

Novamet® Zinc Flake

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Novamet® Zinc Flakes (stabilised)

Registration Number: not available, registration envisaged for a later deadline

1.2. Relevant identified uses of the substance or mixture and uses advised against

powder coatings, appearance repairs on galvanized metal

1.3. Details of the supplier of the safety data sheet

Novamet Specialty Products Corporation

681 Lawlins Road
Wyckoff, NJ 07481
United States

Phone : +1 201-891-7676

Fax : +1 201 891 9467

Responsible person:

Mr. David Croan

E-Mail (competent person):

konrad.stoeber@ra-services.de

1.4. Emergency phone No.:

800-424-9300 - CHEMTREC

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Acc. Regulation (EC) Nr. 1272/2008

Aquatic acute Cat.1 H400

Aquatic chronic Cat.1 H410

Acc. Directive 67/548/EEEC

N, R50-53 for the full text of R-Phrases refer to section 16

2.2. Label elements**Warning****Hazard statements:**

H4110 Very toxic to aquatic life with long lasting effects

Precautionary statements:

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/container according to in accordance with local/regional/national/international regulation.

2.3. Other hazards

no information available

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SECTION 3: Composition/information on ingredients**3.1. Substances***Name of Product:* Novamet® Zinc Flake*IUPAC-Name:* zinc*CAS-No. :* 7440-66-6*EC-No.:* 231-175-3*INDEX-No.:* 030-001-01-9 (Zinc powder - zinc dust (stabilised))*Purity:* 97% (ca. 3% ZnO)*Synonym(s):**MW,* 65.409 g/mol*Formula:* Zn*Impurities:*

Name	CAS No.	EC No.	Content	Classification
Zinc Oxide	1314-13-2	215-222-5	ca.: 3%	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

SECTION 4: First aid measures**4.1. Description of first aid measures***General information:*

In all cases of doubt call in a physician.

In case of inhalation:

Remove person to fresh air. If not breathing, give artificial respiration. Oxygen may be administered if breathing is difficult.

In case of skin contact:

Wash with plenty of water and soap. Remove contaminated clothing and shoes.

In case of eye contact:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses.

In case of ingestion:

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Self protection at first aid:

Avoid substance contact

4.2. Most important symptoms and effects, both acute and delayed

at higher oral doses gastrointestinal tract irritation, vomiting.

inhalation of zinc oxide fumes (developed at high temperatures) "Zinc Fever" (metal fume fever) may occur. The effects may be delayed.

4.3. Indication of any immediate medical attention and special treatment needed

no information available

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SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable extinguishing media:

carbon dioxide, dry sand, metal fire powders

Unsuitable extinguishing media:

water, foam

5.2. Special hazards arising from the substance or mixture

Combustible, Dust explosion possible if in powder form, mixed with air. In the event of fire, toxic fumes are released: Zinc oxides (hazard of metal fume fever, if inhaled). Avoid contact with water.

5.3. Advice for firefighters

Self contained breathing apparatus and suitable protective clothing required.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

For non-emergency responders

Avoid substance contact. Avoid inhalation of dust Provide of sufficient ventilation. Prevent contact with water and/or moisture.

For emergency responders

For suitable protective equipment refer to Section 8.

6.2. Environmental precautions

Do not let enter drains, prevent release to the environment.

6.3. Methods and material for containment and cleaning up

Collect spills dry or vacuuming with the vacuum exhaust passing through a high efficiency particulate arresting (HEPA) filter if exhaust is discharged into the work place. Wear appropriate nationally approved respirators if collection is likely to cause the concentration limits of airborne zinc to exceed exposure limits. Zinc containing material is normally collected to recover zinc.

6.4. Reference to other sections

Refer to Sections 8 and 13

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SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid the formation of dust. Do not breathe dust. Provide appropriate ventilation or local exhaust system if dusts are generated. If dry, it can be charged electrostatically by swirling, pneumatic transport, pouring, etc. Wear appropriate respirator if handling is likely to cause airborne zinc. Keep ignition sources away. Refer to Section 8.2

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7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed and sealed until ready for use. Keep away from sources of heat and ignition. Do not store together with: Acids, Bases, strong oxidizing agents. Keep away from water.

7.3. Specific end use(s)

refer to Section 1.2

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

	Limit value - Eight hours (mg/m ³)	Limit value - Short term (mg/m ³)
Germany (DFG) recommended	2 (inhalable)	2 (inhalable)
	0.1 (respirable)	0,4 (respirable) (15 min. average)
Switzerland	2 (inhalable)	2 (inhalable)
	0.1 (respirable)	0,4 (respirable)

8.2. Exposure controls*Appropriate engineering controls*

Provide exhaust ventilation or local exhaustion.

Individual protection measures:

Choose Suitable personal protection equipment dependant on substance concentration and amount specific for workplace. Resistance against chemicals should be clarified with the supplier.

Eye / face protections

Safety goggles/face shield

Skin protection

protective gloves, protective clothing

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection must be worn. Use Filter P2 (EN143) Respiratory cartridges or canisters must be changed following the recommendations of the supplier.

Environmental exposure controls:

Avoid release to the environment

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

Appearance::	solid, powder - silvery flake
Odour:	odorless
Odour threshold:	n/a
pH:	not available
Melting point/freezing point;	420 °C
Initial boiling point	907 °C

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Flash point;	not applicable
Evaporation rate;	not applicable
Flammability;	not available
lower explosion limits;	125 g/m ³
upper	not available
Vapour pressure;	1 hPa at 487 °C
Vapour density;	not applicable
Relative density;	7,14 g/cm ³
Solubility(ies); in water	very low, pH-dependent
Partition coefficient: n-octanol/water;	not applicable
Auto-ignition temperature;	480 °C
Decomposition temperature;	not applicable
Viscosity	not applicable
Explosive properties;	not available
Oxidising properties.	not available
9.2. Other information	none

SECTION 10: Stability and reactivity**10.1. Reactivity**

no information available

10.2. Chemical stability

The product is stable under normal and dry conditions (room temperature)

10.3. Possibility of hazardous reactions

Violent reactions with oxidizing agents, acids. Hydrogen gas will be released - explosive
Can be charged electrostatically by swirling, pneumatic transport, pouring, etc.

10.4. Conditions to avoid

Strong heat.

10.5. Incompatible materials

Water_Acids, bases, oxidizing agents

10.6. Hazardous decomposition products

please refer to chapter 5

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11. SECTION 11: Toxicological information**11.1. Information on toxicological effects***(a) acute toxicity;*

	<i>Value</i>	<i>Unit</i>	<i>Species</i>
<i>LD50 (oral.)</i>	>2000	mg/kg bw	rat (TNO Report V96, 515-August 1996).
<i>LD50 (dermal)</i>	not available		
<i>LC50 (inhal)</i>	>5,41	mg/L air (4 h)	rat (TNO Report V96, 515-August 1996)

b) skin corrosion/irritation;

slight irritation - not classified

c) serious eye damage/irritation;

not classified

d) respiratory or skin sensitisation;

Repeated or prolonged contact with skin may cause dermatitis - not classified

e) germ cell mutagenicity;

not applicable

f) carcinogenicity;

not classifiable as to human carcinogenicity (EPA)

g) reproductive toxicity;

not classified

h) STOT-single exposure;

not classified

i) STOT-repeated exposure;

not classified

*j) aspiration hazard.**not classified**Other information*

Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

SECTION 12: Ecological information**12.1. Toxicity**

<i>short term toxicity (dissolved zinc)</i>	<i>Value (range)</i>	<i>Duration</i>	<i>Species</i>
EC50 (Invertebrates)	0.15-0.5 mg/l	48 h	Daphnia magna
EC50 - algae	0.150 mg/l	96 h	Selenastrum capricornutum

12.2. Persistence and degradability

not applicable

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12.3. Bioaccumulative potential

not applicable

12.4. Mobility in soil

not applicable endpoint

12.5. Results of PBT and vPvB assessment

does not apply to inorganic substances

12.6. Other adverse effects

not known

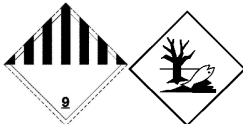
SECTION 13: Disposal considerations

13.1. Waste treatment methods

Chemicals and packages as waste must be disposed of in accordance with the respective national and local regulations. Containers should be cleaned of residual product before disposal. Consult your local or regional authorities.

Do not contaminate ground or surface waters via drainage, by cleaning of equipment or disposal of wastes

SECTION 14: Transport information

	ADR/RID	AND/ADNR	IMDG	IATA
14.1. UN number	3077			
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Powder, stabilized)			
14.3. Transport hazard class(es)	9			
14.4. Packing group	III			
14.5. Environmental hazards	yes	yes	marine pollutant	yes
EmS			F-A, S-F	
Labelling				
14.6. Special precautions for user	not known			

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture***EU regulations:*

refer to Directive on Major accident hazard 96/82/EC: 9.a Dangerous for the environment - 50t/200t

Authorisations and/or restrictions on use:

no special restrictions

National regulations: (Germany)

Water Hazard Class: 2 hazard to waters Reg. no.: 7325 Status: P: Classification according to annex 3

15.2. Chemical safety assessment not available

SECTION 16: Other information

Changes: Version 1

*Relevant**R-Phrases*

R50-53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard Statements

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/container according to in accordance with local/regional/national/international regulation.

Training: Operators should be trained regularly on safe handling and emergency response.

*Further information:**MSDS issued by:*

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These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.