

Version	Revision Date:	SDS Number:	Print Date: 05.01.2023
5.0	04.01.2023	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 Porenbeton RO 200 Aluminium Powder
Product code	:	040341F80
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	: 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:



Version	Revision Date:	SDS Number:	Print Date: 05.01.2023
5.0	04.01.2023	102000000281	Date of first issue: 02.01.2014

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

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

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



Version	Revision Date:	SDS Number:	Print Date: 05.01.2023
5.0	04.01.2023	10200000281	Date of first issue: 02.01.2014

Components

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

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.

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



Version 5.0	Revision Date: 04.01.2023		DS Number: 2000000281	Print Date: 05.01.2023 Date of first issue: 02.01.2014
			Special powder a	gainst metal fire
Unsuitable extinguishing media		:	ABC powder Carbon dioxide (CO2) Water Foam	
			High volume wate	er jet
5.2 Special hazards arising from the			e substance or mi	xture
	ecific hazards during fighting	:	: Contact with water liberates extremely flammable g (hydrogen).	
5.3 Adv	ice for firefighters			
	ecial protective equipment firefighters	:	Wear self-contair necessary.	ned breathing apparatus for firefighting if
Fu	rther information	:	separately in close Use extinguishing circumstances ar	is in case of fire, cans should be stored ed containments. g measures that are appropriate to local id the surrounding environment. y to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective 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

Environmental precautions	:	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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Use mechanical handling equipment.
		Do not use a vacuum cleaner.



Version	Revision Date:	SDS Number:	Print Date: 05.01.2023
5.0	04.01.2023	10200000281	Date of first issue: 02.01.2014

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

A	Advice on safe handling		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.
	dvice on protection against re and explosion	:	Use explosion-proof equipment. During processing, dust may 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.
Н	lygiene measures	:	Wash hands before breaks and at the end of workday.
7.2 Co	onditions for safe storage, i	ncl	uding any incompatibilities
	Requirements for storage reas 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-

No smoking. Keep container tightly closed in a dry and wellventilated place. Electrical installations / working materials must comply with the technological safety standards.



Version 5.0	Revision Date: 04.01.2023	•	DS Number: 02000000281	Print Date: 05.01.2023 Date of first issue: 02.01.2014
	er information on ge conditions	:	Protect from hum	idity and water.
Advic	e on common storage	:	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.
	er information on ge stability	:	Keep in a dry pla 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 has concentration inhalable dus any dust will I levels. Some must comply particles of a particular par response that distinguishes and 'respirabl material that available for o to the fraction definitions an contain comp	ng is undertaken in a eneral methods for s pracic and inhalable zardous to health inc in air equal to or gre t or 4 mg.m-3 8-hour be subject to COSHF dusts have been ass with the appropriate wide range of sizes. ticle after entry into t t it elicits, depend on two size fractions fo le'., Inhalable dust ap enters the nose and deposition in the resp in that penetrates to the d explanatory material onents that have the	of airborne dust which will ccordance with the metho ampling and gravimetric a aerosols., The COSHH de cludes dust of any kind whe ater than 10 mg.m-3 8-he TWA of respirable dust. If people are exposed to signed specific WELs and limits., Most industrial dus The behaviour, deposition he human respiratory syst the nature and size of the r limit-setting purposes ter oproximates to the fraction mouth during breathing an biratory tract. Respirable of a lare given in MDHS14/4 ir own assigned WEL, all no specific short-term exp	ds described in analysis or efinition of a ben present at a bur TWA of This means that dust above these exposure to these ests contain n and fate of any tem, and the body e particle. HSE rmed 'inhalable' n of airborne nd is therefore lust approximates f the lung. Fuller s., Where dusts the relevant limits

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART Porenbeton RO 200 Aluminium Powder

Version 5.0	Revision Dat 04.01.2023		Number: 00000281	Print Date: 05	.01.2023 sue: 02.01.2014				
5.0	04.01.2023	1020	100000281	Date of first is	sue. 02.01.2014				
	1								
		a figure three			nit should be use				
			TWA (Respirab dust)	le 4 mg/m3		GB EH40			
		Further inform		rposes of these	e limits, respirable	dust and			
					dust which will be				
		when samplin	ig is undertaken i	n accordance v	vith the methods	described in			
		MDHS14/4 G	eneral methods f	or sampling and	d gravimetric ana	lysis or			
		respirable, the	pracic and inhalal	ole aerosols., T	he COSHH defini	tion of a			
					of any kind when				
					0 mg.m-3 8-hour i				
					spirable dust. This				
					re exposed to du				
					ific WELs and exp				
					t industrial dusts o				
					our, deposition ar				
					espiratory system				
				on the nature and size of the particle. HSE					
		distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne							
					g breathing and i				
					. Respirable dust				
					ange region of the				
		definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits							
					short-term exposu				
					nit should be use				
L						u.			

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

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

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 equipme	ent	
Eye/face protection	:	Face-shield
		Tightly fitting safety goggles
Hand protection Material	:	Leather



Version 5.0	Revision Date: 04.01.2023		DS Number: 02000000281	Print Date: 05.01.2023 Date of first issue: 02.01.2014
G	love length	:	Long sleeve glov	es
R	emarks	:	only depend on it and is different fro The suitability for	he choice of an appropriate glove does not as material but also on other quality features om one producer to the other. a specific workplace should be discussed as of the protective gloves.
Skin and body protection		:		e resistant protective clothing. DIN EN EN 1149-1. Anti-static safety shoes.
				protective suit tection according to the amount and the dangerous substance at the work place.
Resp	piratory protection	:	Use suitable brea requires. Breathing appara P1 filter	athing protection if workplace concentration tus with filter.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	powder
Colour	:	silver
Odour	:	odourless
Odour Threshold	:	No data available
Melting point/freezing point	:	660 °C
Boiling point/boiling range	:	2,467 °C
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



Version Revision Date: 5.0 04.01.2023	SDS Number: 102000000281		Print Date: 05.01.2023 Date of first issue: 02.01.2014
Flash point	:	No data available	9
Auto-ignition temperature	:	340 °C	
Decomposition temperature	:	No data available	9
рН	:	substance/mixtu	re is non-soluble (in water)
Viscosity, kinematic	:	No data available	e
Solubility(ies) Water solubility	:	insoluble	
Solubility in other solvents	:	No data available	e
Partition coefficient: n- octanol/water	:	No data available	9
Vapour pressure	:	No data available	e
Relative density	:	No data available	e
Density	:	2.5 g/cm3	
Relative vapour density	:	No data available	e

9.2 Other 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 reactions

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 :	ł	Heat, flames and sparks.
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VersionRevision Date:SDS Number:Print Date: 05.01.20235.004.01.202310200000281Date of first issue: 02.01.2014					
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10.5 Incompatible materials

Materials to avoid

: Acids Bases Oxidizing agents Water

10.6 Hazardous decomposition products

This information is not available.

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.



Version	Revision Date:	SDS Number:	Print Date: 05.01.2023
5.0	04.01.2023	10200000281	Date of first issue: 02.01.2014

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.

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



VersionRevision Date:SDS Number:Print Date: 05.01.20235.004.01.202310200000281Date of first issue: 02.01.2014	
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SECTION 13: Disposal considerations

European Waste Catalogue European Waste Catalogue	 12 01 04 - non-ferrous metal dust and particles 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.
Contaminated packaging	 Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number or ID number

:	UN 1309	
:	UN 1309	
:	UN 1309	
:	ALUMINIUM POWDE	ER, COATED
:	ALUMINIUM POWDE	ER, COATED
:	Aluminium powder, coated	
	Class	Subsidiary risks
:	4.1	
:	4.1	
:	4.1	
		 Aluminium powder, ca Class 4.1 4.1 4.1 5.1 1 1 1 53 40

according to Regulation (EC) No. 1907/2006



STANDART Porenbeton RO 200 Aluminium Powder

Versio 5.0	n	Revision Date: 04.01.2023		DS Number: 2000000281	Print Date: 05.01.2023 Date of first issue: 02.01.2014
Т	unnel	restriction code	:	(E)	
	MDG				
		g group	:		
	abels mS C	ode	:	4.1 F-G, S-G	
	lemar		:		egation group 15 - Powdered metals
IA		Cargo)			
Pa		g instruction (cargo	:	448	
		g instruction (LQ)	:	Y441	
		g group	:	II .	
La	abels		:	4.1	
Pa	ackin	Passenger) g instruction nger aircraft)	:	445	
P	ackin	g instruction (LQ)	:	Y441	
		g group	:	II .	
La	abels		:	4.1	
14.5 E	inviro	onmental hazards			
	DR				
E	nviror	nmentally hazardous	:	no	
	MDG larine	pollutant	:	no	
14.6 S	pecia	al precautions for use	er		
		was art alagoification (a)	1	uided berein ere fr	ar informational nurneese and a solaly

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

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 40 aluminium powder (stabilised) (Number on list 40)
		(Number on list 40)



Version 5.0	Revision Date: 04.01.2023	SDS Number: 102000000281		Date: 05.01.2023 of first issue: 02.01.2014		
Regu deple	Not applicable					
UK REACH List of substances subject to authorisation (Annex XIV)				Not applicable		
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; AIIC - 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



Version	Revision Date:	SDS Number:	Print Date: 05.01.2023
5.0	04.01.2023	10200000281	Date of first issue: 02.01.2014

Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

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