

**PRODUCT SAFETY DATA SHEET for Grasimat artificial aggregate - granular ferro silico manganese slag**

*prepared pursuant to Annex II of the REACH regulation EC 1907/2006 in the valid and effective wording*

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Substance/Mixture Identifier**

Substance Name: Grasimat artificial aggregate - granular ferro silico manganese slag  
Chemical Name: 273-733-9 / Slags, silicomanganese – manufg.  
Synonyms: Grasimat artificial aggregate, Grasimat  
Trade Name: Grasimat artificial aggregate - granular ferro silico manganese slag  
EINECS: 273-733-9  
CAS: 69012-33-5  
Molecular Weight Range: 32.0 – 236.0  
REACH Registration No.: 01-2119440597-32-0003

**1.2 Identified Uses of the Substance/Mixture**

Identified Uses: Please, see identified uses of the substance as set forth in Annex 1 to the Product Safety Data Sheet

Uses Advised Against: Other uses not included in Annex 1 to the Product Safety Data Sheet.

**1.3 Details of the Supplier of Safety Data Sheet**

Name: OFZ a. s.  
Address: Široká 381, 027 41 Oravský Podzámok, Slovakia  
Phone No.: +421/43/5804 111  
Fax No.: +421/43/5804 320  
E-mail: [ofz@ofz.sk](mailto:ofz@ofz.sk)

**1.4 Emergency Telephone Number**

European Emergency No.: 112  
Emergency Phone No.  
at the Company: +421/43/5804 111  
Available Outside Office  
Hours: No

National Toxicological  
Information Centre:

+421 2 5477 4166

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the Substance

#### 2.1.1 Classification of the Substance According to Regulation CLP / GHS

The substance does not meet the criteria for classification under Regulation EC 1272/2008.

### 2.2 Label Elements

#### 2.2.1 Labelling According to Regulation CLP / GHS

The substance does not meet the criteria for classification under Regulation EC 1272/2008.

Signal word: None

### 2.3 Other Hazards

The substance does not meet the criteria for classification as PBT or vPvB substance.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Description: UVCB substance, containing metallic oxides, obtained as a by-product in the manufacture of SiMn alloy.

Degree of purity: 100.0 % (w/w)

### 3.1 Constituents

Constituent	Typical Concentration	Concentration Range	Remarks
SiO <sub>2</sub> (silicon dioxide) CAS: 7631-86-9 EINECS: 231-545-4	Not applicable (UVCB substance)	30.0 - 45.0 % (w/w)	
CaO (calcium oxide) CAS: 1305-78-8 EINECS: 215-138-9	Not applicable (UVCB substance)	10.0 - 30.0 % (w/w)	
Al <sub>2</sub> O <sub>3</sub> (aluminium (III) oxide) CAS: 1344-28-1 EINECS: 215-691-6	Not applicable (UVCB substance)	8.0 - 20.0 % (w/w)	
MnO (manganese oxide) CAS: 1344-43-0 EINECS: 215-695-8	Not applicable (UVCB substance)	5.0 - 15.0 % (w/w)	
MgO (magnesium oxide) CAS: 1309-48-4 EINECS: 251-171-9	Not applicable (UVCB substance)	5.0 - 15.0 % (w/w)	
FeO (iron oxide)	Not applicable (UVCB substance)	≤ 2 % (w/w)	

CAS: 1345-21-1 EINECS: 215-721-8	substance)		
K <sub>2</sub> O (potassium oxide) CAS: 12136-45-7 EINECS: 235-227-6	Not applicable (UVCB substance)	≤ 2 % (w/w)	
Na <sub>2</sub> O (sodium oxide) CAS: 1313-59-3 EINECS: 215-208-9	Not applicable (UVCB substance)	≤ 2 % (w/w)	
SO <sub>3</sub> (sulfur trioxide) CAS: 7446-11-9 EINECS: 231-197-3	Not applicable (UVCB substance)	≤ 2 % (w/w)	

### 3.2 Impurities

No impurities relevant for classification and labelling.

## 4. FIRST-AID MEASURES

### 4.1 Description of First-aid Measures

General Information: Not anticipated to cause any harm if in contact with clothing, skin, or eye. However, in case of accident or unwellness, immediately seek medical advice.

Inhalation: Mechanical irritation of airways: Remove person from dust exposed areas.

Skin contact: Wash skin with water and/or a mild detergent.

Eye contact: Rinse eyes with water/saline solution. See a physician upon persistent discomfort.

### 4.2 Most Important Symptoms

No acute danger of poisoning or harm to a human health. Not anticipated – the substance is not classified

## 5. FIRE-FIGHTING MEASURES

### 5.1 Suitable Extinguishing Media

Grasimat artificial aggregate - granular ferro silico manganese slag is not combustible and the dust entails no danger of explosion.

Not applicable

### 5.2 Unsuitable Extinguishing Media

Not applicable

### 5.3 Special Hazards Arising From the Substance or Mixture

None

#### **5.4 Advice for Fire Fighters**

Not applicable

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal Precautions, Protective Equipment, and Emergency Procedures**

#### **6.1.1 For non-emergency personnel**

Use personal protective equipment (see section 8).

#### **6.1.2 For emergency personnel**

Ensure adequate ventilation and ventilate closed spaces before entering.

Avoid generation of dust.

Keep unprotected persons away.

Wear suitable protective equipment. (see section 8)

Avoid inhalation: ensure that sufficient ventilation or suitable respiratory protective system is used, wear suitable protective equipment. (see section 8)

### **6.2 Environmental Precautions**

The preparation is not considered an environmental hazard based on the available studies. However it is advisable to keep away from drains as large quantities could clog drains.

### **6.3 Methods and Material for Containment and Cleaning up**

Material in the form of dust should be collected in the suitable containers to prevent inhalation of dust particles.

Use dust protection respiratory cover.

### **6.4 Reference to Other Sections**

For more information on exposure controls or personal protection, please, see section 8.

## **7. HANDLING AND STORAGE**

### **7.1 Handling**

Grasimat artificial aggregate - granular ferro silico manganese slag is delivered in bulk. When delivered in bulk, Grasimat can be transported in tilting trucks or railway cars suitable for transporting bulk materials.

Avoid generation of dust. Wear protective clothing, gloves and goggles.

Wear suitable respiratory protection where necessary.

## 7.2 Storage

Grasimat artificial aggregate - granular ferro silico manganese slag is stored at the reinforced warehousing areas on the uncovered piles.

## 7.3 Specific End Uses

None. Please, check the identified uses in Table 1 mentioned in Appendix to this Safety Data Sheet.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 Control Parameters

**Occupational Exposure Limit (OEL):** 10 mg/m<sup>3</sup> inhalable dust of Grasimat artificial aggregate - granular ferro silico manganese slag

**Long-term Derived No Effect Level (DNEL):** None. No DNEL for systemic effects were produced for dermal or inhalation exposure on the basis that no exposure will occur via the inhalation route (due to PSD tests indicating no inhalation hazard) and inorganics not being absorbed via the skin.

**PNEC<sub>water</sub>:** Not required. A transformation dissolution study has shown that the concentration of manganese released from the substance (1 µg/l after 28 days from 1mg/L loading) is less than the background concentration of manganese in European environments (15.9 µg Mn/L in surface water).

**PNEC<sub>soil</sub>:** Not required. A transformation dissolution study has shown that the concentration of manganese released from the substance (1 µg/l after 28 days from 1mg/L loading) is less than the background concentration of manganese in European environments (428.6 mg/kg in soil).

**PNEC<sub>sediment</sub>:** Not required. A transformation dissolution study has shown that the concentration of manganese released from the substance (1 µg/l after 28 days from 1mg/L loading) is less than the background concentration of manganese in European environments (452 mg/kg in sediment).

## 8.2 Exposure Controls

To control potential exposures a generation of dust should be avoided. An appropriate protective equipment is recommended. With visible raising of dust from Grasimat artificial aggregate - granular ferro silico manganese slag, working and safety measures that constrain raising of fine-grained dust above 10 mg/m<sup>3</sup> should be implemented.

### 8.2.1 Appropriate Engineering Controls

Measure occupational exposure level regularly. If user operations generate dust, use local exhaust ventilation or other controls to keep airborne dust levels below exposure limits.

## 8.2.2 Individual Protection Measures

### 8.2.2.1 Eye/Face Protection

Wear protective goggles.

### 8.2.2.2 Skin Protection

Wear protective clothes and gloves. Use a hand protective cream.

### 8.2.2.3 Respiratory Protection

Wear protective respiratory system.

## 8.2.3 Environmental Exposure Controls

No concentrations that would prove to be harmful for the environment as measured by environmental exposure have been found.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

## 9.1 Information on Basic Physical and Chemical Properties

Appearance:	Grey/green, solid, in the form of lumps
Odour:	Odourless
Odour treshold:	Does not apply, substance is odourless
pH:	not applicable
Boiling point:	not applicable (solid with a melting point > 300°C)
Melting/freezing point:	expected to be > 1,000 °C at 101.3 kPa
Flash point:	not applicable (substance inorganic)
Flammability:	non flammable (EU Method A.10)
Explosive properties:	non explosive (no chemical groups with explosive properties)
Oxidizing properties:	non oxidizing (EU Method A.17)
Vapour pressure:	not applicable (melting point > 300°C)
Bulk density:	635±100 kg/m <sup>3</sup>
Solubility in water:	not soluble

Partition coefficient n-octanol/water (log value):	not applicable (substance inorganic)
Viscosity:	not applicable (substance solid not liquid at ambient temperature)
Self-ignition:	not self-igniting
Dissociation constant:	cannot dissociate due to lack of relevant functional groups
Surface tension:	substance is not surface active
Stability in organic solvents:	not applicable (substance inorganic)
Mass activity index:	≤ 1

## 9.2 Other Information

No additional information relevant to the safe use of the substance.

# 10. STABILITY AND REACTIVITY

## 10.1 Reactivity

For this substance there is no specific test data available.

## 10.2 Chemical Stability

The substance is chemically stable under recommended conditions of storage, use, and temperature.

## 10.3 Possibility of Hazardous Reactions

No hazardous reactions when handled and stored according to provisions

## 10.4 Conditions to Avoid

Under influence of specific temperature, pressure, lighting, or shock, there are no hazardous reactions.

## 10.5 Incompatible Materials

None

## 10.6 Hazardous Decomposition Products

Does not decompose when used for intended uses

<b>11. TOXICOLOGICAL INFORMATION</b>
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<b>Toxicity Endpoints</b>	<b>Outcome of the Effects Assessment</b>
<b>Toxic-kinetics</b>	<p>The test material, Grasimat artificial aggregate - granular ferro silico manganese slag, is very poorly soluble in water.</p> <p>A detailed analysis using particle-size distribution of the test material indicates that it is not considered an inhalation hazard since only over 96% of the test material was greater than 100 µm.</p> <p>Any test material that is ingested orally is likely to pass through the gastrointestinal (GI) tract unchanged.</p> <p>The test material has an exceedingly low potential for any absorption by oral ingestion, inhalation or dermal absorption.</p>
<b>Acute Toxicity</b>	<p>Grasimat artificial aggregate - granular ferro silico manganese slag is not acutely toxic.</p> <p>Nonhuman information:            Oral: LD<sub>50</sub> &gt; 2,000 mg/kg bw EU Method B.1, rat</p> <p>Inhalation: not appropriate, very low level of particles of an inhalable size, &lt; 3.5 % particles &lt; 100 µm</p> <p>Dermal: LD<sub>50</sub> &gt; 2,000 mg/kg bw EU Method B.3, rat</p> <p>Classification for acute toxicity is not warranted.</p>
<b>Skin Corrosion/Irritation</b>	<p>Grasimat artificial aggregate - granular ferro silico manganese slag is not irritative/corrosive.</p> <p>Nonhuman information:            Grasimat artificial aggregate - granular ferro silico manganese slag is not irritating to skin (rabbit, OECD 404, EU Method B.4, EU Method B.46. OECD 431).</p> <p>On the basis of negative <i>in vivo</i> results for skin, it is also considered that there is no classification for respiratory irritation. <i>In vitro</i> testing has indicated that the substance is not corrosive.</p> <p>Classification for irritation/corrosion is not warranted.</p>
<b>Serious Eye Damage/Irritation</b>	<p>Grasimat artificial aggregate - granular ferro silico manganese slag is not irritative/corrosive.</p> <p>Nonhuman information:            Grasimat artificial aggregate - granular ferro silico manganese slag is not irritating to eye (rabbit, OECD 405, EU Method B.5).</p> <p>On the basis of negative <i>in vivo</i> results for eye, it is also considered that there is no classification for respiratory irritation. <i>In vitro</i> testing has indicated that the substance is not corrosive.</p> <p>Classification for irritation/corrosion is not warranted.</p>
<b>Respiratory or Skin Sensitization</b>	<p>Grasimat artificial aggregate - granular ferro silico manganese slag is not a sensitizer.</p> <p>Nonhuman information:</p>



	<p>Local Lymph Node Assay (OECD 429, EU Method B.42. mouse): not irritating</p> <p>The local lymph node assay (LLNA) test was negative and therefore not classified as a skin sensitizer. Given the intrinsic lack of particles from the substance together with the negative LLNA, it is inferred that the substance will not be a respiratory sensitizer.</p> <p>Classification for sensitization is not warranted.</p>
<b>Germ Cell Mutagenicity</b>	<p>Grasimat artificial aggregate - granular ferro silico manganese slag is not genotoxic.</p> <p>Nonhuman information:  Bacterial reverse mutation assay (Ames test, OECD 471): negative  Reverse mutation test using bacteria (EU Method B.13/14): negative  <i>In vitro</i> mammalian cell gene mutation test (OECD 476): negative  <i>In vitro</i> mammalian chromosome aberration test (OECD 473): negative  <i>In vivo</i> mammalian erythrocyte micronucleus test (OECD 474): negative</p> <p>Negative Ames test on the substance. Negative results on MnCl<sub>2</sub> for all tests conducted (three <i>in vitro</i> and one <i>in vivo</i> test). No classification for mutagenicity of the substance is considered valid on this basis.</p> <p>Classification for genotoxicity is not warranted.</p>
<b>Carcinogenicity</b>	<p>Grasimat artificial aggregate - granular ferro silico manganese slag is not carcinogenic.</p> <p>There is no evidence of carcinogenicity in humans from exposure to the substance. It is considered that this is sufficient evidence along with all the negative genotoxicity tests to justify no classification of the substance.</p> <p>Classification for carcinogenicity is not warranted.</p>
<b>Toxicity for Reproduction</b>	<p>Grasimat artificial aggregate - granular ferro silico manganese slag is not toxic for reproduction.</p> <p>In accordance with Article 14(4) of the regulation No 1907/2006, no exposure assessment is required for the substance to be registered and testing for this endpoint is omitted (see section „Toxic-kinetics“ or „Repeated Dose Toxicity“). Since classification is hazard-based, it is considered that lack of these intrinsic hazards based on physical and chemical properties justifies no classification.</p> <p>Classification is not warranted.</p>
<b>Specific Target Organ Toxicity (Single Exposure)</b>	<p>Based on available data the classification criteria are not met.</p>
<b>Specific Target Organ Toxicity (Repeated Exposure)</b>	<p>Grasimat artificial aggregate - granular ferro silico manganese slag is not toxic via repeated doses.</p> <p>Toxicity of Grasimat artificial aggregate - granular ferro silico manganese slag via oral route: Exposure via the oral route is not expected and therefore this is not considered to be a relevant route of exposure. Absorption of manganese is very low (approximately 5 % based on TK assessment and is not likely to produce any systemic effect for oral exposure. This is supported by the absence of systemic toxicity observed in the acute oral toxicity study (conducted according to EU Method B1).</p> <p>Toxicity of Grasimat artificial aggregate - granular ferro silico manganese slag via dermal route: A repeated dose toxicity study via the dermal route does not need to be conducted as the physiological properties of the</p>

	<p>substance do not suggest a significant rate of absorption through the skin and no systemic effects or other evidence of absorption were seen in the skin or eye irritation studies and furthermore the water solubility of the substance is very poor, and therefore a limited amount of potential substance is available for systemic absorption via the dermal route.</p> <p>Toxicity of Grasimat artificial aggregate - granular ferro silico manganese slag via inhalation: Testing for this endpoint via the inhalation route is omitted on the basis that exposure via the inhalation route is not likely as the particle size distribution suggests that the substance does not pose an intrinsic inhalation hazard.</p> <p>The substance is not an intrinsic inhalation hazard based on a particle size distribution test. It is very poorly soluble in water and manganese leaches out to only a small degree in bio-accessibility studies in both simulated gastric and artificial lung fluid. Dermal absorption of manganese is very low. On this basis there is no justification to classify by any route for any effect.</p> <p>Classification for repeated dose toxicity is not warranted.</p>
<b>Aspiration Hazard</b>	Data lacking.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### 12.1.1 Acute/Prolonged Toxicity to Fish

Short-term toxicity: Not required due to low concentration of manganese released from the substance (1 µg/l after 28 days from 1mg/L loading) is less than the background concentration of manganese in European environments (15.9 µg Mn/L in surface water, 452 mg/kg in sediment, 428.6 mg/kg in soil).

Long-term toxicity: In accordance with column 2 of REACH Annex IX, the long-term testing on fish study does not need to be conducted as there are mitigating factors indicating the aquatic toxicity is unlikely to occur.

#### 12.1.2 Acute/Prolonged Toxicity to Aquatic Invertebrates

Short-term and long-term toxicity: In accordance column 2 of REACH Annex IX, the long-term testing on invertebrates study does not need to be conducted as there are mitigating factors indicating the aquatic toxicity is unlikely to occur.

#### 12.1.3 Acute/Prolonged Toxicity to Aquatic Plants

Short-term and long-term toxicity: In accordance with column 2 of REACH Annex VII, the growth inhibition study, aquatic plants does not need to be conducted as there are mitigating factors indicating the aquatic toxicity is unlikely to occur.

#### 12.1.4 Acute/Prolonged Toxicity to Sediment Organisms

Short-term and long-term toxicity: In accordance column 2 of REACH Annex X, the long-term toxicity to sediment organisms does not need to be conducted as no concern for this endpoint is indicated in the chemical safety assessment.

#### **12.1.5 Acute/Prolonged Toxicity to Soil Macro-organisms**

Short-term toxicity: In accordance with section 1 of REACH Annex XI (testing does not appear scientifically necessary), the short-term testing on invertebrates study does not need to be conducted.

Long-term toxicity: In accordance column 2 of REACH Annex X, the long-term toxicity testing on invertebrates does not need to be conducted as no concern for this endpoint is indicated in the chemical safety assessment.

#### **12.1.6 Acute/Prolonged Toxicity to Terrestrial Plants**

Short-term toxicity: In accordance with section 1 of REACH Annex XI (testing does not appear scientifically necessary), the short-term testing on plants study does not need to be conducted.

Long-term toxicity: In accordance column 2 of REACH Annex X, the long-term toxicity testing on plants does not need to be conducted as no concern for this endpoint is indicated in the chemical safety assessment.

#### **12.1.7 Acute/Prolonged Toxicity to Soil Micro-organisms**

In accordance with section 1 of REACH Annex XI (testing does not appear scientifically necessary), the testing on microbes study does not need to be conducted.

#### **12.1.8 Acute/Prolonged Toxicity to Aquatic Micro-organisms**

In accordance with column 2 of REACH Annex VIII, the activated sludge respiration inhibition test does not need to be conducted as there are mitigating factors indicating the aquatic toxicity is unlikely to occur.

#### **12.1.9 Acute/Prolonged Toxicity to Birds**

In accordance with section 1 of REACH Annex XI (testing does not appear scientifically necessary), the long-term or reproductive toxicity to birds study does not need to be conducted this study appears to be scientifically unnecessary.

#### **12.1.10 General Conclusion**

A transformation dissolution study has shown that the concentration of manganese released from the substance (1 µg/l after 28 days from 1mg/L loading) is less than the background concentration of manganese in European

environments (15.9 µg Mn/L in surface water, 452 mg/kg in sediment, 428.6 mg/kg in soil). Therefore toxicity data for the SiMn slag were not considered to be required due to insignificant exposure. By the same reasoning, PNEC values were also considered not to be required.

### 12.2 Environmental Distribution

An adsorption / desorption screening study test is technically not possible due to the physical nature of the substance (SiMn slag). A transformation dissolution study has shown that the concentration of manganese released from the substance (1 µg/l after 28 days from 1mg/L loading) is less than the background concentration of manganese in European soils (428.6 mg/kg).

### 12.3 Persistence and Degradation

Not relevant for inorganic substances.

### 12.4 Potential for Bioaccumulation

No experimental data on bioaccumulation exist. A transformation dissolution study has shown that the concentration of manganese released from the substance (1 µg/l after 28 days from 1mg/L loading) is less than the background concentration of manganese in European surface waters (15.9 µg Mn/L). Furthermore, manganese is an essential trace nutrient in animals and is required for the photosynthetic process in plants. Hence unacceptable bioaccumulation is highly unlikely to occur in any organism due to their ability to regulate intake and loss from natural sources (at higher concentrations than those resulting from Grasimat artificial aggregate - granular ferro silico manganese slag use).

### 12.5 Results of PBT and vPvB Assessment

Substance is not classified as PBT or vPvB substance.

### 12.6 Other Adverse Effects

No other adverse effects are identified.

## 13. DISPOSAL CONSIDERATIONS

Dispose of Grasimat artificial aggregate - granular ferro silico manganese slag should be in accordance with local and national legislation. Unused contents should be placed at the dump site including an inert one.

## 14. TRANSPORT INFORMATION

Grasimat artificial aggregate - granular ferro silico manganese slag is not classified as hazardous for transport and transported according to ADR (road), RID (rail), IMDG (Sea), and ICAO-TI/IATA-DGR (air).

Grasimat artificial aggregate - granular ferro silico manganese slag is delivered in bulk. When delivered in bulk, Grasimat can be transported in tilting trucks or railway cars suitable for transporting bulk materials.

## 15. REGULATORY INFORMATION

UN GHS - UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS):

“According to Chapter 1.5.2 of the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS) safety data sheets (SDS) are only required for substances and mixtures that meet the harmonized criteria for physical, health or environmental hazards. This product does not meet these criteria

EU CLP – Classification Labeling and Packaging Regulation:

According to Article 59(2)(b) of (EC) No 1272/2008 (CLP), which amends REACH article 31(1), safety data sheets (SDS) are only required for substances and mixtures/special preparations that meet the harmonized criteria for physical, health or environmental hazards. Since this product does not meet these criteria, a SDS according to 453/2010/EC is not issued. In order to communicate relevant HSE-(health, safety and environmental) information, this product safety information (PSI) is provided instead.

EU REACH – Registration, Evaluation and Authorization of Chemicals:

REACH article 31(7) requires relevant exposure scenarios from the Chemical Safety Report (CSR) to be annexed to the SDS. However, according to REACH Annex I, section 0. (Introduction), subsection 0.6. no 4 and 5, exposure scenarios are only required for hazard-classified substances or mixtures. Since this product is not hazard-classified according to CLP, there is no requirement for exposure scenarios.” The assessment of chemical safety was performed for the substance. This substance does not require authorisation according to REACH regulation.

With regard to FeSiMn slag there are no special regulations, restrictions and prohibitions.

## 16. OTHER INFORMATION

These data are based on our current knowledge but do not constitute a guarantee for any specific product features and do not establish a legally valid contractual relationship.

### 16.1 List of Abbreviations

ASRIT:	activated sludge respiration inhibition test
DNEL:	derived no-effect level
LD <sub>50</sub> :	median lethal dose
OEL:	occupational exposure limit
PBT:	persistent, bioaccumulative, toxic chemical

PNEC:	predicted no-effect concentration
T/D test:	test on dissolution of substance
UVCB:	Substances of unknown or variable composition, complex reactions products and biological materials
vPvB:	very persistent, very bioaccumulative chemical

### 16.3 Key References

This safety data sheet is prepared according to Chemical Safety Report issued March 24<sup>th</sup>, 2010 and Technical Data Sheet No. TL-OFZ-04/19.

**APPENDIX**

**Table 1 Identified Uses of the Substance/Mixture**

Identified Use	Process Category (PROC)	Preparation Category (PC)	ERC code	Sector of End Use (SU)	Article Category (AC)
Use as a material for creating a bed and packing water, sewage and other plastic pipelines	PROC 8a, 8b	PC 0	ERC 10a	SU 19	AC 0: C18.2
Use as a spreading material for winter road maintenance	PROC 8a, 8b	PC 0	ERC 10a	SU 19	AC 0: C18.2
Use for recultivation & ground completion	PROC 8a, 8b	PC 1	ERC 10a	SU 19	AC 0: C18.2
Use for a clinker production	PROC 3, 4, 5, 8a, 8b, 9	PC 0	ERC 3, 5	SU 13 SU 0: Other NACE code: C23	AC 0
Use for mechanical sand surfacing	PROC 2	PC 20	ERC 2	SU 9	-

**Approved by:**

**Ing. Milan Harcek**

Technical Director



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Environmental Manager

