

SAFETY DATA SHEET

Fly ash (coal)

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

Date issued 24.10.2012

1.1. Product identifier

Product name Fly ash (coal)
 REACH Reg. No. 01-2119491179-27
 EC no. 931-322-8

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

Use of the substance/preparation Constituents of concrete and asphalt. Raw material for the production of cement. Filler in building and construction work.

1.3. Details of the supplier of the safety data sheet

Importer

Company name NORCEM A.S
 Office address Lilleakerveien 2b
 Postal address Postboks 143 Lilleaker
 Postcode 0216
 City OSLO
 Country NORWAY
 Tel +4722878400
 Fax +4722878402
 E-mail jorunn.gundersen@norcem.no
 Website <http://www.norcem.no/>
 Enterprise no. 934949145

1.4. Emergency telephone number

Emergency telephone Norwegian Poisons Information:+47 22 59 13 00

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

Classification notes Not classified according to the Norwegian regulations on classification and labelling of chemicals (67/548/EEC or 1999/45/EC).
 Classification notes CLP Not classified according to CLP (EC) No 1272/2008 [CLP/GHS]
 Substance / mixture hazardous properties Dust may irritate throat and respiratory system and cause coughing. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases. Addition of water released small amounts of ammonia, which irritates the respiratory tract.
 May contain small amounts of heavy metals that are highly toxic to organisms living in water.

2.2. Label elements

Other Label Information According to criteria of Directive EC 67/548/EEC and Regulation (EC) 1272/2008 the substance does not need to be labelled.

2.3. Other hazards

PBT / vPvB Fly ash does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH (Regulation (EC) No 1907/2006).

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance	Identification	Classification	Contents
Ashes (residues), coal	EC no.: 931-322-8 Registration number: 01-2119491179-27 Synonyms: Fly Ash		100 %
Description of the mixture	Fly ash is defined as inorganic UVCB substance (Substances of Unknown or Variable composition, Complex reaction products or Biological materials). Main constituents are aluminosilicate glass and may also contain quartz (respirable quartz <2%), mullite, hematite, magnetite, calcium oxide, calcite and calcium sulphate as well as traces of various metals eg. lead, chromium, nickel and vanadium.		

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Provide fresh air and rest. By persistent throat irritation or coughing, seek medical attention and bring this safety data sheet.
Skin contact	Remove contaminated clothing and wash the skin thoroughly with water.
Eye contact	Do not rub the eye. Rinse immediately with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes fully. If irritation persists: Seek medical attention and bring along this safety data sheet.
Ingestion	Rinse mouth and then drink plenty of water. Keep the person under surveillance. If uncomfortable, seek medical attention and bring this safety data sheet.

4.2. Most important symptoms and effects, both acute and delayed

Acute symptoms and effects	May cause irritation to skin, eyes, respiratory tract and mucous membranes. See section 11 for further information.
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4.3. Indication of any immediate medical attention and special treatment needed

Other Information	Not known.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The substance is not combustible. Use any means suitable for extinguishing surrounding fire.
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5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	No special precautions.
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5.3. Advice for firefighters

Personal protective equipment	Follow general precautions.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Avoid inhalation of dust. Avoid contact with eyes and prolonged skin contact.
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6.2. Environmental precautions

Environmental precautionary measures	The product should not be dumped in nature but collected and delivered according to agreement with local authorities.
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6.3. Methods and material for containment and cleaning up

Cleaning method	Use a vacuum cleaner. If this is not possible, moisture dust with water before it is collected with a shovel, brush or the like.
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6.4. Reference to other sections

Other instructions	See section 8 and 13 for use of personal protective equipment and waste disposal.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Follow good chemical hygiene. Avoid inhalation of dust. Avoid contact with eyes and prolonged skin contact.
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Protective Safety Measures

Preventive Measures to prevent aerosol and dust generation	Handling of dry fly ash shall be in closed systems or using machinery with protective cab. Handling of wet fly ash in open systems, takes place by moistening the fly ash to earth-moist consistency before handling. Avoid drying by adequate covering or watering. Mechanical ventilation may be necessary.
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7.2. Conditions for safe storage, including any incompatibilities

Storage	Dry fly ash: Keep dry. Wet fly ash: Keep moist.
Requirements for storage rooms and vessels	In suitable enclosed silos, suitable large bags, or approved intermediate storage or landfill. During storage, avoid dust formation and spills.

7.3. Specific end use(s)

Specific use(s)	See section 1.2.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure limit values

Substance	Identification	Value	TWA Year
Quartz, respirable dust	CAS no.: 14808-60-7 EC no.: 238-878-4	8-hour TWA: 0.1 mg/m ³ K	
Quartz, total inhalable dust	CAS no.: 14808-60-7 EC no.: 238-878-4	8-hour TWA: 0.3 mg/m ³ K	
Respirable dust		8-hour TWA: 5 mg/m ³	
Total inhalable dust		8-hour TWA: 10 mg/m ³	

8.2. Exposure controls

Precautionary measures to prevent exposure

Organisational measures to prevent exposure	Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Technical measures to prevent exposure	Ensure adequate ventilation. When a person is potentially exposed to dust levels above exposure limits, use appropriate respiratory protection. The type of respiratory protection should be adapted to the dust level and conform to the relevant standard.

Respiratory protection

Respiratory protection	Short term work: Use respiratory equipment with particle filter, type P2/P3, Prolonged work: Use respiratory equipment with particle filter, type P2/P3. Optionally, use a respirator turbo unit. At the risk of oxygen deficiency (closed systems, eg silo): Use fresh air supplied respirators.
Reference to relevant standard	NS-EN 143, NS-EN 149, NS-EN 140, NS-EN 405, NS-EN 1827, NS-EN

14387.

Hand protection

Hand protection Use protective gloves.

Reference to relevant standard NS-EN 374

Eye / face protection

Eye protection Safety goggles or full facemask.

Reference to relevant standard NS-EN 166

Skin protectionSkin protection (except hands) Large amounts of dust: Use tight clothing.
Wear appropriate protective footwear.**Hygiene / Environmental**

Specific hygiene measures Remove contaminated clothing and wash skin thoroughly with soap and water after work. Wash hands after use.

Appropriate environmental exposure control

Environmental exposure control remarks Not known.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	Powder.
Colour	Light gray to grayish brown.
Odour	Odourless
Comments, pH (as supplied)	ca. 11 at 1% suspension.
Comments, Melting point / melting range	Not entered.
Comments, Boiling point / boiling range	Not applicable.
Comments, Flash point	Not applicable.
Comments, Explosion limit	Not applicable.
Specific gravity	Value: 2,3 g/cm ³ Method of testing: EN 1097-6
Comments, Specific gravity	Variation: 2.0-3.3 g/cm ³
Solubility in water	1 g/l in water. Variation: 0.7-4.1 g/l at 20 °C.

9.2. Other information

Bulk density	Value: 1,0 g/cm ³ Method of testing: EN 1097-3
Comments, Bulk density	Variation: 0.7-1.5 g/cm ³

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reactivity No reactivity hazard.

10.2. Chemical stability

Stability Stable

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not known.

10.4. Conditions to avoidConditions to avoid Dry product: Moisture.
Wet fly ash: Drying.**10.5. Incompatible materials**

Materials to avoid Dry product: water.

10.6. Hazardous decomposition products

Hazardous decomposition products None under normal conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Potential acute effects

Inhalation	Addition of water releases small quantities of ammonia, which irritates the respiratory tract. Dust may irritate the respiratory tract and cause throat irritation and coughing.
Skin contact	Dust has an irritating effect on moist skin.
Eye contact	Irritating, causing redness and stinging pain.
Ingestion	Ingestion may cause severe irritation of the mouth, esophagus and gastrointestinal tract.

Delayed effects / repeated exposure

Inhalation	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Sensitisation	Not sensitising.

Carcinogenic, Mutagenic or Reprotoxic

Carcinogenicity	This substance has no evidence of carcinogenic properties.
Mutagenicity	Not mutagen.
Reproductive toxicity	No reproduction toxicity.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	Not classified as dangerous for the environment. May contain small amounts of heavy metals, which are highly toxic to organisms living in water. The product may affect the acidity (pH) in water with risk of harmful effects to aquatic organisms.
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12.2. Persistence and degradability

Persistence and degradability	This product consists entirely of inorganic compounds which are not biodegradable.
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12.3. Bioaccumulative potential

Bioaccumulative potential	Bioaccumulation is unlikely to be significant because of the low solubility.
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12.4. Mobility in soil

Mobility	Moderately mobile in soil. Absorption to soil particles is possible. Leaching of the main compounds (SiO ₂ , Al ₂ O ₃) is not expected.
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12.5. Results of PBT and vPvB assessment

PBT assessment results	This substance is not classified as PBT or vPvB.
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12.6. Other adverse effects

Other adverse effects / Remarks	None known.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Relevant waste regulation	To be disposed of according to FOR 2004-06-1 nr 930: Norwegian Regulations concerning recycling and treatment of waste.
Product classified as hazardous waste	No
EWC waste code	EWC: 10 01 02 coal fly ash
Other Information	The given EWCode(s) are guidelines only. The end user has to choose the correct code(s) based on the actual use of the product.

SECTION 14: Transport information

14.1. UN number

Comments Not relevant.

14.2. UN proper shipping name

Comments Not relevant.

14.3. Transport hazard class(es)

Comments Not relevant.

14.4. Packing group

Comments Not relevant.

14.5. Environmental hazards

Comments Not relevant.

14.6. Special precautions for user

Special safety precautions for user Not relevant.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Additional information.

Additional information. Not classified as dangerous goods according to ADR, RID, IMDG or IATA.

SECTION 15: Regulatory information

EC no. 931-322-8

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

Legislation and regulations FOR 2002-07-16 nr 1139: Norwegian Regulations for classification and labelling of Chemicals, as amended.
REACH (Regulation (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006)
FOR 2004-06-01 nr 930: Norwegian Regulations concerning recycling and treatment of waste, as amended.
International Transport Regulation: ADR/RID, IMDG, IATA.
FOR 1998-04-30 nr. 550: Norwegian regulations concerning Work performed by children and young people, as amended.
FOR 1993-05-24 nr 1425: Norwegian Regulations concerning use of personal protective equipment at work, as amended.
Annex VI to Regulation (EC) No 1272/2008 includes lists of harmonised classification and labelling www.ecb.jrc.ec.europa.eu/classification-labelling/clp/.
Norwegian Occupational Exposure Limits ([www.arbeidstilsynet.no/administrative normer](http://www.arbeidstilsynet.no/administrative_normer))
COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010, amending Regulation (EC) No 1907/2006 REACH.
C&L Inventory database: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

No duty to declare owing to Not classified as hazardous.

15.2. Chemical safety assessment

Chemical safety assessment performed Yes

SECTION 16: Other information

Supplier's notes 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.
Checking quality of information	The safety data sheet has been compiled in accordance with the regulations in force. BIS Production Partner is not responsible for any errors or deficiencies in the information received from the manufacturer/importer/supplier. The manufacturer/importer/supplier mentioned in section 1 is legally responsible for the contents of the safety data sheet.
Version	1
Responsible for safety data sheet	NORCEM A.S
Prepared by	BIS Production Partner, HSE&Q (JAB)