

| Substance Information Sheet (SIS) for JS_Ashes (residues), coal | | | |
|---|-------------------|------------|-------|
| Trade Name | Date of Printing | Revised on | Page |
| (siliceous) fly ash | Master 22.12.2010 | 10-03-2011 | 1 / 7 |

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1 Product identifier:

| | |
|-----------------|-----------------------|
| EC nr 931-322-8 | Ashes (residues),coal |
|-----------------|-----------------------|

| | |
|-----------------------|-----------------------|
| REACH registration nr | 01-2119491179-27-0073 |
|-----------------------|-----------------------|

| | |
|----------|--------------------------------------|
| Synonyms | Fly Ash Pulverised Fuel Ash (PFA) |
|----------|--------------------------------------|

| | |
|-------------|-----|
| Trade names | N/A |
|-------------|-----|

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

| | |
|---------------------------|--|
| Relevant identified uses: | <p>Raw mineral material and construction material for use in bound and unbound applications (e.g. cement, concrete addition, blasting grit...)</p> <p>PFA Bound applications Used as an ingredient/component within another product and is fully bound within that product.</p> <ol style="list-style-type: none"> 1) Hydraulically bound mixtures in pavement construction, e.g. capping, sub-base and road base, and ground stabilisation. 2) Type II addition in concrete, e.g. cementitious component in concrete. 3) Type I addition in concrete, e.g. as filler or lightweight filler aggregate. 4) Cement manufacture, e.g. added as raw material into kiln feed or added to Portland cement. 5) Ceramic tiles and brick-making. 6) Paints, plastics, rubber and similar. 7) Lightweight filler in bitumen-bound materials, e.g. foamed bitumen or asphalt. <p>Unbound applications Used without any binding agent.</p> <ol style="list-style-type: none"> 1) Engineering fill e.g. embankment development, raise levels for construction sites and cap contaminated land. <p>Grout Uses where the material is hydraulically pumped or injected into the ground to fill void space. The material sets gradually. Setting time depends on the mixture design, water content and ground conditions.</p> <ol style="list-style-type: none"> 1) Lightweight filler for use in grouts. |
|---------------------------|--|

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| Use advised against: | Not appropriate |
|----------------------|-----------------|

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1.3 Details of the supplier of the safety data sheet

| | | | |
|----------------------------|---|------|---------------------|
| Producer/supplier: | Drax Power Limited | | |
| Street/P.O. Box: | Drax Power Station, Selby, North Yorkshire | | |
| Nat. code/postcode, place: | YO8 8PH | | |
| Phone: | 01757 618381 | Fax: | 01757 612160 |

Note: Ashes registered under "JS_Ashes (residues), coal" do not possess hazardous properties. To avoid confusion no Safety Data Sheet (SDS) is prepared. The information given by this Substance Information Sheet (SIS) follows by structure and content Annex 2 of REACH-regulation (EC No 1907/2006 and amendment 453/2010) regarding the preparation of a SDS. Special Information e.g. PNECs (predicted no-effect level) and DNELs (derived no-effect level) left out in the SIS is available in the Chemical Safety Report (CSR).

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| | | | |
|--------------------|---|--------|-----------------------------------|
| Responsible Person | Steven Foster | Phone: | 01757 612355 |
| | Drax Power Ltd | Fax | 01757 612160 |
| | Drax Power Station, Selby, North Yorkshire YO8 8PH | Email | stevenfoster@draxpower.com |

1.4 Emergency telephone number

| | | | |
|-----------------|---------------------------|-------------------|---------------------------|
| (Office hours): | Drax Power Station | Emergency number: | Drax Power Station |
| | 01757 618381 | Tel: | 01757 618381 |
| | | Mobile: | |

2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

- According to criteria of Directive EC 67/548/EEC and Regulation (EC) 1272/2008 the substance is not classified as hazardous

2.2 Label elements

- 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

- no special remarkable hazards

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

| | |
|---------|------------------------|
| EC No: | 931-322-8 |
| EC name | Ashes (residues), coal |

| | |
|-----------|--------------|
| Purity: | 100 % (UVCB) |
| Synonyms: | see 1.1 |

Additional information

Substance is a UVCB-substance composed of glassy/amorphous material and mineral phases. Its chemical composition is preferably analyzed as elements and reported as the mass percent of each equivalent oxide, e. g. SiO₂, Al₂O₃, Fe₂O₃, CaO.

3.2 Mixtures

- not applicable

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4. FIRST AID MEASURES

4.1 Description of first aid measures

| | |
|----------------------|---|
| - Inhalation | No particular measures required. |
| - Ingestion | Drink plenty of water (in case you feel unwell consult doctor). |
| - Skin contact | Dust has to be rinsed with water (if irritation persists contact doctor). |
| - Eye contact | Dust has to be rinsed with water (if irritation persists contact doctor). |
| Notes for the doctor | No allergic reactions known, mineral dust |

4.2 Most important symptoms and effects, both acute and delayed

- skin and eye irritation might occur

4.3 Indication of any immediate medical attention and special treatment needed

- not appropriate

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- The substance is not combustible. Use any means suitable for extinguishing surrounding fire.

5.2 Special hazards arising from the substance or mixture

- none

5.3 Advice for fire fighters

- not appropriate

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- avoid creating airborne dust wherever possible
see 6.4

6.2 Environmental precautions

- avoid creating airborne dust wherever possible
see 6.4

6.3 Methods and material for containment and cleaning up

- Spills: Sweep together and containerize for reclamation or disposal. Dry vacuum or wet cleaning with mechanical devices may be used to avoid dust dispersal.

6.4 Reference to other sections

- for personal protection see section 8
- for waste disposal see section 13

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7. HANDLING AND STORAGE

7.1 Precautions for safe handling

| |
|---|
| - avoid creating airborne dust wherever possible |
| - do not eat, drink and smoke in working areas |
| - wear appropriate protective clothing (e.g. goggles, gloves) |
| - avoid prolonged skin contact |
| - wash hands after work |

7.2 Conditions for safe storage, including any incompatibilities

| |
|---------------------------|
| - no special requirements |
|---------------------------|

7.3 Specific end use(s)

| |
|------------------|
| - not applicable |
|------------------|

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

| |
|--|
| 10mg/m ³ Inhalable 8 Hour TWA |
| 4mg/m ³ Respirable 8 Hour TWA |

8.2 Exposure controls

- appropriate engineering controls

| | |
|-----------------------------------|---|
| - for closed cycles | <i>[care for dedusting installations]</i> |
| - for semi-closed and open cycles | <i>[care for sufficient ventilation or wetting the ash]</i> |

- individual protection measures

| | |
|---------------------------|--|
| - Eye / face protection | Safety goggles / face shield if potential for contact is existing |
| - Skin (hand) protection: | Gloves if potential for contact is given; further measures for body protection are usually not necessary |
| - Respiratory protection | no special protective equipment required if dust occurs constantly – use respiratory dust mask |

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- Physical

| Parameter | value/comment | unit | method |
|--------------|------------------------|-------------------|-----------|
| Form | fine grained powder | - | visual |
| Colour | greyish black to brown | - | visual |
| Odour | no | - | - |
| Density | 2.2 (2.0 – 2.6) | g/cm ³ | EN 1097-6 |
| bulk density | 1.0 (0.8 – 1.2) | g/cm ³ | EN 1097-3 |

- Chemical

| Parameter | value/comment | unit | method |
|-------------------------|---------------|------|-----------------|
| pH | < 12,5 | - | (1:10; 20°C) |
| Water solubility (20°C) | 1 (0.7 – 1.4) | g/l | |

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All other parameters as given in Annex 2 of REACH-regulation are evaluated as not applicable.

9.2 Other information

- not applicable

10. STABILITY AND REACTIVITY

10.1 Reactivity

- no reactivity hazards

10.2 Chemical stability

- stable under normal conditions

10.3 Possibility of hazardous reactions

- not applicable as material is not hazardous and no reactivity hazards are to be expected

10.4 Conditions to avoid

- no special requirements

10.5 incompatible materials

- no incompatible materials known

10.6 hazardous decomposition products

- not applicable as no hazardous properties

11. TOXICOLOGICAL INFORMATION

| | |
|--|--|
| 11.1 Potential health effects | the substance is not classified as hazardous |
| 11.2 Acute toxicity oral, inhalation, dermal | no acute toxicity |
| 11.3 Irritation Skin, eye irritation | not irritating |
| 11.4 Corrosivity | not corrosive |
| 11.5 Sensitisation | not sensitising |
| 11.6 Repeated dose toxicity | no repeated toxicity |
| 11.7 Mutagenicity | not mutagen |
| 11.8 Carcinogenicity | no carcinogenetic effects are known |
| 11.9 Toxicity to reproduction | no reproduction toxicity |

For more detailed information to toxicological aspects Chemical Safety Report (CSR)

12. ECOLOGICAL INFORMATION

| | |
|---|---|
| 12.1 Toxicity | - the substance is not classified as hazardous - no aquatic toxicity - no toxicity in sewage treatment plants |
| 12.2 Persistence and degradability | - not applicable: inorganic substance - neither photo- or chemical degradation, nor biodegradation is expected |
| 12.3 Bioaccumulative potential | not applicable: inorganic substance - significant bioaccumulation is not expected |
| 12.4 Mobility in soil | - Moderately mobile in soil Adsorption to soil particles is possible |

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| | |
|--|---|
| | - Leaching of main compounds (SiO ₂ , Al ₂ O ₃) is not expected |
| 12.5 Results of PBT and vPvB assessment | - no PBT and vPvB properties |
| 12.6 Other adverse effects | No other adverse effects are known Due to the CLP system the substance has not to be labelled as dangerous for the environment. On the basis of existing data about the elimination, degradation and bioaccumulation potential longer term damage to the environment is unlikely. |

For more detailed information see Chemical Safety Report (CSR)

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Ashes (residues), coal have to be disposed off by national regulations for non hazardous wastes; no further special treatment methods are necessary

Waste codes / waste designation according to EWC

10 WASTES FROM THERMAL PROCESSES

10 01 wastes from power stations and other combustion plants (except 19)

10 01 02 coal fly ash

10 01 17 fly ash from co-incineration other than those mentioned in 10 01 16

14. TRANSPORT INFORMATION

Not a dangerous good according to the regulations ADR, IMDG and IATA

15. REGULATORY INFORMATION

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

ashes (residues), coal do not require any labelling

15.2 Chemical safety assessment

ashes (residues), coal do not require any labelling

15.3 Water Pollution Class

not hazardous (Annex 3)

16. OTHER INFORMATION

The Information in this safety data sheet describes the safety requirements of the product and is based on the present knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.