

Substance Information Sheet (SIS) for natural Mineral Garnet			
Trade Name	Date of Printing	Revised on	Page
Garnet HS	25.08.2016	25.08.2016	1 / 9

1. IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1. Product identifier:

EC no	not applicable
REACH registration no	not applicable
Synonyms	Garnet HS, $\text{Fe}_3\text{Al}_2(\text{SiO}_4)_3$, garnet, almandine
Trade names	Granat HS

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

Relevant identified uses	Mineral raw material in unbound applications (e.g. jet cutting, blast cleaning)
Use advised against:	Not appropriate

Note:

Garnet is an inert, not metallic, natural material without hazardous characteristics and for this reason it is not registered in REACH. To avoid confusion no Safety Data Sheet (SDS) is prepared. The information given by this Substance Information Sheet (SIS) follows by structure and content Annex II of REACH-regulation (EC No 1907/2006 and amendment 453/2010) regarding the preparation of a SDS.

Substance Information Sheet (SIS) for natural Mineral Garnet			
Trade Name	Date of Printing	Revised on	Page
Garnet HS	25.08.2016	25.08.2016	2 / 9

1.3. Details of the supplier of the safety data sheet

Producer/supplier:	STEAG Power Minerals GmbH		
Street/P.O. Box:	Duisburger Str. 170		
Nat. code/postcode, place:	46535 Dinslaken		
Phone:	+ 49 (0) 2064 – 608 404	Fax:	+ 49 (0) 2064 – 608 47404

Responsible Person	Dipl.-Ing Martin Pielke	Phone:	+ 49 (0) 2064 – 608 319
		Fax	+ 49 (0) 2064 – 608 241
		Email	martin.pielke@steag.com

1.4. Emergency telephone number

(Office hours):	24h	Emergency number:	112 (Germany)
	8:00 – 17:00	Tel:	+ 49 (0) 2064 – 608 319
	8:00 – 17:00	Mobil:	+ 49 (0) 173 - 5344980

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

- According to criteria of Directive EC 67/548/EEC and Regulation (EC) 1272/2008 the substance is not classified as hazardous

2.2. Label elements

- According to criteria of Directive EC 67/548/EEC and Regulation (EC) 1272/2008 the substance does not need to be labelled

2.3. Other hazards

- No special remarkable hazards

Substance Information Sheet (SIS) for natural Mineral Garnet			
Trade Name	Date of Printing	Revised on	Page
Garnet HS	25.08.2016	25.08.2016	3 / 9

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

EC no:	not applicable
EC name	(natural mineral)

Purity:	almandine 97-98 %, ilmenite 1-2 %, quartz 0,5%, others 0,5 %
Synonyms:	see 1.1

Additional information

Garnet is a natural mineral of the modification almandine. Its chemical composition is preferably analyzed as elements and reported as the mass percent of each equivalent oxide, e.g. SiO₂, Al₂O₃, Fe₂O₃, CaO.

4. FIRST AID MEASURES

4.1. Description of first aid measures

– Inhalation	No particular measures required.
– Ingestion	Drink plenty of water (in case you feel unwell consult doctor).
– Skin contact	Dust has to be rinsed with water (if irritation persists contact doctor)
– Eye contact	Dust has to be rinsed with water (if irritation persists contact doctor).
Notes for the doctor	No allergic reactions known. Garnet can cause irritation of the cornea and conjunctiva

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

– Skin and eye irritation might occur

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

– Not appropriate

Substance Information Sheet (SIS) for natural Mineral Garnet			
Trade Name	Date of Printing	Revised on	Page
Garnet HS	25.08.2016	25.08.2016	4 / 9

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

- The substance is not combustible. Use any means suitable for extinguishing surrounding fire.

5.2. Special hazards arising from the substance or mixture

- None

5.3. Advice for fire fighters

- Not appropriate

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

- Avoid creating airborne dust wherever possible, see 6.4

6.2. Environmental precautions

- Avoid creating airborne dust wherever possible, see 6.4

6.3. Methods and material for containment and cleaning up

- Spills: sweep together and place in suitable containers

6.4. Reference to other sections

- For personal protection see section 8
- For waste disposal see section 13

Substance Information Sheet (SIS) for natural Mineral Garnet			
Trade Name	Date of Printing	Revised on	Page
Garnet HS	25.08.2016	25.08.2016	5 / 9

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

– Do not eat, drink and smoke in working areas
– Wear appropriate protective clothing (e.g. goggles, gloves)
– Wash hands after work

7.2. Conditions for safe storage, including any incompatibilities

– No special requirements

7.3. Specific end use(s)

– Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

– The current occupational exposure limits for respirable dust in the European Union (1,25 – 10 mg/m ³) should apply. These limits will be met during handling of the supplied granulations.
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8.2. Exposure controls

– appropriate engineering controls

– For closed cycles	care for dedusting installations
– For semi-closed and open cycles	care for sufficient ventilation or wetting the ash

– individual protection measures

– Eye/ face protection	Safety goggles/ face shield if potential for contact is existing
– Skin (hand) protection	Gloves if potential for contact is given; further measures for body protection are usually not necessary
– Respiratory protection	no special protective equipment required if dust occurs constantly – use respiratory dust mask

Substance Information Sheet (SIS) for natural Mineral Garnet			
Trade Name	Date of Printing	Revised on	Page
Garnet HS	25.08.2016	25.08.2016	6 / 9

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

– Physical properties

Parameter	value/ comment	unit	method
Form	grit-like, angular grain, glassy	-	visual
Colour	bright reddish-brown to dark	-	visual
Odour	none	-	-
Density	4,1	g/cm ³	EN 1097-6
bulk density	2,4	g/cm ³	EN 1097-3

– Chemical properties

Parameter	value/ comment	unit	method
pH	in the eluate 6.93	-	-
Water solubility (20°C)	not determined	g/l	-

All other parameters as given in Annex 2 of REACH-regulation are evaluated as not applicable.

9.2. Other information

– Not applicable

10. STABILITY AND REACTIVITY

10.1. Reactivity

– No reactivity hazards

10.2. Chemical stability

– Stable under normal conditions

10.3. Possibility of hazardous reactions

– Not applicable as material is not hazardous and no reactivity hazards are to be expected

Substance Information Sheet (SIS) for natural Mineral Garnet			
Trade Name	Date of Printing	Revised on	Page
Garnet HS	25.08.2016	25.08.2016	7 / 9

10.4. Conditions to avoid

– No special requirements

10.5. Incompatible materials

– No incompatible materials known

10.6. Hazardous decomposition products

– Not applicable as no hazardous properties

11. TOXICOLOGICAL INFORMATION

11.1. Potential health effects	the substance is not classified as hazardous
11.2. Acute toxicity oral, inhalation, dermal	no acute toxicity
11.3. Irritation skin, eye irritation	not irritating in unused condition
11.4. Corrosivity	not corrosive in unused condition
11.5. Sensitisation	not sensitising in unused condition
11.6. Repeated dose toxicity	no repeated toxicity
11.7. Mutagenicity	not mutagen
11.8. Carcinogenicity	no carcinogenetic effects are known
11.9. Toxicity to reproduction	no reproduction toxicity

Substance Information Sheet (SIS) for natural Mineral Garnet			
Trade Name	Date of Printing	Revised on	Page
Garnet HS	25.08.2016	25.08.2016	8 / 9

12. ECOLOGICAL INFORMATION

12.1. Toxicity	<ul style="list-style-type: none"> – the substance is not classified as hazardous – no aquatic toxicity – no toxicity in sewage treatment plants
12.2. Persistence and degradability	<ul style="list-style-type: none"> – not applicable: inorganic substance – neither photo- or chemical degradation, nor biodegradation is expected
12.3. Bioaccumulative potential	<ul style="list-style-type: none"> – not applicable: inorganic substance – significant bioaccumulation is not expected
12.4. Mobility in soil	<ul style="list-style-type: none"> – leaching of main compounds (SiO₂, Al₂O₃) is not expected
12.5. Results of PBT and vPvB assessment	<ul style="list-style-type: none"> – no PBT and vPvB properties
12.6. Other adverse effects	<ul style="list-style-type: none"> – no other adverse effects are known – Due to the CLP system the substance has not to be labelled as dangerous for the environment.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Garnet in unused condition have to be disposed off by national regulations for non hazardous wastes; no further special treatment methods are necessary	
Waste codes/ waste designation according to EWC: EAK 010499	
01	Wastes, which are produced from prospecting, yield, quarrying and chemical or physical treatment of minerals.
01 04	Wastes, which are produced from physical und chemical processing of non-metalliferous minerals.
010499	wastes n. e. c.

Substance Information Sheet (SIS) for natural Mineral Garnet			
Trade Name	Date of Printing	Revised on	Page
Garnet HS	25.08.2016	25.08.2016	9 / 9

14. TRANSPORT INFORMATION

– Not a dangerous substance according to the regulations ADR, IMDG and IATA

15. REGULATORY INFORMATION

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

– Garnet does not require any labelling

15.2. Chemical safety assessment

– Garnet does not require labelling

15.3. Water Pollution Class

– Not applicable

16. OTHER INFORMATION

The Information describes the safety requirements of the product and is based on the present knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.