

Filling Granules, V2A high-grade steel

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

- 1.1 Product identifier**
Commercial product name: Filling Granules, V2A high-grade steel
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Use of the substance/mixture: Blasting material for shot peening and blast cleaning
Uses advised against: all uses which are not mentioned above
- 1.3 Details of the supplier of the safety data sheet**
Manufacturer/Supplier: al dente Dentalprodukte GmbH
Street / mailbox: Borsigstr. 1
Country code. / postal code / city: D - 38644 Goslar
Phone: 0 53 21 / 80031
Fax: 0 53 21 / 50881
E-mail / Website: info@aldente.de / www.aldente.de
Further information obtainable from: al dente Dentalprodukte GmbH
- 1.4 Emergency telephone number**
al dente Dentalprodukte GmbH: +49 (0) 53 21 / 80031 (Mon-Fri. 8 a.m. – 4 p.m.)

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture**
Regulation (EC) No 1272/2008: This mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.
- 2.2 Label elements**
Regulation (EC) No 1272/2008
Special labelling of certain mixtures: EUH208 Contains nickel. May produce an allergic reaction.
EUH210 Safety data sheet available on request.
- 2.3 Other hazards:**
The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

- 3.2 Mixtures**
Chemical characterization: Steel ISO 16120-2

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7439-96-5	Manganese			< 1 %
	231-105-1		01-2119449803-34	
7440-21-3	silicon			0.3 - < 1 %
	231-130-8		01-2119480401-47	
7440-50-8	granulated copper			<0,25 %
	231-159-6	029-024-00-X	01-2119480154-42	
	Aquatic Chronic 2; H411			

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7440-02-0	nickel		0.1 - < 0.3 %
	231-111-4	028-002-00-7	01-2119438727-29
	Carc. 2, Skin Sens. 1, STOT RE 1, Aquatic Chronic 3; H351 H317 H372 H412		
7440-47-3	Chromium		0.1 - < 0.3 %
	231-157-5		01-2119485652-31
7439-98-7	Molybdenum		<0,1 %
	231-107-2		01-2119472304-43
7723-14-0	red phosphorus		< 0.1 %
	231-768-7	015-002-00-7	
	Flam. Sol. 1, Aquatic Chronic 3; H228 H412		
7429-90-5	Aluminium		< 0.1 %
	231-072-3		01-2119529243-45

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
7440-21-3	231-130-8	silicon	0.3 - < 1 %
		dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg	
7440-50-8	231-159-6	granulated copper	<0,25 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = 300 - 500 mg/kg	
7440-02-0	231-111-4	nickel	0.1 - < 0.3 %
		oral: LD50 = > 9000 mg/kg	
7439-98-7	231-107-2	Molybdenum	<0,1 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg	
7429-90-5	231-072-3	Aluminium	< 0.1 %
		oral: LD50 = > 15900 mg/kg	

Further Information:

No further relevant information available.

SECTION 4: First aid measures

4.1 Description of first aid measures:

General information:

First aider: Pay attention to self-protection!
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation:

Provide fresh air. Call a doctor if you feel unwell. If unconscious but breathing normally, place in recovery position and seek medical advice.

After contact with skin:

No special measures are necessary.
In case of skin irritation, consult a physician.

After contact with eyes:

Protect uninjured eye.
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
Remove contact lenses, if present and easy to do. Continue rinsing.

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After ingestion:	Get medical advice/attention if you feel unwell.
4.2 Most important symptoms and effects, both acute and delayed:	No known symptoms to date.
4.3 Indication of any immediate medical attention an special treatment needed:	Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media	
Suitable extinguishing media:	Dry sand, metal fire extinguishing powder.
Unsuitable extinguishing media:	Foam, Water, Carbon dioxide (CO2).
5.2 Special hazards arising from the substance or mixture:	The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.
5.3 Advice for fire fighters:	Danger of dust explosion. Avoid dust formation. Special protective equipment for firefighters: Flame-retardant protective clothing In case of fire: Wear self-contained breathing apparatus. Fight fire with normal precautions from a reasonable distance.
Additional information:	Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Dispose of waste according to applicable legislation.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	
General advice:	See protective measures under point 7 and 8. Personal protection equipment: see section 8 Remove all sources of ignition. Use only antistatically equipped (spark-free) tools. Avoid dust formation. Avoid contact with skin, eyes and clothes. To follow: emergency procedures
For non-emergency personnel:	Stop leak if safe to do so. Remove persons to safety. Evacuate area. Involve a qualified person Keep unprotected persons away. Stay on the side facing the wind.
For emergency responders:	In case of fire: Evacuate area. Release of: Dust Do not use a brush or compressed air for cleaning surfaces or clothing. Use approved industrial vacuum cleaner for removal.
6.2 Environmental precautions:	Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Retain contaminated washing water and dispose it. Cover drains.

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- In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
- 6.3 Methods and material for containment and cleaning up**
- For containment:** Take up dust-free and set down dust-free. Take up mechanically, placing in appropriate containers for disposal. Dispose of waste according to applicable legislation. Ensure waste is collected and contained.
- For cleaning up:** Clean with detergents. Avoid solvent cleaners. Clear contaminated areas thoroughly. Retain contaminated washing water and dispose it
- Other information:** Provide fresh air. Avoid dust formation.
- 6.4 Reference to other sections:** Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling**
- Advice on safe handling:** See protective measures under point 7 and 8. Personal protection equipment: see section 8
Dust should be exhausted directly at the point of origin. Floors, walls and other surfaces in the hazard area must be cleaned regularly. In case of inadequate ventilation wear respiratory protection. Avoid contact with skin, eyes and clothes.
- Advice on protection against fire and explosion:** The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Avoid dust formation. Keep away from sources of ignition - No smoking.
- Advice on general occupational hygiene:** Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.
Wear suitable protective clothing, gloves and eye/face protection.
When using do not eat, drink or smoke.
Do not breathe dust.
Wash all protective clothing after use.
Make available sufficient washing facilities
- Further information on handling:** Don't store containers without labelling.
Observe instructions for use.
- 7.2 Conditions for safe storage, including any incompatibilities**
- Requirements for storage rooms and vessels:** To follow: Betriebssicherheitsverordnung (BetrSichV)
Keep container tightly closed in a cool, well-ventilated place.
- Hints on joint storage:** Keep away from: Food and feedingstuffs
Keep in a cool place away from acids.
Keep in a cool place away from alkali.

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according to Regulation (EC) No 1907/2006

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Further information on storage conditions:

No information available.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
7429-90-5	Aluminium metal (Respirable Fraction)	-	1		TWA (8 h)	
-	Chromium (III) compounds (as Cr)	-	2		TWA (8 h)	
-	Chromium (VI) compounds (as Cr)	-	0.01		TWA (8 h)	
-	Chromium (VI) compounds (as Cr) Insoluble	-	0.01		TWA (8 h)	
7440-47-3	Chromium (VI) compounds (as Cr) Water soluble	-	2		TWA (8 h)	
7440-50-8	Chromium metal	-	1		TWA (8 h)	
7440-50-8	Copper, dusts and mists	-	0.2		TWA (8 h)	
7439-96-5	Copper, fume	-	0.2		TWA (8 h)	
7439-96-5	Manganese (Inhalable Fraction)	-	0.05		TWA (8 h)	
-	Manganese (Respirable Fraction)	-	0.5		TWA (8 h)	
7440-02-0	Nickel, inorganic compounds (as Ni), insoluble compounds	-	0.1		TWA (8 h)	
7723-14-0	Nickel, inorganic compounds (as Ni), soluble compounds	-	0.3		STEL (15 min)	
7440-21-3	Nickel	-	4		TWA (8 h)	
	Phosphorus, yellow					
	Silicon Si, respirable dust					

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
7440-02-0	Nickel	Ni	3 µg/L	Urine	After several consecutive working shifts
7440-47-3	Chromium	Total chromium	25 µg/L	Urine	End of shift at end of workweek

DNEL/DMEL values

CAS No	Substance	DNEL type	Exposure route	Effect	Value
7439-96-5	Manganese	Worker DNEL, long-term	inhalation	systemic	0,2 mg/m ³
		Worker DNEL, long-term	dermal	systemic	0,00414 mg/kg bw/day
		Consumer DNEL, long-term	inhalation	systemic	0,041 mg/m ³
		Consumer DNEL, long-term	dermal	systemic	0,0021 mg/kg bw/day
7440-50-8	granulated copper	Worker DNEL, long-term	dermal	systemic	137 mg/kg bw/day
		Worker DNEL, acute	dermal	systemic	273 mg/kg bw/day
		Consumer DNEL, long-term	inhalation	local	1 mg/m ³

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Consumer DNEL, acute	inhalation	local	1 mg/m ³
Consumer DNEL, long-term	dermal	systemic	137 mg/kg bw/day
Consumer DNEL, acute	dermal	systemic	273 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,041 mg/kg bw/day
7440-02-0	nickel		
Worker DNEL, long-term	inhalation	systemic	0,05 mg/m ³
Worker DNEL, long-term	inhalation	local	0,05 mg/m ³
Worker DNEL, acute	inhalation	local	11,9 mg/m ³
Worker DNEL, long-term	dermal	local	0,035 mg/cm ²
Consumer DNEL, long-term	inhalation	systemic	0,00002 mg/m ³
Consumer DNEL, acute	inhalation	systemic	408 mg/m ³
Consumer DNEL, long-term	inhalation	local	0,00002 mg/m ³
Consumer DNEL, acute	inhalation	local	0,8 mg/m ³
Consumer DNEL, long-term	dermal	local	0,035 mg/cm ²
Consumer DNEL, long-term	oral	systemic	0,011 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	0,37 mg/kg bw/day
7440-47-3	Chromium		
Worker DNEL, long-term	inhalation	local	0,5 mg/m ³
Consumer DNEL, long-term	inhalation	local	0,027 mg/m ³
7439-98-7	Molybdenum		
Worker DNEL, long-term	inhalation	systemic	11,17 mg/m ³
Consumer DNEL, long-term	inhalation	systemic	3,33 mg/m ³
Consumer DNEL, long-term	oral	systemic	3,4 mg/kg bw/day
7429-90-5	Aluminium		
Worker DNEL, long-term	inhalation	systemic	3,72 mg/m ³
Worker DNEL, long-term	inhalation	local	3,72 mg/m ³
Consumer DNEL, long-term	oral	systemic	7,9 mg/kg bw/day

PNEC values

CAS No	Substance	Value
Environmental compartment		
7439-96-5	Manganese	
Freshwater		0,034 mg/l
Marine water		0,003 mg/l
Freshwater sediment		3,3 mg/kg
Marine sediment		0,34 mg/kg
Soil		3,4 mg/kg
7440-50-8	granulated copper	
Freshwater		0,0063 mg/l
Marine water		0,0052 mg/l
Freshwater sediment		87 mg/kg
Marine sediment		676 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,23 mg/l
Soil		65 mg/kg
7440-02-0	nickel	
Freshwater		0,0071 mg/l
Freshwater (intermittent releases)		0 mg/l
Marine water		0,0086 mg/l
Freshwater sediment		109 mg/kg
Marine sediment		109 mg/kg
Secondary poisoning		0,12 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,33 mg/l

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Soil		29,9 mg/kg
7440-47-3	Chromium	
Freshwater		0,0065 mg/l
Marine water		0 mg/l
Freshwater sediment		205,7 mg/kg
Marine sediment		0 mg/kg
Soil		21,1 mg/kg
7439-98-7	Molybdenum	
Freshwater		12,7 mg/l
Marine water		1,91 mg/l
Freshwater sediment		22600 mg/kg
Marine sediment		1984 mg/kg
Soil		9,9 mg/kg
7429-90-5	Aluminium	
Freshwater		0,0749 mg/l
Micro-organisms in sewage treatment plants (STP)		20 mg/l

8.2 Exposure controls

Appropriate engineering controls:

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation as well as local exhaust at critical locations. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Dustproof grounded devices.

Individual protection measures, such as personal protective equipment

Eye/face protection:

Wear eye/face protection. EN 166

Tightly sealed safety glasses. Dust protection eye glasses

Hand protection:

Tested protective gloves must be worn: EN ISO 374

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material, Breakthrough times and swelling properties of the material must be taken into consideration. Observe the wear time limits as specified by the manufacturer.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Check leak tightness/impermeability prior to use.

Skin protection:

Only wear fitting, comfortable and clean protective clothing. (antistatic, flame-retardant), dust-tight Protective clothing. EN 340 / (DIN EN 1149-5)

Respiratory protection:

Respiratory protection necessary at: exceeding exposure limit values, Generation/formation of dust

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Filtering device (full mask or mouthpiece) with filter: FFP2

Thermal hazards:

No data available.

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Environmental exposure controls: Reference to other sections: 7

SECTION 9: Physical and chemical properties

9.1 Information on basics physical and chemical properties

Physical state:	solid
Colour:	silver grey
Odour:	odourless
Melting point / freezing point:	1460 °C
Boiling point or initial boiling point and boiling range:	2500 °C
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	No data available
Solubility in other solvents:	No data available
Partition coefficient n-octanol/water:	No data available
Vapour pressure:	No data available
Density:	7,85 g/cm ³
Relative vapour density:	No data available

9.2 Other information:

Information with regard to physical hazard classes

Explosive properties:	The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.
Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	No data available
Gas:	No data available
Oxidizing properties:	No data available
Other safety characteristics	
Evaporation rate:	No data available
Solid content:	100 %
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
Viscosity / dynamic:	No data available
Further Information:	Particle size: 0,4-2 mm

SECTION 10: Stability and reactivity

10.1 Reactivity:	In finely dispersed form: there is a risk of self-heating, flammable solid.
10.2 Chemical stability:	The product is stable under storage at normal ambient temperatures.
10.3 Possibility of hazardous reactions:	May form combustible dust concentrations in air.
10.4 Conditions to avoid:	Generation/formation of dust Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
10.5 Incompatible materials:	Acid, alkali, Oxidising agent, Hydrogen halide

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10.6 Hazardous decomposition products: No information available.

Further information: No information available.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity: Based on available data, the classification criteria are not met.

ATEmix calculated: ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	
7440-21-3	silicon				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1990)	OECD Guideline 401
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1978)	Four animals per group used, two each tr
7440-50-8	granulated copper				
	oral	LD50 300 - 500 mg/kg	Rat	Study report (2001)	OECD Guideline 423
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2001)	OECD Guideline 402
7440-02-0	nickel				
	oral	LD50 > 9000 mg/kg	Rat	Study report (1983)	OECD Guideline 401
7439-98-7	Molybdenum				
	oral	LD50 > 2000 mg/kg	Rat	OECD Guideline 401	
	dermal	LD50 > 2000 mg/kg	Rat	OECD Guideline 402	
7429-90-5	Aluminium				

Irritation and corrosivity: Based on available data, the classification criteria are not met.

Sensitising effects: Contains nickel. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction: 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.

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11.2 Information on other hazards:

Endocrine disrupting properties: No data available

Other information: Dust can cause mechanical irritation.

Further information: The product has not been tested. Calculation method.

SECTION 12: Ecological information

12.1 Toxicity: Based on available data, the classification criteria are not met.

CAS No	Chemical name		Dose	[h] [d]	Species	Source	Method
	Aquatic toxicity						
7440-21-3	silicon						
	Acute algae toxicity	ErC50 ca. 250 mg/l		72 h	Pseudokirchneriella subcapitata	Publication (2008)	OECD Guideline 201
7440-50-8	granulated copper						
	Acute fish toxicity	LC50 0,193 mg/l		96 h	Pimephales promelas	Study report (1996)	measurements were conducted by standard
	Acute algae toxicity	ErC50 0,152 mg/l		72 h	Raphidocelis subcapitata	Publication (2005)	OECD Guideline 201
	Acute crustacea toxicity	EC50 0,007 mg/l		48 h	Daphnia magna	Study report (1978)	- Test were conducted on Daphnia magna t
	Fish toxicity	NOEC 0,123 mg/l		12 d	Atherinops affinis	Mar. Environ. Res. 31: 17-35 (1991)	Three tests are reported, designed to de
	Algae toxicity	NOEC 0,0102 mg/l		19 d	other aquatic plant: giant kelp Macrocystis pyrife	Mar. Ecol. Prog. Ser. 68: 147 - 156 (199)	Tests were conducted to determine the ef
	Crustacea toxicity	NOEC 0,033 mg/l		14 d	Penaeus mergulensis and Penaeus monodon	Bull. Environ. Contain. Toxicol. (1995)	The effects of dissolved copper on the g
7440-02-0	nickel						
	Acute fish toxicity	LC50 15,3 mg/l		96 h	Oncorhynchus mykiss	Aquatic Toxicology 63 (2003) 65-82 (2003)	other: not reported
	Acute algae toxicity	ErC50 0,237 mg/l		72 h	Ankistrodesmus falcatus	Publication (2009)	OECD Guideline 201
	Acute crustacea toxicity	EC50 0,276 mg/l		48 h	Ceriodaphnia dubia	Study report (2005)	Test methods were in accordance with app

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	Fish toxicity	NOEC 0,057 mg/l	32 d	Pimephales promelas	Water Resources Research Institute. Kent	other: ASTM 1980, E-729
	Algae toxicity	NOEC 0,6 mg/l	14 d	Anabaena cylindrica	Environ. Pollut. (Series A). 25(4):241-2	other: not reported
	Crustacea toxicity	NOEC 0,0053 - 0,0153 mg/l	7 d	Ceriodaphnia dubia	Environmental Toxicology and Chemistry,	other: EPA/600/4-91/002
	Acute bacteria toxicity	(EC50 33 mg/l)	0,5 h	Activated sludge	Journal of Hazardous Materials. B139:332	ISO 8192
7439-98-7	Molybdenum					
	Acute fish toxicity	LC50 609,1 mg/l	96 h	Pimephales promelas	OECD Guideline 203	
	Acute algae toxicity	ErC50 > 419,9 mg/l	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201	
	Acute crustacea toxicity	EC50 2847,5 mg/l	48 h	Daphnia magna	ASTM standard practi	
	Fish toxicity	NOEC 200 mg/l	32 d	Oncorhynchus mykiss	Method described in	
	Crustacea toxicity	NOEC 156,5 mg/l	21 d	Ceriodaphnia dubia	USEPA, 2002. Short-t	
	Acute bacteria toxicity	(EC50 1100 mg/l)	0,5 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209	
7429-90-5	Aluminium					
	Acute fish toxicity	LC50 6,17 mg/l	96 h	Oncorhynchus mykiss	Canadian Journal of Fisheries and Aquati	Juvenile rainbow trout were exposed to f
	Acute algae toxicity	ErC50 0,0169 mg/l	72 h	Raphidocelis subcapitata	Study report (2009)	OECD Guideline 201
	Acute crustacea toxicity	EC50 0,72 mg/l	48 h	Ceriodaphnia dubia	Study report (1992)	other: USEPA 1985. Methods for measuring
	Fish toxicity	NOEC 0,4 mg/l	7 d	Pimephales promelas	Study report (1992)	other: USEPA 1989. Short-term Methods fo
	Crustacea toxicity	NOEC 1,02 mg/l	6 d	Ceriodaphnia dubia	Study report (1992)	other: US EPA

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12.2 Persistence and degradability: Biodegradation is not relevant for metals and inorganic substances.

12.3 Bioaccumulation potential: No information available.

BCF

CAS No	Chemical name	BCF	Species	Source
7440-50-8	granulated copper	0,02 - 20	Crangon crangon	Symp. Biologica. Hun
7440-02-0	nickel	45	other aquatic crustacea: Cambarus bartoni	Bull. Environ. Conta

12.4 Mobility in soil: No information available.

12.5 Results of PBT and vPvB assessment: The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Endocrine disrupting properties: This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7 Other harmful effects: No information available.

Further information: Hazardous to water in general.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:
Disposal recommendations: Non hazardous waste according to Directive 2008/98/EC (waste framework directive).
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. (12 01 04, 12 01 17)
Consult the appropriate local waste disposal expert about waste disposal. Dispose of waste according to applicable legislation.
Waste treatment methods: Recovery operations

List of Wastes Code - residues/unused products

120104 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; non-ferrous metal dust and particles

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging: Completely emptied packages can be recycled.
Dispose of waste according to applicable legislation.
Cleaning agent: Water

SECTION 14: Transport information

Land transport (ADR/RID)

14.1 UN number or ID number: No dangerous good in sense of this transport regulation.
14.2 UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3 Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4 Packing group: No dangerous good in sense of this transport regulation.

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Inland waterways transport (ADN)

- | | |
|----------------------------------|--|
| 14.1 UN number or ID number: | No dangerous good in sense of this transport regulation. |
| 14.2 UN proper shipping name: | No dangerous good in sense of this transport regulation. |
| 14.3 Transport hazard class(es): | No dangerous good in sense of this transport regulation. |
| 14.4 Packing group: | No dangerous good in sense of this transport regulation. |

Marine transport (IMDG)

- | | |
|----------------------------------|--|
| 14.1 UN number or ID number: | No dangerous good in sense of this transport regulation. |
| 14.2 UN proper shipping name: | No dangerous good in sense of this transport regulation. |
| 14.3 Transport hazard class(es): | No dangerous good in sense of this transport regulation. |
| 14.4 Packing group: | No dangerous good in sense of this transport regulation. |

Air transport (ICAO-TI/IATA-DGR)

- | | |
|----------------------------------|--|
| 14.1 UN number or ID number: | No dangerous good in sense of this transport regulation. |
| 14.2 UN proper shipping name: | No dangerous good in sense of this transport regulation. |
| 14.3 Transport hazard class(es): | No dangerous good in sense of this transport regulation. |
| 14.4 Packing group: | No dangerous good in sense of this transport regulation. |

14.5 Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6 Special precautions for user: No dangerous good in sense of this transport regulation.

14.7 Maritime transport in bulk according to IMO instruments: No dangerous good in sense of this transport regulation.

Other applicable information: No information available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII): Entry 27, Entry 65, Entry 75

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Marketing and use of explosives precursors (Regulation (EU) 2019/1148): This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

Additional information:

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Classification according to Regulation (EC) No 1272/2008 [CLP]

COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives

National regulatory information

Water hazard class (D): awg - hazardous to water in general

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Additional information:

Germany:
Ordinance on Installations for Handling Substances
Hazardous to Water (AwSV)
Hazardous Substances Ordinance (GefStoffV)
Technische Regeln für Gefahrstoffe
TRGS 400, TRGS 500, TRGS 720ff., TRGS 800, TRGS 900
Recommendation :
DGUV-Regel 100-500 „Betreiben von Arbeitsmitteln“

15.2 Chemical safety assessment:

For the following substances of this mixture a chemical safety assessment has been carried out:
Manganese
silicon
granulated copper
nickel
Chromium
Aluminium

SECTION 16: Other information

Changes:

This data sheet contains changes from the previous version in section(s): 1,9,10.

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)
RID: Règlement international conernat le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern
Flam. Sol: Flammable solid

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Skin Sens:	Skin sensitisation
Carc:	Carcinogenicity
STOT RE:	Specific target organ toxicity - repeated exposure
Aquatic Chronic:	Chronic aquatic hazard

Relevant H and EUH statements (number and full text)

H228	Flammable solid.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains nickel. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)