

Material information sheet Based on Regulation (EC) no. 1907/2006 (REACH)

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

1.1 Identification of the substance or preparation

Zinc Aluminium Alloy Wire

Use of the substance / preparation

Thermal Spraying

Company/undertaking identification

Grillo-Werke AG, Geschäftsbereich Metall, Weseler Str. 1, 47169 Duisburg

Tel. +49 203 5557 1, Telefax +49 203 5557 440

E-mail (competent person): ukross@grillo.de

Emergency telephone:

Advisory office in case of poisoning:

Tel: +49 228 19240

2: Hazards identification

Classification

This product does not require labeling in sense of the preparation guideline 1999/45/EC.

3: Composition/information on ingredients

3.1 Chemical name:

	Zinc	Aluminium
REACH registration number:	01-2119467174-37-XXXX	01-2119529243-45-XXXX
EC-no. (EINECS/ELINCS):	231-175-3	231-072-3
CAS-no	7440-66-6	7429-90-5
Content %	5 - 60	2 - 22
R-phrases:	No	No
Classification categories	No	No
Hazard Class	No	No

4: First aid measures

4.1 Description of first aid measures

In case of inhalation: (smoke / dust)

When inhaled, move the person to fresh air and seek medical advice.

Skin contact: (dust/ molten metal)

Wash thoroughly with plenty of water. In case of contact with molten product, cool skin area rapidly with cold water.

Eye contact: (smoke / dust)

In case of contact with eyes, rinse immediately thoroughly with plenty of water and consult an ophthalmologist.

4.2 Most important symptoms and effects, both acute and delayed

The following may occur: **after resorption**

Nausea

Vomiting

Metal fume fever

Irritation of the respiratory tract

5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Dry extinguishing powder

Carbon dioxide (CO₂)

Dry sand

Unsuitable extinguishing media

Water

5.2 Specific hazards arising from the substance

In case of fire may form:

Metal oxides

5.3 Advice for fire fighting

In case of fire: Wear self-contained breathing apparatus.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid built up of dust

Ensure adequate ventilation

Avoid inhalation

6.2 Environmental precautions

Do not allow to enter drains/surface water/ground-water.

Avoid release into the environment.

6.3 Methods and materials for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

Avoid built up of dust

7: Handling and Storage

7.1 Precautions for Safe Handling

During thermal spraying:

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

All work processes must always be designed so that the following is excluded:

Inhalation

Skin contact

Eye contact

7.2 Conditions for safe storage, including environmental compatibility

Store product closed and only in original packing

Protect against moisture and store closed.

Avoid condensation.

Do not store with acids.

Do not store with alkalis.

8: Exposure controls / Personal protection

8.1 Control parameters

Chemical name	General dust limit	Content%
WEL-TWA: 1 mg/m ³ (ihal. Dust), 4 mg/m ³ (respir. dust)	EL-STEL:----	---
BGW: ---	Other information:----	

WEL-TWA = Workplace Exposure Limit – Long-term exposure limit (8-hour TWA (=time weighted average) reference period) / WEL_STEL = Workplace Exposure Limit – Short-term exposure limit (15-minute reference period). MGW = Biological monitoring guidance value EH40

8.2 Exposure controls**8.2.1 Appropriate technical controls****During the formation of dust / smoke**

Ensure good ventilation. This can be achieved by local exhaust ventilation.

If this is insufficient to keep the concentration below the exposure limits (OEL), suitable respiratory protection should be worn.

8.2.2 Individual protection measures, such as personal protective equipment

In the presence of ZnO smoke and dust respirator may be required (particulate filter unit with DIN EN 143).

Hand protection, body protection and eye protection must be adapted to work

8.2.3 Limitation and control of environmental exposure

No information available at present.

9: Physical and chemical Properties**9.1 Information on basic physical and chemical properties**

Physical state:	solid
Color:	shiny metallic
Odor:	odorless
Melting point:	~ 382 - 488 °C (depending on the alloy composition)
Flash Point:	n.av.
Boiling Temperature:	n.av.
Density	~ 5,2 – 6,9 g/cm ³ (depending on the alloy composition)
Water solubility (g/l):	Insoluble.

10: Stability and Reactivity**10.1 Reactivity**

No hazardous reactions under normal conditions.

10.2 Chemical Stability

Stable when properly handled and stored

10.3 Possibility of hazardous reactions

See subsection 10.4 to 10.6

10.4 Conditions to avoid

Moisture

Strong heating

10.5 Incompatible materials

See also Section 7

Avoid contact with strong acids

Avoid contact with strong alkalis

Development of: hydrogen gas - explosion

10.6 Hazardous Decomposition Products

See subsection 10.4 to 10.6

See also section 5.2

Metal Oxides

11: Toxicological Information

When delivered as a wire not classified as toxic.

When used, see Section 8.1

Zinc dust

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, oral	LD50	>2000	mg/kg	Rat		
Acute toxicity, inhalation	LC50	>5140	mg/m ³ /4h	Rat		

Aluminium

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
n.d.a.						

12: Ecological information

When delivered as a wire not harmful to the environment.

Zinc dust							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity, fish	LC50	96h	0,238- 0,56	mg/l	(Pimephales promelas)		
Toxicity, fish	LC50	96h	0,238- 0,56	mg/l	(Onocorhynchus mykiss)		
Toxicity, Daphnia	EC50	48h	2,8	mg/l	(Daphnia magna)		

Aluminium							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
n.d.a.							

13: Disposal considerations

13.1 Waste treatment methods

For the substance

Waste code no. EC

The waste codes are recommendations based on the probable use of this product. Because of special use and disposal, the user under certain circumstances, other waste codes are assigned. (2001/118/EG, 2001/119/EG, 2001/573/EG)

17 04 07 mixed metals

Recommendation:

Waste disposal according to EC-regulations 75/442/EEC and 91/689/EEC in the corresponding versions, covering waste and dangerous waste

Implement Substance recycling.

For contaminated packing material

Non-contaminated packages may be recycled.

Wastes generated during use.

Dust

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Waste disposal according to EC-regulations 75/442/EEC and 91/689/EEC in the corresponding versions, covering waste and dangerous waste

Consult the appropriate authorities about waste disposal.

14: Transport information

Not hazardous according to these transportation regulations:

Land transport (ADR/RID)

Inland waterway craft (ADN/ADNR)

Marine transport (IMDG)

Air transport (ICAO-TI / IATA-DGR)

15: Regulatory information**15.1 Safety, health and environmental protection legislation specific to the product**

Classification and identification see Section 2

The product does not contain a vPvB substance (vPvB = very persistent, very bioaccumulative) and does not fall under the Annex XIII of Regulation (EC) 1907/2006.

The product does not contain any PBT (PBT = persistent, bioaccumulative, toxic) and does not fall under the Annex XIII of Regulation (EC) 1907/2006.

Storage class VCI	13
WGK	no classification

16: Other information

These figures relate to the product as it is delivered.

Legend

n.a. = not applicable

n.av. = not available

n.c. = not checked

n.d.a. = no data available

WGK = Water hazard class according to Administrative Regulation on Substances Hazardous to Water - class (German Regulation)

WGK3 = very hazardous to water

WGK2 = hazardous to water

WGK1 = slightly hazardous to water

AGF = Occupational Exposure Limit / BGW biological limit

The statements made here should describe the product with regard to the necessary safety precautions. They are not meant to guarantee definite characteristics and based on the current state of our knowledge. No responsibility. Issued by:

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