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

· **Product identifier**

· **Trade name: SYLOBEAD® MS C 542**

· **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Sector of Use**
SU1 Agriculture, forestry, fishery
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU5 Manufacture of textiles, leather, fur
SU6b Manufacture of pulp, paper and paper products
SU7 Printing and reproduction of recorded media
SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU11 Manufacture of rubber products
SU12 Manufacture of plastics products, including compounding and conversion
SU15 Manufacture of fabricated metal products, except machinery and equipment
SU16 Manufacture of computer, electronic and optical products, electrical equipment
SU19 Building and construction work

· **Product category**
PC1 Adhesives, sealants
PC2 Adsorbents
PC8 Biocidal products
PC9a Coatings and paints, thinners, paint removers
PC9b Fillers, putties, plasters, modelling clay
PC12 Fertilisers
PC14 Metal surface treatment products
PC15 Non-metal-surface treatment products
PC18 Ink and toners
PC19 Intermediate
PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
PC23 Leather treatment products
PC26 Paper and board treatment products
PC27 Plant protection products
PC28 Perfumes, fragrances
PC31 Polishes and wax blends
PC32 Polymer preparations and compounds
PC33 Semiconductors
PC34 Textile dyes, and impregnating products
PC35 Washing and cleaning products (including solvent based products)
PC37 Water treatment chemicals
PC40 Extraction agents
PC0 Other

· **Process category**
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC5 Mixing or blending in batch processes
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC14 Tabletting, compression, extrusion, pelletisation, granulation

· **Environmental release category** ERC2 Formulation into mixture

· **Article category** Not applicable.

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· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
GRACE GmbH
In der Hollerhecke 1
D-67547 Worms
GERMANY
Tel.: +49 (0)6241 - 403 1549
FAX: +49 (0)6241 - 403 1211

· **Further information obtainable from:**
Product Stewardship, Grace Europe Holding GmbH.
MSDS.Davison@grace.com

· **Emergency telephone number:** Tel.: +49 (0)172 7129276

SECTION 2: Hazards identification

· **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonised System (GHS).
· **Label elements**
· **GHS label elements** Not applicable.
· **Hazard pictograms** Not applicable.
· **Signal word** Not applicable.
· **Hazard statements** Not applicable.
· **Other hazards**
The product is very adsorbent and may have a drying effect on skin and eyes.
When exceeding the WEL (Workplace Exposure Limit) a mechanical overburdening of the respiratory system is possible.
In contact with water heat development and therefore burning of the skin and mucous membrane is possible.
This product contains ≤1 % quartz which is part of a natural raw material.
At present, EU Regulations do not require safety labeling of products containing quartz.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **Mixtures**

· **Description:** Crystalline aluminosilicate with binders.

· **Components (CAS No. and EINECS No.):**		
CAS: 1318-02-1 EINECS: 215-283-8 Reg.nr.: UK-06-1379203786-6-0001	zeolite (crystalline aluminosilicate)	75-90%
CAS: 1318-02-1 EINECS: 215-283-8	zeolites	10-25%
CAS: 14808-60-7 EINECS: 238-878-4	quartz (SiO_2)	≤1%

· **Dangerous components:** Not applicable.

· **Impurities and stabilising additives:**
Silica, crystalline (airborne particles of respirable size) Alternative CAS number: 14808-60-7

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· **Additional information:**
Quartz is a natural occurring component of the binder. See note in Section 2.

SECTION 4: First aid measures

· **Description of first aid measures**

· **General information:** No special measures required.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately rinse with water.
Generally the product does not irritate the skin.
· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.
· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**

· **Protective equipment:** Wear personal protective equipment.
· **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
· **Methods and material for containment and cleaning up:**
Sweep the spill area; avoid raising dust.
· **Reference to other sections**
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **Precautions for safe handling**
Keep receptacles tightly sealed.
Provide suction extractors if dust is formed.
Any unavoidable deposit of dust must be regularly removed.
Prevent static electric sparks.

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· **Information about fire - and explosion protection:**
Earth container to avoid electric sparks, especially in contact with flammable substances.
The product is not flammable.
· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **Further information about storage conditions:**
Store in dry conditions.
This product is hygroscopic.
Keep container tightly sealed.
· **Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
14808-60-7 quartz (SiO2)	
BOELV (European Union)	Long-term value: 0.1* mg/m³ *respirable fraction

· **Ingredients with biological limit values:**

· **Additional Occupational Exposure Limit Values for possible hazards during processing:**	
Dust inhalable	
TWA (Great Britain)	Long-term value: 10 mg/m³
Dust respirable	
WEL (Great Britain)	Long-term value: 4 mg/m³

· **Additional information:** Valid lists at time of creation were used as basis.
· **Exposure controls**
· **Appropriate engineering controls** No further data; see item 7.
· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.

· **Respiratory protection:**
If the WEL value is exceeded.
Filter P2
Suitable respiratory protective device recommended.

· **Hand protection**

Protective gloves.

Wear gloves for protection against mechanical hazards according to EN 388.
Use gloves of stable material (e.g. Nitrile) - if necessary tri-coted to improve the wearability.
Check the condition of the gloves prior to each use.
Check the permeability prior to each anew use of the glove.
After use of gloves apply skin-cleaning agents and skin cosmetics.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
Preventive skin protection by use of skin-protecting agents is recommended.

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· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Recommended thickness of the material: ≥ 0.11 mm
Butyl rubber, BR
Nitrile rubber, NBR

· **Penetration time of glove material**
The exact break through time has to be obtained from the manufacturer of the protective gloves and has to be observed.
For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 16523-1:2015: Level 6).

· **For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**
Butyl rubber, BR
Nitrile rubber, NBR

· **For the permanent contact gloves made of the following materials are suitable:**
Nitrile rubber, NBR

· **Not suitable are gloves made of the following materials:**
cloth gloves
Leather gloves

· **Eye/face protection**

Safety glasses.

· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Solid
· **Appearance:**	
· **Form:**	Solid Beads
· **Colour:**	Beige
· **Odour:**	Odourless
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	>400 °C (OECD TG 102)
· **Boiling point or initial boiling point and boiling range**	Not determined
· **Flammability**	Product is not flammable.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	Not determined.
· **Auto-ignition temperature:**	Not determined.
· **Ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not applicable.
· **pH at 20 °C**	7-11

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· **Viscosity:**	
· **Kinematic viscosity**	Not applicable.
· **Dynamic viscosity:**	Not applicable.
· **Solubility**	
· **water:**	Insoluble.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure:**	Not applicable.
· **Density and/or relative density**	
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Bulk density:**	
· **Vapour density**	Not applicable.
· **Particle characteristics**	Not determined.
· **Other information**	No further relevant information available.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Change in condition**	
· **Evaporation rate**	Not applicable.
· **Information with regard to physical hazard classes**	
· **Explosives**	Not applicable.
· **Flammable gases**	Not applicable.
· **Aerosols**	Not applicable.
· **Oxidising gases**	Not applicable.
· **Gases under pressure**	Not applicable.
· **Flammable liquids**	Not applicable.
· **Flammable solids**	Not applicable.
· **Self-reactive substances and mixtures**	Not applicable.
· **Pyrophoric liquids**	Not applicable.
· **Pyrophoric solids**	Not applicable.
· **Self-heating substances and mixtures**	Not applicable.
· **Substances and mixtures, which emit flammable gases in contact with water**	Not applicable.
· **Oxidising liquids**	Not applicable.
· **Oxidising solids**	Not applicable.
· **Organic peroxides**	Not applicable.
· **Corrosive to metals**	Not applicable.
· **Desensitised explosives**	Not applicable.

SECTION 10: Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability** No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

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

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

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· **LD/LC50 values relevant for classification:**

1318-02-1 zeolite (crystalline aluminosilicate)

Oral	LD50	>5,110 mg/kg (rat) (OECD 401)
Dermal	LD50	>5,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC0	>3,350 mg/m³/4h (rat) IUCLID Dataset 18-Feb-2000
	LC50 (6 h)	1.25-1.5 mg/m³ (General population)

· **Skin corrosion/irritation**

1318-02-1 zeolite (crystalline aluminosilicate)

Skin	IS	0 (rabbit) (OECD 404)

· **Serious eye damage/irritation**

1318-02-1 zeolite (crystalline aluminosilicate)

Eye	IS	0.7-1.3 (rabbit) (OECD 405) Corneal opacity

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **Respiratory sensitisation** No further relevant information available.
· **Skin sensitisation**
No further relevant information available.
Sensitisation possible through skin contact.

· **Additional toxicological information:**

· **Repeated dose toxicity**

1318-02-1 zeolite (crystalline aluminosilicate)

Oral	NOAEL (90 d)	250-300 mg/kg bw/day (rat) subchronic oral repeated dose

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**

· **Carcinogenicity**

1318-02-1 zeolite (crystalline aluminosilicate)

Oral	NOAEL	≥1,000 ppm (rat)

· **Mutagenicity**

1318-02-1 zeolite (crystalline aluminosilicate)

Oral	Micronucleus-Test	5,000 mg/kg bw (mouse) (OECD 474) Genotoxicity: negative (male/female)
	AMES Test	>0.1 mg/plate (Salmonella typhimurium) (OECD 471) negative with and without metabolic activation
	HPRT Test	>0.08 mg/ml (L5178Y) (OECD 476) no genotoxicity; cytotoxicity: >0,02 mg/ml without metabolic acivation; >0,08 mg/ml with metabolic activation

· **Reproductive toxicity**

1318-02-1 zeolite (crystalline aluminosilicate)

Oral	NOAEL (maternal toxicity)	≥1,600 mg/kg bw/day (rat) (OECD 414)
		≥1,600 mg/kg bw/day (rabbit) (OECD 414)
	NOAEL (teratogenicity)	≥1,600 mg/kg bw/day (rat) (OECD 414)
		≥1,600 mg/kg bw/day (rabbit) (OECD 414)

· **Specific target organ toxicity (single exposure)** No further relevant information available.
· **Specific target organ toxicity (repeated exposure)** No further relevant information available.

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· **Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

SECTION 12: Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Fish toxicity**	
1318-02-1 zeolite (crystalline aluminosilicate)	
LC50 (96 h)	>680 mg/l (Pimephales promelas) (EPA 660/3-75/009)

· **Water flea toxicity**	
1318-02-1 zeolite (crystalline aluminosilicate)	
EC50 (24 h)	2,808 mg/l (Daphnia magna) (OECD 202)

· **Algae toxicity**	
1318-02-1 zeolite (crystalline aluminosilicate)	
EC50 (96h)	>328 mg/l (Scenedesmus subspicatus) (OECD 201)

· **Bacterial toxicity**	
1318-02-1 zeolite (crystalline aluminosilicate)	
EC50 (16h)	950 mg/l (Pseudomonas putida) (DIN 38412/8)

· **Persistence and degradability** No further relevant information available.
· **Other information:**
By the insolubility in water there is a separation at every filtration and sedimentation process.

· **Behaviour in environmental systems:** Accumulation in organisms is not to be expected.

· **Bioaccumulative potential** Does not accumulate in organisms
· **Mobility in soil** No further relevant information available.
· **Results of PBT and vPvB assessment**
· **PBT:** Not determined.
· **vPvB:** Not determined.
· **Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **Other adverse effects** No further relevant information available.

· **Additional ecological information:**
· **General notes:** Not hazardous for water.

SECTION 13: Disposal considerations

· **Waste treatment methods**

· **Recommendation:** Disposal must be made according to official regulations.

· **Waste disposal key:**
The disposal of the product has to be carried out in accordance with the legal requirements. EWC waste codes are strictly industry-oriented, therefore waste classification has to be done by the waste producer.

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· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **UN number or ID number**	
· **ADR, ADN, IMDG, IATA**	Not applicable.
· **UN proper shipping name**	
· **ADR, ADN, IMDG, IATA**	Not applicable.
· **Transport hazard class(es)**	
· **ADR, ADN, IMDG, IATA**	
· **Class**	Not applicable.
· **Packing group**	
· **ADR, IMDG, IATA**	Not applicable.
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Not applicable.
· **Segregation groups**	-
· **Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications. GRACE recommendation for air transport: Cargo aircraft only.

SECTION 15: Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **GHS label elements** Not applicable.
· **Hazard pictograms** Not applicable.
· **Signal word** Not applicable.
· **Hazard statements** Not applicable.

· **Directive 2012/18/EU (Seveso III)**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**
None of the ingredients is listed.

· **REGULATION (EC) 1907/2006 ANNEX XIV (List of Substances Subject to Authorisation)**
None of the ingredients is listed.

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**
None of the ingredients is listed.

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II (RoHS)**
None of the ingredients is listed.

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· **REGULATION (EU) 2019/1148 on the marketing and use of explosives precursors**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**
None of the ingredients is listed.

· **Classification system:**

· **Waterhazard class:** WGK nwg (AwSV of 18.04.2017): not hazardous to waters.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**
None of the ingredients is listed.

· **Candidate List of Substances of Very High Concern for Authorisation**
None of the ingredients is listed.

· **Registered in the international inventory lists:**
TSCA (USA) and DSL (Canada)
Zeolites are considered for TSCA and DSL purposes to be mixtures of the substances used to manufacture them. The individual reactant materials used to produce zeolites are required to be listed separately on the Inventory. The application of EPA's guidance is not affected by the chemical composition of the zeolite under consideration.
EPA recognizes zeolites as a family of aluminosilicates manufactured from a number of commercial processes and techniques that utilize different proportions of alumina, silica and a variety of sources of different inorganic and organic cations. The final zeolites are characterized by covalently linked AlO4 and SiO4 tetrahedra. Zeolites as a class of substances are considered mixtures under TSCA regardless of the commercial manufacturing processes and reactants utilized to achieve the desired chemical composition of the final zeolite structure.
EINECS/REACH (Europe)
IECSC (China)
PICCS (Philippines)
AIIC (Australia)
KECI (Korea)
TCSI (Taiwan)
ENCS (Japan)
DIW (Thailand)
NZIoC (New Zealand)

· **Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Product Stewardship, Grace Europe Holding GmbH.

· **HS-Code** 3824 9915

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· **Other information:**
· **The first date of preparation** 13.06.2016
· **Number of revision times and the latest revision date** 6.6 / 19.05.2022
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
· **Others** No further relevant information available.
· *** Data compared to the previous version altered.**