

STANDART REFLEXAL 212 Aluminium Powder

Version	Revision Date:	SDS Number:	Print Date: 16.04.2024
5.1	02.04.2024	10200000281	Date of first issue: 02.01.2014

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

1.1 Product identifier

Trade name	: STANDART REFLEXAL 212 Aluminium Powder
Product code	: 049131D70
Substance name	: aluminium powder (stabilised)
EC-No.	: 231-072-3
Index-No.	: 013-002-00-1

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

Use of the	:	Colouring agents, pigments
Substance/Mixture		

1.3 Details of the supplier of the safety data sheet

Company	(ECKART GmbH Guentersthal 4 91235 Hartenstein
Telephone	: +	+499152770
Telefax	: -	+499152777008
E-mail address of person responsible for the SDS	: <u>r</u>	msds.eckart@altana.com

1.4 Emergency telephone number

NCEC: +44 1235 239670 (Europe) Call and response in your language is possible. Contract no.: ECKART29003-NCEC.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) Flammable solids, Category 1 H228: Flammable solid.

Information concerning particular hazards for human and environment:



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Please refer to our website for further important safety instructions for handling aluminium powder:

http://www.eckart.net/fileadmin/eckart/Service/GDA_Alupulver_Safety_engl.pdf

2.2 Label elements

Labelling (REGULATION (EC)	No 1272/2008)	
Hazard pictograms :		
Signal word :	Danger	
Hazard statements :	H228	Flammable solid.
Precautionary statements :	Prevention: P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P240	Ground and bond container and receiving equipment.
	P241	Use explosion-proof electrical/ ventilating/ lighting equipment.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
	Response:	
	P370 + P378	In case of fire: Use for extinction: Special powder for metal fires.
	P370 + P378	In case of fire: Use for extinction: Dry sand.

2.3 Other hazards

3.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

1 Substances	
Substance name	: aluminium powder (stabilised)
Index-No.	: 013-002-00-1
EC-No.	: 231-072-3
Chemical nature	: Pigment



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Components

Chemical name	CAS-No. EC-No. Index-No.	Concentration (% w/w)	M-Factor, SCL, ATE
	Registration number		
aluminium powder	7429-90-5	>= 50 - <= 100	
(stabilised)	231-072-3		
	013-002-00-1		
	01-2119529243-45		

SECTION 4: First aid measures

4.1 Description of first aid measures			
General advice	: Move the victim to fresh air.		
	Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.		
If inhaled	 Remove to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician. 		
In case of skin contact	: Wash off immediately with soap and plenty of water.		
	If on clothes, remove clothes.		
In case of eye contact	 Flush eyes with water as a precaution. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist. 		
If swallowed	 Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. 		

4.2 Most important symptoms and effects, both acute and delayed None known.



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4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media		- .		
Suitable extinguishing media	:	Dry sand Special powder against metal fire		
Unsuitable extinguishing media	:	ABC powder Carbon dioxide (CO2) Water Foam		
		High volume water jet		
5.2 Special hazards arising from the substance or mixture				
Specific hazards during firefighting	:	Contact with water liberates extremely flammable gas (hydrogen).		
5.3 Advice for firefighters				
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.		
Further information	:	For safety reasons in case of fire, cans should be stored separately in closed containments. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use a water spray to cool fully closed containers.		

SECTION 6: Accidental release measures

6.1 Personal precautions, protective	ve equipment and emergency procedures
Personal precautions	Use personal protective equipment. Evacuate personnel to safe areas. Avoid dust formation. Remove all sources of ignition.
6.2 Environmental precautions	
General advice :	The product should not be allowed to enter drains, water courses or the soil. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.



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6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical

: Use mechanical handling equipment. Do not use a vacuum cleaner.

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling	
Advice on safe handling : Advice on protection against :	Avoid creating dust. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Store away from heat. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations. Use explosion-proof equipment. During processing, dust may
fire and explosion	form explosive mixture in air. Take measures to prevent the build up of electrostatic charge. When transferring from one container to another apply earthing measures and use conductive hose material. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures :	Wash hands before breaks and at the end of workday.
7.2 Conditions for safe storage, inc	luding any incompatibilities
Requirements for storage : areas and containers	Earthing of containers and apparatuses is essential. Reaction with water liberates extremely flammable gas (hydrogen) Use explosion-proof equipment. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking. Keep container closed when not in use.
	No smoking. Keep container tightly closed in a dry and well- ventilated place. Electrical installations / working materials must comply with the technological safety standards.



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	r information on e conditions	:	Protect from hum	idity and water.
Advice	Never allow pro storage. Keep away fror		Never allow prod storage. Keep away from	ther with oxidizing and self-igniting products. uct to get in contact with water during oxidizing agents, strongly alkaline and erials in order to avoid exothermic reactions.
storag	r information on e stability	:	Keep in a dry plac No decompositio	ce. n if stored and applied as directed.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
aluminium powder (stabilised)	7429-90-5	TWA (Inhalable)	10 mg/m3	GB EH40
		TWA (Respirable fraction)	4 mg/m3	GB EH40
		TWA (inhalable dust)	10 mg/m3	GB EH40
	when samplin MDHS14/4 G respirable, the substance ha concentration inhalable dus any dust will b levels. Some must comply particles of a particular par response that distinguishes and 'respirabl material that of available for of to the fraction definitions an contain comp	ng is undertaken in a eneral methods for s pracic and inhalable zardous to health ind in air equal to or great tor 4 mg.m-3 8-hour be subject to COSHH dusts have been ass with the appropriate wide range of sizes. ticle after entry into the it elicits, depend on two size fractions for e'., Inhalable dust appendent that penetrates to the deposition in the respondent that penetrates to the despondent that penetrates to the despondent that penetrates to the despondent that penetrates to the despondent the despondent that penetrates to the despondent the despondent the despondent that penetrates to the despondent	of airborne dust which will ccordance with the method ampling and gravimetric a aerosols., The COSHH de cludes dust of any kind whe eater than 10 mg.m-3 8-ho TWA of respirable dust. T I if people are exposed to signed specific WELs and limits., Most industrial dus The behaviour, deposition the human respiratory syst the nature and size of the r limit-setting purposes ter oproximates to the fraction mouth during breathing an irratory tract. Respirable due as exchange region of al are given in MDHS14/4. ir own assigned WEL, all to o specific short-term expo	ds described in nalysis or finition of a en present at a ur TWA of his means that dust above these exposure to these ts contain n and fate of any em, and the body particle. HSE med 'inhalable' of airborne d is therefore ust approximates the lung. Fuller , Where dusts he relevant limits

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



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	а	figure three			exposure limit should be us	
			TWA (Respir dust)	able	4 mg/m3	GB EH40
	in w M re su co in au le m p p re d au m p c c d au m av t c c s l	halable dust hen samplin IDHS14/4 Ge espirable, the ubstance has oncentration halable dust ny dust will b vels. Some aust comply articles of a stricular part esponse that istinguishes nd 'respirable paterial that ev vailable for co the fraction efinitions and ontain comp hould be cor	are those frace g is undertake eneral method pracic and inha zardous to hea in air equal to to 4 mg.m-3 8 be subject to C dusts have bee with the approp wide range of icle after entry it elicits, depe two size fraction e'., Inhalable d enters the nose leposition in the that penetrate d explanatory r onents that hav nplied with., W	ctions n in ac s for s lable a lth inc or gre 3-hour OSHH en ass priate l sizes. into the ons fo lust ap e and n le resp s to the materia ve the here r	ses of these limits, respirab of airborne dust which will b cordance with the methods ampling and gravimetric an aerosols., The COSHH def ludes dust of any kind wher ater than 10 mg.m-3 8-hou TWA of respirable dust. Th if people are exposed to d igned specific WELs and ex- imits., Most industrial dusts The behaviour, deposition the nature and size of the p r limit-setting purposes term proximates to the fraction of nouth during breathing and iratory tract. Respirable dust at are given in MDHS14/4., r own assigned WEL, all th o specific short-term expose exposure limit should be us	be collected a described in alysis or inition of a n present at a r TWA of is means that lust above these a contain and fate of any m, and the body barticle. HSE ned 'inhalable' of airborne is therefore st approximates the lung. Fuller Where dusts e relevant limits sure limit is listed,

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

			• •	
Substance name	End Use	Exposure routes	Potential health	Value
			effects	
aluminium powder	Workers	Inhalation	Long-term systemic	3.72 mg/m3
(stabilised)			effects	
	Workers	Inhalation	Long-term local	3.72 mg/m3
			effects	
	Consumers	Oral	Long-term systemic	3.95 mg/kg
			effects	

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
aluminium powder (stabilised)	Fresh water	0.0749 mg/l
	clarification plant	20 mg/l

8.2 Exposure controls

Personal protective	equipment	
Eye/face protection	:	Face-shield
		Tightly fitting safety goggles
Hand protection		
Material	:	Leather
Glove length	:	Long sleeve gloves



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Re	emarks	only depend on i and is different f The suitability fo	The choice of an appropriate glove does not ts material but also on other quality features rom one producer to the other. or a specific workplace should be discussed		
Skin and body protection		 with the producers of the protective gloves. Anti-static and fire resistant protective clothing. DIN EN 11612; EN 533; EN 1149-1. Anti-static safety shoes. Dust impervious protective suit 			
Respi	ratory protection	concentration of	otection according to the amount and the dangerous substance at the work place. athing protection if workplace concentration atus with filter.		

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	:	powder
Colour	:	silver
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/range	:	> 600 °C
Boiling point/boiling range	:	No data available
Flammability	:	The substance or mixture is a flammable solid with the category 1.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	30 g/m3
Flash point	:	No data available
Auto-ignition temperature	:	340 °C
Decomposition temperature	:	No data available
рН	:	substance/mixture is non-soluble (in water)
Viscosity, kinematic	:	No data available



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Wate	bility(ies) r solubility bility in other solvents	:	insoluble No data available	9
	ion coefficient: n- nol/water	:	No data available	9
	ur pressure	:	No data available	9
Relat	ive density	:	No data available	9
Dens	ity	:	2.5 g/cm3	
Relat	ive vapour density	:	No data available	9
	cle characteristics article Size Distribution	:	No data available	9
	information			

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous rea	ctio	ns
Hazardous reactions		Contact with acids and alkalis may release hydrogen.
		No decomposition if stored and applied as directed.
		Dust may form explosive mixture in air.
10.4 Conditions to avoid		
Conditions to avoid	:	Heat, flames and sparks.
10.5 Incompatible materials		
Materials to avoid	:	Acids
		Bases
		Oxidizing agents
		Water

10.6 Hazardous decomposition products

This information is not available.



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SECTION 11: Toxicological information

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

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity	:	LC50 (Rat): > 888 mg/l
		Exposure time: 4 h
		Test atmosphere: dust/mist

Components:

aluminium powder (stabilised):

Acute inhalation toxicity	:	LC50 (Rat): > 5 mg/l
		Exposure time: 4 h
		Test atmosphere: dust/mist

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.



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11.2 Information on other hazards

Further information

Product:

Remarks

: No data available

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability No data available

12.3 Bioaccumulative potential No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Product:

Additional ecological : No data available information

:

SECTION 13: Disposal considerations

European Waste Catalogue	:	10 03 21 - other particulates and dust (including ball-mill dust) containing hazardous substances
13.1 Waste treatment methods Product	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.



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Conta	aminated packaging	:	Dispose of as u Do not re-use e	g contents. Inused product. Empty containers. use a cutting torch on, the empty drum.	
SECTIO	N 14: Transport infor	ma	tion		
14.1 UN r	number or ID number				
ADR		:	UN 1309		
IMDO	3	:	UN 1309		
ΙΑΤΑ	,	:	UN 1309		
14.2 UN p	proper shipping name				
ADR		:	ALUMINIUM P	OWDER, COATED	
IMDO	3	:	ALUMINIUM POWDER, COATED		
ΙΑΤΑ	,	:	Aluminium powder, coated		
14.3 Tran	sport hazard class(es)				
			Class	Subsidiary risks	
ADR		:	4.1		
IMDO	3	:	4.1		
ΙΑΤΑ		:	4.1		
14.4 Pack	king group				
Class Haza Labe	ing group sification Code rd Identification Number Is el restriction code		II F3 40 4.1 (E)		
Labe	ing group Is Code	: :	ll 4.1 F-G, S-G IMDG Code se	gregation group 15 - Powdered metals	
Pack aircra Pack	ing instruction (LQ) ing group	:	448 Y441 II 4.1		



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ΙΑΤΑ	(Passenger)		

IATA (Passenger)Packing instruction: 445(passenger aircraft)Packing instruction (LQ): Y441Packing group: II

14.5 Environmental hazards

ADR

Labels

Environmentally hazardous	:	no
IMDG		
Marine pollutant	:	no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

: 4.1

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

:	Conditions of restriction for the following entries should be considered: Number on list 40 aluminium powder (stabilised) (Number on list 40)
:	Not applicable
:	Not applicable
:	Not applicable
:	aluminium powder (stabilised)
:	Not applicable



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This product is regulated by Regulation (EU) 2019/1148: all aluminium powder (stabilised) suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

15.2 Chemical safety assessment

No data available

SECTION 16: Other information

Full text of other abbreviations

GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AllC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx -Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID -Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative



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Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GB / EN