2 Exposure controls****· Personal protective equipment:****· General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

· Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Use filter AX (EN 14387) for low boiling organic vapors / gases (bp < 65°C).

· Protection of hands:**· Material of gloves** If contamination is possible, use gloves made of nitrile according EN 374**· Penetration time of glove material** >480 min / 0,9mm**· Eye protection:** Safety glasses**SECTION 9: Physical and chemical properties****· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:****Form:** Aerosol**Colour:** Black**· Odour:** ether like**· Odour threshold:** Not determined.**· pH-value:** 7.3 - 8.5**· Change in condition****Melting point/freezing point:** Undetermined.**Initial boiling point and boiling range:** -24°C
value concerns to propellant**· Flash point:** -42°C

concerns to propellant

· Flammability (solid, gas): Contains extremely flammable liquefied gas**· Ignition temperature:** 235°C**· Decomposition temperature:** Not determined.**· Auto-ignition temperature:** Product is not selfigniting.

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· Explosive properties:	Risk of bursting at temperatures > 50°C. Damage of the container may lead to the formation of explosive mixtures of gas/vapors with air.
· Explosion limits:	
Lower:	3 Vol %
Upper:	18.6 Vol %
Pressure (20°C)	5 - 6 bar
· Density at 20°C:	ca. 0.8 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Partly soluble.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	ca. 6.5 %
VOC (EC)	62.40 %
· 9.2 Other information	No further relevant information available.
· Additional information	Vapors are heavier than air.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Risk of bursting at temperatures >50°C.
- **10.3 Possibility of hazardous reactions**
By use or incidental release the formation of explosive vapor/air mixtures is possible.
- **10.4 Conditions to avoid**
Temperatures >50°C
Avoid the use in the near of ignition sources.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.
- **Additional information:** Stable for a storage time of min. 24 months

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

115-10-6 dimethyl ether		
Inhalative	LC50/4 h	308 mg/l (rat)
64-17-5 ethanol		
Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4 h	20,000 mg/l (rat)
111-76-2 2-butoxyethanol		
Oral	LD50	1,480 mg/kg (rat)

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Dermal	LD50	400 mg/kg (rab)
Inhalative	LC50/4 h	2.21 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

64-17-5 ethanol

LC 50 / 96 h | 8,150 mg / l (gol)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
empty cans: material recycling
filled cans: remove in accordance with local regulations

· European waste catalogue

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 05 00	gases in pressure containers and discarded chemicals
16 05 04*	gases in pressure containers (including halons) containing hazardous substances

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1950

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· **14.2 UN proper shipping name**
 · **ADR** 1950 AEROSOLS
 · **IMDG** AEROSOLS
 · **IATA** AEROSOLS, flammable

· **14.3 Transport hazard class(es)**· **ADR**

· **Class** 2 5F Gases.
 · **Label** 2.1

· **IMDG, IATA**

· **Class** 2.1
 · **Label** 2.1

· **14.4 Packing group**· **ADR, IMDG, IATA** Void· **14.5 Environmental hazards:** Not applicable.· **14.6 Special precautions for user**· **Danger code (Kemler):** -· **EMS Number:** F-D,S-U· **Segregation groups** Ammonium compounds· **Stowage Code** SW1 Protected from sources of heat.· **Segregation Code**

SW22 For AEROSOLS with a maximum capacity of 1 litre:
 Category A. For AEROSOLS with a capacity above 1 litre:
 Category B. For WASTE AEROSOLS: Category C, Clear
 of living quarters.
 SG69 For AEROSOLS with a maximum capacity of 1 litre:
 Segregation as for class 9. Stow "separated from" class 1
 except for division 1.4. For AEROSOLS with a capacity
 above 1 litre: Segregation as for the appropriate
 subdivision of class 2. For WASTE AEROSOLS:
 Segregation as for the appropriate subdivision of class 2.

· **14.7 Transport in bulk according to Annex II of
Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)** IL· **Excepted quantities (EQ)** Code: E0

Not permitted as Excepted Quantity

· **Transport category** 2· **Tunnel restriction code** D· **Remarks:**

Transportation as "LIMITED QUANTITIES" according
 3.4 ADR is possible.
 Sole marking: Sign for "Limited Quantities" (rhombus
 with two black edges)
 Entry in the transportation document: Transportation
 according chapter 3.4 ADR
 Tunnel category "E" in case of a load of 8000 kg (rgross

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weight) or more.

Hazardous goods under the transport regulations listed above may be subject to special regulations. For details please consult the relevant transport regulations

· **IMDG**· **Limited quantities (LQ)**

IL

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **UN "Model Regulation":**

UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Directive 2012/18/EU**· **Named dangerous substances - ANNEX I** None of the ingredients is listed.· **Seveso category P3a** FLAMMABLE AEROSOLS· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t· **National regulations:**· **Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

Class	Share in %
NK	13.1

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H400 Very toxic to aquatic life.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

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*vPvB: very Persistent and very Bioaccumulative**Flam. Gas 1: Flammable gases – Category 1**Aerosol 1: Aerosols – Category 1**Press. Gas C: Gases under pressure – Compressed gas**Flam. Liq. 2: Flammable liquids – Category 2**Acute Tox. 4: Acute toxicity – Category 4**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1*

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