

1 Identification

- **Product identifier**
- **Trade name: SYLOSIV® A 4**
- **Application of the substance / the preparation:**
Intermediate product of varied applicability in industry and trade.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
GRACE
W. R. Grace & Co.-Conn
7500 Grace Drive
Columbia MD 21044
U. S. A.
- **Information department:**
Health and Safety (9 AM to 5 PM-EST) 1-410-531-4000
MSDS.Davison@grace.com
- **Emergency telephone number:**
Chemtrec North America: +1-800-424-9300
Chemtrec International: +1-703-527-3887
Other Emergencies (24hr): +1-410-531-4000

2 Hazard(s) identification

- **Classification of the substance or mixture**
The substance is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** None
- **Hazard pictograms** None
- **Signal word** None
- **Hazard statements** None
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 0

- **Hazard not otherwise classified**

The product is very adsorbent and may have a drying effect on skin and eyes.

When exceeding the OEL (Occupational 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.

Trade name: **SYLOSIV® A 4**

(Contd. of page 1)

3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **Description:**

- **CAS No. and description:**

1318-02-1	zeolite (crystalline aluminosilicate)	100%
-----------	---------------------------------------	------

4 First-aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Generally the product does not irritate the skin.
Wash with water.
- **After eye contact:**
Flush opened eye with large quantities of running water for at least 30 minutes. If symptoms occur, consult a doctor.
- **After swallowing:** Seek medical attention. Do not induce vomiting.
- **Information for 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.

5 Fire-fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Hazardous combustion products** No further relevant information available.
- **Protective equipment:**
Wear personal protective equipment.
No special measures required.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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:**
Vacuuming or wet sweeping may be used to avoid dust dispersal.
- **Reference to other sections** No dangerous substances are released.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Prevent formation of dust.
Keep receptacles tightly sealed.
Provide suction extractors if dust is formed.

(Contd. on page 3)

USA

Trade name: SYLOSIV® A 4

(Contd. of page 2)

Any deposit of dust which cannot be avoided must be regularly removed.
Take precautionary measures against static discharges.

- **Information about protection against explosions and fires:**
When transferring this material into flammable solvents, use proper grounding to avoid static electric sparks.
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:**
Keep receptacle tightly sealed.
Store in dry conditions.
This product is hygroscopic.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:** Not required.

- **Additional Occupational Exposure Limit Values for possible hazards during processing:**

Dust inhalable

PEL	Long-term value: 15 mg/m ³ TWA
-----	----------------------------------------------

REL	Long-term value: 15 mg/m ³ TWA
-----	----------------------------------------------

Dust respirable

PEL	Long-term value: 5 mg/m ³ TWA
-----	---------------------------------------------

REL	Long-term value: 5 mg/m ³ TWA
-----	---------------------------------------------

- **Additional information:** Valid lists at time of creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Protection of hands:**



Protective gloves

Wear gloves for the protection against mechanical hazards.
Check protective gloves prior to each use for their proper condition.
Check the permeability prior to each new use of the glove.
Use gloves of stable material (e.g. Nitrile)
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

- **Material of gloves**
Butyl rubber, BR
Nitrile rubber, NBR

(Contd. on page 4)

Trade name: SYLOSIV® A 4

(Contd. of page 3)

Recommended thickness of the material: ≥ 0.11 mm

- **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:**

Butyl rubber, BR
Nitrile rubber, NBR

- **Not suitable are gloves made of the following materials:**

Strong fabric gloves
Leather gloves

- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Powder
Color: White

- **Odor:** Odorless
- **Odour threshold:** Not available.

- **pH-value at 20 °C (68 °F):** 7-11

- **Change in condition**

Melting point/Melting range: > 400 °C (> 752 °F) (Zeolite, OECD TG 102)

Boiling point/Boiling range: Not determined.

- **Conditions of flammability**

Flash point: Not available.

- **Flammability (solid, gaseous):** Product is not flammable.
- **Ignition temperature:** Not available.
- **Decomposition temperature:** Not available.

- **Auto igniting:** Product is not self-igniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: Not determined.
Upper: Not determined.

- **Vapor pressure at 20 °C (68 °F):** - hPa

- **Density at 20 °C (68 °F):** 2.1 g/cm³ (17.525 lbs/gal)

- **Bulk density at 20 °C (68 °F):** 400 kg/m³

- **Specific Gravity** Not available

- **Vapour density** Not applicable.

(Contd. on page 5)

Trade name: **SYLOSIV® A 4**

(Contd. of page 4)

· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Insoluble.
· Coefficient of water/oil distribution:	Not available.
· Viscosity:	
Dynamic at 20 °C (68 °F):	- mPas
Kinematic:	Not applicable.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** No decomposition if used 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.

11 Toxicological information

- **Information on the likely routes of exposure**
- **Delayed and immediate effects and chronic effects from short or long term exposure**
- **Information on toxicological effects**
- **Acute toxicity:**

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

1318-02-1 zeolite (crystalline aluminosilicate)

Oral	LD50	> 5110 mg/kg (rat) (OECD TG 401)
Dermal	LD50	>5000 mg/kg (rabbit) (OECD TG 402)
Inhalative	LC0	> 3350 mg/m ³ /4h (rat) IUCLID Dataset 18-Feb-2000

· **Primary irritant effect:**

- **on the skin:**
May cause irritation with dryness and abrasion.

1318-02-1 zeolite (crystalline aluminosilicate)

Irritation of skin	IS	0 (rabbit) (OECD TG 404)
--------------------	----	--------------------------

- **on the eye:**
No irritating effect.

1318-02-1 zeolite (crystalline aluminosilicate)

Irritation of eyes	IS	0.7-1.3 (rabbit) (OECD 405) Corneal opacity
--------------------	----	------------------------------------------------

- **Skin sensitization** No further relevant information available.
- **Subacute to chronic toxicity:**
Subchronic toxicity (zeolite): Rat, oral, 90 day feeding experiment: NOEL 5000 ppm. Rat, inhalative, 11 weeks, no follow-up period: Lung effects, inflammation.
Lung effects, inflammation (zeolite): No negative effects were determined during test for carcinogenity and teratogenity.

(Contd. on page 6)

Trade name: SYLOSIV® A 4

(Contd. of page 5)

· **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

1318-02-1	zeolite (crystalline aluminosilicate)	3
-----------	---------------------------------------	---

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **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 (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Carcinogenicity**

1318-02-1 zeolite (crystalline aluminosilicate)

Oral	NOAEL	≥ 1000 ppm (rat)
------	-------	------------------

· **Mutagenicity**

1318-02-1 zeolite (crystalline aluminosilicate)

Oral	CHO	>0.5 mg/kg bw (rat) (OECD TG 474) no genotoxic effects
	AMES Test	>0.1 mg/plate (Salmonella typhimurium) (OECD TG 471) negative with and without metabolic activation
	Mouse Lymphoma Test	>0.08 mg/ml (L5178Y) (OECD TG 476) no genotoxicity; cytotoxicity >0,02 mg/ml (without metabolic activation); >0,08 with metabolic activation
	CHO	0.067 mg/l (Chinese Hamster Ovary) (OECD TG 473) cytotoxic 0,0671-0,725 mg/l without metabolic activation; 0,313-0,4 with metabolic activation

· **Reproductive toxicity**

1318-02-1 zeolite (crystalline aluminosilicate)

Oral	NOAEL (maternal toxicity)	≥ 1600 mg/kg bw/day (rat) (OECD 414) ≥ 1600 mg/kg bw/day (rabbit) (OECD 414)
	NOAEL (teratogenicity)	≥ 1600 mg/kg bw/day (rat) (OECD 414) ≥ 1600 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.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

· **Fish toxicity**

1318-02-1 zeolite (crystalline aluminosilicate)

LC50 (96 h)	>680 mg/l (Pimephales promelas) (EPA 660/3-75/009)
-------------	----------------------------------------------------

(Contd. on page 7)

Trade name: **SYLOSIV® A 4**

(Contd. of page 6)

· Water flea toxicity	
1318-02-1 zeolite (crystalline aluminosilicate)	
EC50 (24 h)	2808 mg/l (Daphnia magna) (OECD TG 202)
· Algae toxicity	
1318-02-1 zeolite (crystalline aluminosilicate)	
EC50 (96h)	>328 mg/l (Scenedesmus subspicatus) (OECD TG 201)
· Bacterial toxicity	
1318-02-1 zeolite (crystalline aluminosilicate)	
EC50 (16h)	950 mg/l (Pseudomonas putida) (DIN 38412/8)

- **Persistence and degradability**
Being an inorganic product, it cannot be removed from water by biological cleaning processes.
- **Other information:**
By the insolubility in water there is a separation at every filtration and sedimentation process.
- **Behavior in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
 - **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Recommendation:**
Disposal must be made according to official regulations.
- Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State/provincial and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state/provincial and local requirements.

14 Transport information

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	None
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	None
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	None
· Packing group	
· DOT, ADR, IMDG, IATA	None
· Environmental hazards:	
	Not applicable.
· Special precautions for user	
	Not applicable.

(Contd. on page 8)

Trade name: **SYLOSIV® A 4**

(Contd. of page 7)

- | | |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. GRACE recommendation for air transport: Cargo aircraft only. |

15 Regulatory information· **SARA**· **SARA 302/304**

Substance is not listed.

· **SARA 313**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

EPA has defined zeolites as complex chemical products consisting of silica (SiO₂) and alumina (Al₂O₃), in various proportions, plus metallic oxides and certain cations. Zeolites are considered for TSCA purposes to be statutory mixtures of the substances used to manufacture them.

Substance is not listed.

· **Proposition 65**· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **Canadian DSL**

Zeolites are considered for DSL purposes to be mixtures of the substances used to manufacture them.

· **Canadian NDSL**

Substance is not listed.

· **European EINECS**

Substance is listed.

· **Philippines Inventory of Chemicals and Chemical Substances PICCS**

Substance is listed.

· **Inventory of the Existing Chemical Substances manufactured or imported in China IECSC**

Substance is listed.

(Contd. on page 9)

Printing date 10/20/2015

Version: 24.8

Reviewed on 10/20/2015

Trade name: **SYLOSIV® A 4**

(Contd. of page 8)

· Australian Inventory of Chemical Substances AICS		
Substance is listed.		
· Existing and New Chemical Substance List ENCS		
1318-02-1	zeolite (crystalline aluminosilicate)	
· Korean Existing Chemical Inventory KECI		
1318-02-1	zeolite (crystalline aluminosilicate)	KE-35511

- **GHS label elements** None

- **Hazard pictograms** None

- **Signal word** None

- **Hazard statements** None

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:** GRACE Safety & Health Department

- **Tarif number** 28421000

- **Contact:**

SALES OFFICES

USA:

GRACE

W. R. Grace & Co.-Conn

7500 Grace DR

Columbia, MD 21044

Tel: +1 410-531 4000

Europe:

Grace GmbH & Co. K.G.

In der Hollerhecke 1

Postfach 1445

D-67545 Worms, Germany

Tel: +49 6241 4030

Asia Pacific:

W. R. Grace (Singapore) Pte. Ltd.

230 Orchard Road

09-232, Faber House

Singapore 238854

Tel: +65 6737 3033

Fax: +65 6737 5826

19th Floor K.Wah Center

1010 Huai Hai Zhong Road

Shanghai, 200031 China

T (电话): 86 21 3158 2888

F (传真): 86 21 3158 2828

Grace Japan K.K.

Kohken New River Bldg 3F

2-21-18, Shinkawa

Chuo-ku, Tokyo 104-0033

JAPAN

Tel: +81 3.3537.6006

Fax: +81 3.3537.6007

(Contd. on page 10)

USA

Printing date 10/20/2015

Version: 24.8

Reviewed on 10/20/2015

Trade name: SYLOSIV® A 4

(Contd. of page 9)

- **Date of preparation / last revision** 10/20/2015 / 24.7
- **The first date of preparation** 04/08/2001
- **Number of revision times and the latest revision date** 24.8 / 10/20/2015

- **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 européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

- *** Data compared to the previous version altered.**

USA