

Date: 30.12.2015

(*) concerns only chemical notification

(**) either 3.1 or 3.2 must be filled

Previous date: 13.8.2015

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

Trade name / Substance name Masuunikuonajauhe KJ400
Company product code Not applicable
REACH Registration number Not applicable

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

The uses of the chemical Slag is used as an hydraulic binder for the production of concrete, mortars, grouts and for soil stabilization

Classification of economic activities (NACE) (*) C236 Manufacture of articles of concrete, cement and plaster
F429 Construction of other civil engineering projects

Use categories (UC62) (*) 13: Construction material

The chemical can be used by the general public (*)

The chemical is used by the general public only (*)

1.3 Details of the supplier of the Safety Data Sheet

**Supplier (manufacturer, importer, only representative, downstream user, distributor)
Responsible for placing a chemical on the market in Finland (*)**

Street address Finnsementti Oy
Skräbbölientie 18
Postcode and post office 21600 PARAINEN
Post-office box
Postcode and post office
Telephone number 0201 206 200
Telefax
E-mail address info@finnsementti.fi
Finnish Business ID (Y code) (*) 1628387-7

1.4 Emergency telephone number

Poison Information Centre Tel. +358 9 471 977 (direct) or +358 9 4711 (exchange)

SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

This substance does not meet the requirements for classification as dangerous under both the EU Dangerous Substances (67/548/EEC) Directive and secondly according to the Classification, Labelling and Packaging of substances and mixtures (CLP) regulations (EC 1272/2008).

2.2 Label elements

Not applicable

2.3 Other hazards

Product dust may irritate mechanically eyes and respiratory system

SECTION : COMPOSITION / INFORMATION ON INGREDIENTS**3.1 Substances (**)**

Further information:

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Granulated slag is a vitrified substance, which is a byproduct of iron production in a blast furnace. The structure of the granulated slag depends on the temperature during cooling.

Main constituent / constituent	CAS-, EC- or index number	Concentration

3.2 Mixtures (**)

Substance name	CAS-, EC- or index number	REACH Registration No.	Concentration	Classification Regulation 1272/2008	
				Hazard class, category	Hazard statement

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes

No personal protective equipment is needed for first aid responders. First aid workers should avoid contact.

Eye contact

Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses. If irritation continues, consult a doctor.

Skin contact

Wash with soap and water.

Inhalation

Move the person to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists.

Ingestion

Rinse mouth and drink a couple of glasses of water.

4.2 Most important symptoms and effects, both acute and delayed

Eyes: Eye contact may cause serious and potentially irreversible injuries.

Skin: Avoid contact with skin.

Inhalation: Repeated inhalation of dust over a long period of time increases the risk of developing lung diseases.

Environment: Under normal use, no hazards to the environment.

4.3 Indication of any immediate medical attention and special treatment needed

Not applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Not flammable.

5.2 Special hazards arising from the substance or mixture

None

5.3 Advice for firefighters

Not applicable

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust dispersion.

6.2 Environmental precautions

Do not wash down to sewage and drainage systems or into bodies of water (e.g. streams).

6.3 Methods and material for containment and cleaning up

Pick up mechanically, avoid disturbing dust. Use dust reducing cleaning method.

6.4 Reference to other sections

Additional information under Sections 7, 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid dust dispersion. Where applicable keep dust wet. In closed areas provide adequate ventilation to prevent dust inhalation. In case of further handling with foreseeable high dust dispersion, use for example an exhaust ventilation with filter or a closed system. Wear safety goggles and a respirator mask if dust is therefore necessary. Use protective gloves and avoid skin contact. Do not eat, drink, smoke or take snuff while working. Wash hands before breaks and after work. Follow the instructions in sections 6.3 and 8.

7.2 Conditions for safe storage, including any incompatibilities

Stored in a dry, watertight and clean silo, where the contamination can be avoided. Do not go to the closed state e.g. a silo, tank or other container that contains the ground granulated blastfurnace slag.

Packaged slag is stored unopened in a poke cool and dry place off the ground and protected from excessive drafts.

7.3 Specific end use(s)

Not applicable

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

National occupational exposure limit values

Inorganic dust 10 mg/m³ / 8h

Other limit values

Not applicable

DNEL-arvot

Occupational exposure 4 mg/m³

PNEC-arvot

Not applicable

			Varmuuserroin
PNEC	Fresh water	5 g/l	10
	Sea water	0,5 mg/l	100
	Sewage farm	10 g/l	1
	Soil	1000mg/kg maata	10
	Sediment (Fresh water)	Not applicable	100
	Air	Not applicable	---

8.2 Exposure controls

8.2.1 Appropriate engineering controls

See Section 7

8.2.2 Individual protection measures such as personal protection equipment**General**

Do not eat, drink or smoke when working with slag to avoid contact with skin or mouth. Before starting to work with slag apply a barrier creme and reapply it at regular intervals. Immediately after working with slag or slag-containing materials, workers should wash or shower or use skin moisturisers. Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before re-using them.

Engineering controls

Dust problem will be minimized with good ventilation, dust extraction and dry cleaning methods, which will not generate dust.

**Eye/face protection**

Wear approved glasses or safety goggles according to EN 166.

**Skin protection**

Use watertight, wear- and alkali-resistant protective gloves (e.g. nitrile soaked cotton gloves with CE marking) internally lined with cotton; boots; closed long-sleeved protective clothing as well as skincare products (e.g. barrier creams) to protect the skin from prolonged. For the gloves, respect the maximum wearing time to avoid skin problems.

**Respiratory protection**

When a person is potentially exposed to dust levels above exposure limits, use appropriate respiratory protection.

Thermal hazards

Not applicable.

Environmental exposure controls

Do not wash slag into sewage systems or into bodies of water

8.2.3 Environmental exposure controls

Do not wash slag into sewage systems or into bodies of water.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Appearance	finely ground inorganic material, grey
Odour	odourless
Odour threshold	No threshold
pH	10-12
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	Not applicable as under normal atmospheric conditions, melting point >1 000°C

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Flash point	Not applicable as is not a liquid
Evaporation rate	Not applicable as is not a liquid
Flammability (solid, gas)	Not applicable as is a solid which is non combustible and does not cause or contribute to fire through friction
Upper/lower flammability or explosive limits	Not applicable as is not a flammable gas
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	~2,9 g/cm ³ , bulk density ~1,2 g/cm ³
Solubility(ies)	slight solubility in water
Partition coefficient: n-octanol/water	Not applicable as is inorganic substance
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable as no organic peroxide present
Viscosity	Not applicable as not a liquid
Explosive properties	Not applicable
Oxidising properties	Not applicable

9.2 Other information

Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

It is not normally reactive, but can react with certain materials, etc. cement.

10.2 Chemical stability

The product is chemically stable when handled and stored at ambient temperature and pressure.

10.3 Possibility of hazardous reactions

None

10.4 Conditions to avoid

Humid conditions during storage may cause lump formation and loss of product quality..

10.5 Incompatible materials

May form small amounts of hydrogen sulfide (H₂S) reacts with the water or acids.

10.6 Hazardous decomposition products

None

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

No immediate effects.

Ingestion, LD₅₀ (14d), rat > 2000 mg/kg bw (OECD 401, tested: ground granulated blast furnace slag)

Skin, LD₅₀ (14d), rat > 4000 mg/kg bw (OECD 402, tested: ground granulated blast furnace slag)

Inhaled, LC₅₀ (4h), rat > 5235 mg/m³ (OECD 403, tested: ground granulated blast furnace slag)

Subacute toxicity

Inhaled, NOAEC, rat 200 mg/m³

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Skin corrosion / irritation

None

Skin, rabbit (OECD 404, tested: air-cooled blast furnace slag)

Serious eye damage / irritation

Ei ole ärsyttävä

Eye, rabbit (OECD 405, tested: air-cooled blast furnace slag)

Respiratory or skin sensitization

none

Skin, guinea pig, (OECD 406, tested: air-cooled blast furnace slag)

Germ cell mutagenicity

Not germ cell mutagenic effects

Salminella typhimurium (EU B. 13/14, tested: air-cooled blast furnace slag)

Chinese hamster lung connective tissue cells V79 (EU B.17, tested: air-cooled blast furnace slag)

Carcinogenic effects

Based on the available information is not a carcinogen.

Reproductive toxicity

Based on the available information is not toxic for reproduction.

Specific target organ toxicity - single exposure

Have not been observed for acute toxicity studies.

Specific target organ toxicity - repeated exposure

The research results are not yet available. The possibility of long-term intense exposure causes silicosis can not be ruled out.

Aspiration danger

None

Other information

None

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Slags is not expected to cause short-term or long-term hazard to water or terrestrial environments or adverse effects on sewage treatment plants.

12.2 Persistence and degradability

Not relevant, an inorganic material.

12.3 Bioaccumulative potential

Not relevant, an inorganic material.

12.4 Mobility in soil

Metals are very tightly bound to the material. Mobility in soil is not relevant.

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Other adverse effects

Not relevant

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Jätteiden käsittelymenetelmät

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Dry slag: place spilled materials into a container
Dispose of according to the local legislation. Do not dispose of into sewage systems or surface waters.
Wet slag or slurry: Allow to harden and dispose of according to the local legislation.
Blast furnace slag waste can be recycled.

SECTION 14: TRANSPORT INFORMATION

Slag is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID), therefore no classification is required.

14.1 UN number

Not relevant

14.2 UN proper shipping name

Not relevant

14.3 Transport hazard class(es)

Not relevant

14.4 Packing group

Not relevant

14.5 Environmental hazards

Not relevant

14.6 Special precautions for user

Not relevant

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not relevant

SECTION 15: REGULATORY INFORMATION

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

None

15.2 Chemical safety assessment

Not applicable

SECTION 16: OTHER INFORMATION

16.1 Indication of changes

Classification according to Regulation (EN) N:o 1272/2008 [CLP]

16.2 Abbreviations and acronyms

none

16.3 Key literature references and sources of data

Ruukin Masuunikuonan käyttöturvallisuustiedote ja Safety Data Sheet for Granulated blast furnace slag

16.4 Training advice for workers

In addition to health, safety and environmental training programs for their workers, companies must ensure that workers read, understand and apply the requirements of this SDS.

16.5 Further information

Finnsementti Oy
Tekninen neuvonta
21600 Parainen

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puh: 0201 206 200

The information on this data sheet reflects the currently available knowledge and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product, including the use of the product in combination with any other product or any other process, is the responsibility of the user. It is implicit that the user is responsible for determining appropriate safety measures and for applying the legislation covering his/her own activities.