

SAFETY SHEET

(According to Directive No. 27/1999 of the Digest)

Date of issue: March 1, 2002	Page 1 of 5
Date of revision:	
Product name: ZEOCHEM MOLECULAR 4A FILTER	

1. IDENTIFICATION OF THE SUBSTANCE / AGENT, THE MANUFACTURER AND THE IMPORTER
1.1 Chemical name of the substance / trade name of the agent ZEOCHEM MOLECULAR 4A FILTER CAS No.: None, agent ES (EINECS) No.: None, agent Other names of the substance:
1.2 Identification of the manufacturer / importer Manufacturer: CU Chemie Uetikon AG, CH-8707 Uetikon, Switzerland Tel. +41 1/922 91 11 Fax +41 1/920 62 05 Importer: Name or business name: KNORR – BREMSE systémy pro užitková vozidla s.r.o. Address: P.Bezruč 399, 463 62 Hejnice Identification No.: 47311096 Tel. 0427/363611 Fax 0427/363711 Emergency phone number: 02/24919293, 02/24915402, 02/24914575 Toxicology Information Centre, Na Bojišti 1, 128 08 Praha 2
2. INFORMATION ON THE SUBSTANCE / AGENT COMPOSITION The product contains the following dangerous substances: Chemical name: alkali aluminosilicate Content in %: 100 CAS No.: 1318-02-1 ES (EINECS) No.: 215-283-8 Warning symbol: Xi R-sentence: R 36/37/38 S-sentence: S 26, S 36
3. INFORMATION ON THE DANGEROUS EFFECTS OF THE SUBSTANCE / AGENT: 3.1 The most serious adverse effects on human health when using the substance/agent: The agent irritates eyes, breathing organs and skin. In case of contact with moist tissues burns may occur. Prolonged or repeated exposure may lead to lung damage. 3.2 The most serious adverse effects on the environment when using the substance/agent: The agent has no serious adverse effects in water environment. 3.3 Possible improper use of the substance/agent: 3.4 Other information:
4. FIRST AID INSTRUCTIONS 4.1 General instructions: When in doubt, seek medical help. 4.2 In case of inhalation: Stop the exposure, move the victim to fresh air and in case of breathing difficulties call medical help. 4.3 In case of contact with skin: Remove the contaminated items of clothing immediately wash the affected parts with water and soap.

4.4	In case of contact with eyes:	Immediately rinse the eyes with clean water for 15 minutes while keeping the eyelids open and in case of continued irritation seek medical help.
4.5	In case of ingestion:	Drink at least two glasses of clean water and seek medical help.
4.6	Other information:	The agent adsorbs water while releasing heat. Treat with regard to the symptoms.
5.	MEASURES FOR EXTINGUISHING FIRE	
5.1	Suitable fire extinguishing agents:	The product does not burn on its own, use extinguishers with respect to the substances burning around.
5.2	Unsuitable fire extinguishing agents:	Water
5.3	Special dangers:	No special dangers
5.4	Special protective gear for the fire brigade:	Protective clothing and the protection of the air passages
5.5	Other information:	In case of fire the presence of other substances absorbed in the agent must be considered.
6.	MEASURES IN CASE ACCIDENTAL RELEASE	
6.1	Safety measures for the protection of persons:	Mark the affected area and order unauthorized persons out. Use personal protection gear for eyes, skin and air passages. Follow the recommendations given up paragraphs 7 and 8.
6.2	Safety measures for environmental protection:	Prevent the agent from entering sewerage system or surface or ground water (due to possible contamination by other pollutants potentially harmful to water) and inform the relevant authorities
6.3	Recommended methods of cleaning and disposal:	Brush the loose product carefully or vacuum it into suitable containers. If the product is contaminated by hydrocarbons, do not vacuum clean.
6.4	Other information:	
7.	INSTRUCTIONS FOR HANDLING AND STORAGE	
7.1	Instructions for handling:	Do not raise dust and do not inhale it. Use personal protection gear. Do not eat, drink or smoke while working. After finishing work wash your hands. Follow the regulations for health protection and safety at work.
7.2	Instructions for storage:	Store in sealed packagings in dry, cool and well-ventilated warehouses at normal temperatures. Close immediately after taking the product from the packaging so that its quality does not deteriorate. Follow the instructions on the label.
8.	EXPOSURE MONITORING AND PROTECTION OF PERSONS	
8.1	Technical measures:	Ensure proper ventilation or extraction
8.2	Inspection parameters:	
	Chemical name	CAS PEL _c
	Other silicates	10 mg/m ³
8.3	Personal protection gear:	
	Protection of air passages:	A breathing mask with dust filter
	Eye protection:	Protective goggles
	Hand protection:	Protective gloves
	Skin protection:	Overalls
8.4	Other information:	

9. PHYSICAL AND CHEMICAL CHARACTERISTICS	
State (at °C):	Solid
Colour:	Beige
Odour (scent):	No data
pH value (at 20°C):	11
(100 g/l of water)	
Melting temperature (temperature range) (°C):	
Boiling temperature (temperature range) (°C):	
Inflammation point (°C):	Nonflammable
Flammability:	Nonflammable
Self-ignition:	
Explosion limits: Upper limit (vol. %):	
Lower limit (vol. %):	
Oxidation properties:	
Vapour tension (at °C):	
Density (at 20°C):	
Solubility (at 20°C):	
- in water	Insoluble
- in fats	
(including oil specification)	
Partition coefficient n-octanol/water:	
Other information:	
Bulk density:	680-800 kg/m ³
Specific heat	1.07 kJ/kg
10. STABILITY AND REACTIVITY	
10.1 Conditions under which the product is stable	Stable under the conditions recommended for storage and handling (par. 7).
10.2 Conditions to be avoided:	The product may not get into contact with moisture and water and some incompatible substances.
10.3 Substances and materials the product may not come into contact with .	Water, substances with a high adsorption heat (hydrogen chloride, olefins)
10.4 Dangerous decomposition products:	During the process of thermal decomposition the oxides of the metals contained in the product or the decomposition products of the absorbed substances may be produced.
10.5 Other information:	
11. TOXICOLOGY INFORMATION	
11.1 Acute toxicity:	
-LD ₅₀ orally, brown rat (mg/kg):	
-LD ₅₀ dermally, brown rat or rabbit (mg/kg):	
-LD ₅₀ brown rat, for aerosols or particles (mg/l):	
-LD ₅₀ brown rat, for gases and vapours (mg/l):	
11.2 Subchronic – chronic toxicity:	
11.3 Sensitization:	
11.4 Carcinogenicity:	
11.5 Mutagenity:	
11.6 Toxicity for reproduction	
11.7 Experience in humans: The product may cause the irritation of eyes accompanied with reddening and lacrimation. Inhalation causes the irritation of air passages. Prolonged	

	<p>or repeated exposure may lead to lung damage. The product dries skin, when in contact with moisture heat is generated that may cause burns. Ingestion may cause the burns of moist body tissues.</p>
11.8 Tests carried out on animals:	
11.9 Other information:	No other information about the agent is available.
12. ECOLOGY INFORMATION	
12.1 Acute toxicity for water organisms:	
-LC ₅₀ ,96 hours, fish (mg/l):	
-EC ₅₀ ,48 hours, daphnia (mg/l):	
-LC ₅₀ ,72 hours, algae (mg/l):	
12.2 Decomposability:	
12.3 Toxicity for other types of environment:	Toxicity for water and other types of environment is not known.
12.4 Other information:	
12.5 CHSK:	
12.6 BSK ₅ :	none
13. DISPOSAL INFORMATION	
13.1 The manner of disposal of the substance/agent:	<p>The recommended manner of disposal is dumping at a waste disposal site. Waste name is according to Waste Catalogue: - absorption agents, filtration materials, cleaning textiles and protective clothing contaminated by dangerous substances, catalogue No. 150202* category N.</p>
13.2 The manner of disposal of the contaminated packaging:	<p>Follow the valid legislative regulations. Uncleaned packagings are to be disposed of in the same way as is the product. Cleaned packaging may be recycled.</p>
14. TRANSPORT INFORMATION	
With respect to transport the product is not classified as dangerous.	
ADR/RID: --	
ADN/ADNR: --	
IMDG: --	
ICAO/IATA: --	
15. INFORMATION ON REGULATIONS	
Legal regulations applicable to the substance/agent:	
According to Law No. 157/1998 of the Digest and as amended by Law No. 352/1999 of the Digest the product is classified as	
irritant Xi.	
The numbers and wording of the related R-sentences (Annex No. 5 to Government Decree No. 25/1999 of the Digest):	
R-sentence: R 36/37/38 – Irritates eyes, breathing organs and skin	
The numbers and wording of the related S-sentences (Annex No. 5 to Government Decree No. 25/1999 of the Digest.):	
S-sentence: S 22 – Do not inhale the dust	
S 26 – In case of contact with eyes carefully rinse with water and seek medical help.	
S 36/37 – Use suitable overalls and protective gloves.	

S 46—In case of ingestion immediately seek medical help and show the packaging or identification.

EINECS No.: All substances contained in the agent are listed in EINECS.

Other compulsory identification of products containing the substances listed in the section 9, Decree of the Ministry of Industry and Trade No. 26/1999 of the Digest.: none Other regulations:

Related regulations in effect in the Czech Republic:

Decree of the Czech Republic Ministry of Health No. 89/2001 of the Digest that determines conditions for classifying work into categories, the limit values of biological exposure tests and requirements for reporting work with asbestos and biological agents, Government Decree No. 178/2001 of the Digest that stipulates conditions for health protection at work.

Law No. 185/2001 of the Digest on Waste (and its implementary decrees No. 381-384/2001 of the Digest).

16. OTHER INFORMATION

Validation parameters for work environment:

Substance name	CAS No.	Type	Value	Unit
Aluminium oxide (nonfibrous)		MAK	6	mg/m ³

Water hazard class: D 1

When compiling the Safety Sheet the manufacturer's data and the data mentioned in the Fluka Company catalogue were used.

Recommended use:

The product is designed for use in industry.

The information contained in this sheet corresponds to our best knowledge of the product at the time of publication. This information only serves for more correct and safer handling, storage, transport and disposal. It can not be viewed as the guarantee or quality clarification of the product. It only applies to the expressly mentioned material and it does not apply when it is used in combination with other materials or processes not expressly mentioned in this safety sheet.

The user is responsible for adhering to all applicable legal regulations.