

DISPAL® Alloys and AlSi10Mg Powders

Version:1.0 Date: 2022-10-05

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

1.1 Product identifier

Trade name:

DISPAL® Aluminium Alloys - AlSi10Mg Powder

Registration number (REACH): CAS number: not relevant (mixture) not relevant (mixture)

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

Relevant identified uses Material

1.3 Details of the supplier of the safety data sheet

Gränges Powder Metallurgy SAS Z.I Europort Route de Haslach 57500 Saint-Avold FRANCE Telephone: +333 87 29 86 23 e-mail: sds@granges.com

1.4 Emergency telephone number

As above or next toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

CLASSIF				
Section	Hazard class	Category	Hazard class and category	Hazard statement
2.12	Substance and mixture which, in contact with water, emits flammable gas	3	Water-react.3	H261
3.4R	Respiratory sensitisation	1	Resp. Sens. 1	H334
3.4S	Skin sensitisation	1	Skin Sens.1	H317
3.6	Carcinogenicity	2	Carc. 2	H351
3.9	Specific target organ toxicity – repeated exposure	2	STOT RE 2	H373

for full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure. In contact with water releases flammable gases which may ignite spontaneously.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)						
Signal word	danger					
Pictograms						
GHS02, GHS08						





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Hazard statements	
H261	In contact with water releases flammable gases.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
Precautionary statemen	ts
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition
	sources. No smoking.
P231+P232	Handle and store contents under inert gas. Protect from moisture.
P260	Do not breathe dust.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse
	skin with water [or shower].
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
Hazardous ingredients f	or labelling nickel
	cobalt

2.3 Other hazards

There is no additional information.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

HAZARDOUS INGREDIENTS

Name of substance	Identifier	Wt%	Classification acc. To GHS	Pictograms	Notes
aluminium powder (pyrophoric)	CAS No 7429-90-5 EC No 231-072-3 Index No 013-001-00-6	50-95	Pyr. Sol. 1 / H250 Water-react.2 / H261		GHS-HC T(a)
Silicon, containing more than 99.99 per cent by weight of silicon	CAS No 7440-21-3 EC No 231-130-8 REACH Reg. No 01-2119480401- 47-xxxx	0 – 50	Flam. Sol. 2 / H228		



Nickel	CAS No 7440-02-0 EC No 231-111-4 Index No 028-002-01-4 REACH Reg. No 01-2119438727-	0 - <10	-® Alloys and AlSi1 Skin Sens. 1 / H317 Carc. 2 / H351 STOT RE 1 / H372 Aquatic Chronic 3 / H412	GHS-HC
Magnesium	29-xxxx CAS No 7439-95-4 EC No 231-104-6 Index No 012-001-00-3	0 – 10	Pyr. Sol. 1 / H250 Water- react. 1 / H260	GHS-HC T(a)
Copper	CAS No 7440-50-8 EC No 231-159-6	0 - 10		
Iron	CAS No 7439-89-6 EC No 231-096-4	0 - 10		
Manganese	CAS No 7439-96-5 EC No 231-105-1	0 - < 5		IOELV
Cobalt	CAS No 7440-48-4 EC No 231-158-0 Index No 027-001-00-9	0 - <2.5	Resp. Sens. 1 / H334 Skin Sens. 1 / H317 Aquatic Chronic 4 / H413	
Zirkonium	CAS No 7440-67-7 EC No 231-176-9 Index No 040-001-00-3	0-<2.5	Pyr. Sol. 1 / H250 Water-react. 1 / H260	



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Titanium	CAS No 7440-32-6 EC No 231-142-3	0-<2.5	Flam. Sol. 1 / H228		
Chromium	CAS No 7440-47-3 EC No 231-157-5	0-<2.5			IOELV
Notes					
GHS-HC:			ion (the classification of the	e substance corresponde	s to the entry

in the list according to 1272/2008/EC, Annex VI)
Substance with a community indicative occupational exposure limit value
This substance is marketed in a form which has the physical properties as indicated

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

In case of respiratory tract irritation, consult a physician.

Following skin contact

After contact with skin, wash immediately with plenty of water and soap.

If skin irritation or rash occurs: Get medical advice/attention.

After contact with the molten product, cool rapidly with cold water.

Following eye contact

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Get medical advice/attention if you feel unwell.

Notes for the doctor

None

4.2 Most important symptoms and effects, both acute and delayed

These information are not available.

4.3 Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use for extinction: Special powder for metal fires (class D).

Unsuitable extinguishing media

Water

5.2 Special hazards arising from the substance or mixture

Product may release hydrogen gas. Increased storage temperatures will accelerate this process.



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Water-reactive (in contact with water releases flammable gases). The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

Hazardous combustion products

Metal oxide smoke, toxic

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Coordinate firefighting measures to the fire surroundings.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Use suitable breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Do not get in eyes, on skin, or on clothing.

Avoid breathing dust.

Control of dust.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

take up mechanically

Advice on how to clean up a spill

Take up mechanically.

Collect spillage.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area. 6.4 Reference to other sections

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not get in eyes, on skin, or on clothing.

Provision of sufficient ventilation.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.



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Take precautionary measures against static discharge. Use only in well-ventilated areas.

Do not allow contact with water.

Keep away from sources of ignition - No smoking.

Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however

leads to the danger of dust explosion.

Handling of incompatible substances or mixtures

Do not mix with acids.

Do not mix with alkali.

Keep away from

Acids, caustic solutions, water

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

Do not breathe dust/fume/gas/mist/vapours/spray.

7.2 Conditions for safe storage, including any incompatibilities

Explosive atmospheres

Removal of dust deposits.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Observe hints for combined storage.

Do not allow contact with water.

Evaporative conditions

Keep container tightly closed and in a well-ventilated place.

Protect against external exposure, such as

Humidity

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

No information available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

OCCUPATIONAL EXPOSURE LIMIT VALUES (WORKPLACE EXPOSURE LIMITS)

Country	Name of agent	CAS No	Notation	Identifier	TWA [mg/m³]	STEL [mg/m³]	Source
EU	Manganese	7439-96-5	i	IOELV	0.2		2017/164/EU
GB	Manganese	7439-96-5		WEL	0.5		EH40/2005



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EU	Chromium	7440-47-3		IOELV	2		2006/15/EC
GB	Chromium	7440-47-3		WEL	0.5		EH40/2005
GB	Aluminium	7429-90-5	i	WEL	10		EH40/2005
GB	Aluminium	7429-90-5	r	WEL	4		EH40/2005
GB	Nickel	7440-02-0		WEL	0.1		EH40/2005
GB	Cobalt	7440-48-4		WEL	0.1		EH40/2005
GB	Copper	7440-50-8	dm	WEL	1	2	EH40/2005
GB	Copper	7440-50-8	fume	WEL	0.2		EH40/2005

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Notation

dm	as dusts and mists
fume	as fume
i	inhalable fraction
r	respirable fraction
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is
	related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Wear protective gloves against thermal risks (heat and/or fire)

Respiratory protection

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

Particulate filter device (EN 143).

Thermal hazards

Wear protective gloves against thermal risks (heat and/or fire).

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state	solid
Form	Solid in various forms
Colour	Silver grey
Odour	Odourless
Odour threshold	These information are not available
Other safety parameters	
pH (value)	These information are not available
Melting point/freezing point	543–660 °C



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Initial boiling point and boiling range Flash point Evaporation rate Flammability (solid, gas)

Explosion limits of dust clouds Vapour pressure Density Vapour density Relative density **Solubility(ies)** Water solubility Partition coefficient n-octanol/water (log KOW) Auto-ignition temperature Relative self-ignition temperature for solids Decomposition temperature **Viscosity** Kinematic viscosity

Dynamic viscosity

Explosive properties Oxidising properties 9.2 Other information None

SECTION 10: Stability and reactivity

10.1 Reactivity

The mixture contains reactive substance(s). Reactivity with water. **10.2 Chemical stability** See below "Conditions to avoid". **10.3 Possibility of hazardous reactions** Material reacts vigorously with water emitting flammable gases. In contact with Alkalis. 10.4 Conditions to avoid Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. **10.5 Incompatible materials** Water, acids, bases, strong oxidiser Release of flammable materials with: water **10.6 Hazardous decomposition products** Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5

>2,300 °C
Not applicable
These information are not available
Mixture which, in contact with water, emits flammable gases (in accordance with GHS criteria)
Not determined
These information are not available
2.5 – 2.9 g/cm³ at 20 °C
These information are not available
These information are not available

Not miscible in any proportion

These information are not available These information are not available These information are not available These information are not available

Not relevant (solid matter) Not relevant (solid matter) Not explosive Shall not be classified as oxidising



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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on: Ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic (oral).

Shall not be classified as acutely toxic (dermal).

Shall not be classified as acutely toxic (inhalation).

ACUTE TOXICITY ESTIMATE (ATE) OF COMPONENTS OF THE MIXTURE

Name of substance	CAS No	Exposure route	ATE
Aluminum powder (pyrophoric)	7429-90-5	Inhalation: dust/mist	0.888 mg/l /4h

ACUTE TOXICITY OF COMPONENTS OF THE MIXTURE

Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
aluminium powder (pyrophoric)	7429-90-5	oral	LD50	> 15,900 mg/kg	rat	OECD Guideline 401	ECHA
aluminium powder (pyrophoric)	7429-90-5	inhalation: dust/mist	LC50	> 0.888 mg/l /4h	rat	OECD Guideline 403	ECHA
Silicon, containing more than 99.99 per cent by weight of silicon	7440-21-3	oral	LD50	>5,000 mg/kg	rat		ECHA
Silicon, containing more than 99.99 per cent by weight of silicon	7440-21-3	dermal	LD50	> 5,000 mg/kg	rabbit		ECHA
Nickel	7440-02-0	oral	LD50	> 9,000 mg/kg	rat	OECD Guideline 401	ECHA
Copper	7440-50-8	dermal	LD50	> 2,000 mg/kg	rat		
Iron	7439-89-6	oral	LD50	98,600 mg/kg	rat	OECD Guideline 401	ECHA
Manganese	7439-96-5	oral	LD50	>2,000 mg/kg	rat		ECHA
Manganese	7439-96-5	inhalation: dust/mist	LC50	>5.14 mg/kg	rat		ECHA
Cobalt	7440-48-4	oral	LD50	550 mg/ kg	rat		ECHA
Cobalt	7440-48-4	inhalation: dust/mist	LC50	0.05 mg/l/4h	rat		ECHA
Titanium	7440-32-6	oral	LD50	>5,000 mg/kg	rat, female	OECD Guideline 425	ECHA



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Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

Classification could not be established because: Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

AQUATIC TOXICITY (ACUTE) OF COMPONENTS IN THE MIXTURE

Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
Silicon, containing more than 99.99 per cent by weight of silicon	7440-21-3	LC50	~250 mg/l	algae (pseudo- kirchneriella- subcapitata)		ECHA	72h
Magnesium	7439-95-4	LC50	2,800 mg/l	Fish		ECHA	48h
Nickel	7440-02-0	LC50	15.3 mg/l	rainbow trout (Oncorhynchus mykiss)		ECHA	96h
Nickel	7440-02-0	LC50	40 µg/l	Ceriodaphnia dubia (water flea)			96h



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Nickel	7440-02-0	EC50	>0.081 – <0.148 mg/l	algae (pseudokirchneriella- subcapitata)	OECD Guideline 201	ECHA	48h
Nickel	7440-02-0	EC50	0.013 mg/l	Daphnia			48h
Nickel	7440-02-0	EC50	<148 µg/l	algae (pseudokirchneriella- subcapitata)	OECD Guideline 201	ECHA	72h
Cobalt	7440-48-4	EC50	>100 mg/l	aquatic invertebrates		ECHA	48h
Titanium	7440-32-6	ErC50	>10,000 mg/l	algae (Skeletonema- costatum)	DIN EN ISO 10253	ECHA	72h
Titanium	7440-32-6	ErC50	61 mg/l	algae (pseudokirchneriella- subcapitata)	EPA- 600/9- 78-018	ECHA	72h
Titanium	7440-32-6	ErC50	16 mg/l	algae (pseudokirchneriella- subcapitata)	EPA- 600/9- 78-018	ECHA	72h

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Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

Aquatic toxicity (chronic) of components of the mixture AQUATIC TOXICITY (CHRONIC) OF COMPONENTS IN THE MIXTURE

Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
Magnesium	7439-95-4	LC50	898 mg/l	Fish		ECHA	24h
Nickel	7440-02-0	NOEC	15.3 µg/l	Ceriodaphnia dubia (water flea)		ECHA	7d
Nickel	7440-02-0	NOEC	40 µg/l	striped brill (Brachydanio rerio)			28d
Nickel	7440-02-0	NOEC	1,4 µg/l	Daphnia			28d
Nickel	7440-02-0	NOEC	12,4 µg/l	Algae			28d
Nickel	7440-02-0	LOEC	0,141 mg/l	saltwater invertebrates (Mysidopsis bahia)		ECHA	36d



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Nickel	7440-02-0	Growth rate (ErCx) 10%	3,599 µg/l	fish		ECHA	40d
Cobalt	7440-48-4	EC50	20 µg/l	algae		ECHA	70h
Titanium	7440-32-6	NOEC	5,600 mg/l	Giant tiger prawn (Penaeus monodon)	DIN EN ISO 10253	ECHA	72h
Titanium	7440-32-6	NOEC	1 mg/l	algae (pseudokirchneriella- subcapitata)	EPA- 600/9- 78-018	ECHA	72h
Titanium	7440-32-6	Growth rate (ErCx) 10%	12.7 mg/l	algae (pseudokirchneriella- subcapitata)	EPA- 600/9- 78-018	ECHA	72h

12.2 Persistence and degradability

Biodegradation

The study does not need to be conducted, the relevant substances in the mixture are inorganic.

Persistence

Data are not available.

12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

Bioaccumulative potential of components of the mixture

BIOACCUMULATIVE POTENTIAL OF COMPONENTS OF THE MIXTURE

Name of substance	CAS No	BCF	Log KOW
Nickel	7440-02-0	270	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class):1

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.



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SECTION 14: Transport information	
14.1 UN number	1398
14.2 UN proper shipping name	ALUMINIUM SILICON POWDER, UNCOATED
14.3 Transport hazard class(es)	
Class	4.3
14.4 Packing group	III
14.5 Environmental hazards	non-environmentally hazardous acc. to the dangerous
	goods regulations
14.6 Special precautions for user	
There is no additional information.	
14.7 Transport in bulk according to Annex II of M/	ARPOL and the IBC Code
The cargo is not intended to be carried in bu	ılk.
14.8 Information for each of the UN Model Regula	
Transport of dangerous goods by road, rail and inland	d waterway (ADR/RID/ADN).
UN number	1398
Proper shipping name	UN1398, ALUMINIUM SILICON POWDER, UNCOATED,
	4.3, III, (E)
Class	4.3
Classification code	W2
Packing group	III
Danger label(s)	4.3
Special provisions (SP)	37
Excepted quantities (EQ)	E1
Limited quantities (LQ)	1 kg
Transport category (TC)	3.
Tunnel restriction code (TRC)	E
Hazard identification No	423
Emergency Action Code	4Y
International Maritime Dangerous Goods Code (IN	-
UN number	1398
Proper shipping name	UN1398, ALUMINIUM SILICON POWDER, UNCOATED,
	4.3, 111
Class	4.3
Marine pollutant	-
Packing group	 1.2
Danger label(s)	4.3
Special provisions (SP)	37, 223, 932
Excepted quantities (EQ)	E1
Limited quantities (LQ)	1 kg
EmS	F-G, S-N
Stowage category	A



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Segregation group	15 - Powdered metals.			
International Civil Aviation Organization (ICAO-IATA/DGR)				
UN number	1398			
Proper shipping name	UN1398, Aluminium silicon powder, uncoated, 4.3, III			
Class	4.3			
Packing group	III			
Danger label(s)	4.3			
Special provisions (SP)	A3, A53			
Excepted quantities (EQ)	E1			
Limited quantities (LQ)	10 kg			

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list None of the ingredients are listed

Seveso Directive

Not assigned.

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

POLLUTANT RELEASE AND TRANSFER REGISTERS (PRTR)

Name of substance	CAS No	Remarks	Threshold for releases to air (kg/year)
Nickel	7440-02-0	(8)	50
Chromium	7440-47-3	(8)	100
Copper	7440-50-8	(8)	100

Legend

(8) All metals should be reported as the total mass of the element in all chemical forms present in the release.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

WATER FRAMEXORK DIRECTIVE (WFD)

Name of substance	CAS No	Listed in	Remarks
Nickel	7440-02-0	Annex X	

Legend

Annex X List of priority substances in the field of water policy

Regulation 98/2013/EU on the marketing and use of explosives precursors

None of the ingredients are listed.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.



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SECTION 16: Other information

ABBREVIATIONS AND ACRONYMS

Abbr.	
2006/15/EC	Commission Directive establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EE and 2000/39/EC
2017/164/EU	Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open- government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Flam. Sol.	Flammable solid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
Index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LOEC	Lowest Observed Effect Concentration
Log KOW	n-Octanol/water



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MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
Pyr. Sol.	Pyrophoric solid
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Resp. Sens.	Respiratory sensitisation
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
Water-react.	Material which, in contact with water, emits flammable gases
WEL	Workplace exposure limit

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

LIST OF RELEVANT PHRASES (CODE AND FULL TEXT AS STATED IN CHAPTER 2 AND 3)

Code	Text
H228	Flammable solid
H250	Catches fire spontaneously if exposed to air
H260	In contact with water releases flammable gases which may ignite spontaneously
H261	In contact with water releases flammable gases
H317	May cause an allergic skin reaction
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

Responsible for the safety data sheet

Gränges Powder Metallurgy SAS Z.I Europort Route de Haslach



DISPAL® Alloys and AlSi10Mg Powders

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Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.