Material Safety Data Sheet – DIRK Phoenix DP Fly Ash – various grades

Company: DIRK Phoenix Private Limited

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Composition / Information on ingredients

Chemical Composition

DIRK Phoenix DP Fly Ash is composed of inorganic material with a small proportion of carbon particulate resulting from incomplete combustion of the parent fuel, coal. DP fly ash is extracted from flue gases discharged from combustion systems by electrostatic and mechanical processes.

Hazardous Components

DIRK Phoenix DP fly ash is not considered to have any hazardous components that will affect existing patterns of production, handling, storage and use.

Hazard Identification

The material is not considered to be especially hazardous to health but should be handled in accordance with good occupational hygiene and safety practices.

Dust in high concentration may cause irritation to eyes.

First Aid Measures

Eyes

If the substance has entered the eyes wash out with water or emergency eye wash solution. Continue irrigation for 15 minutes. Obtain medical advice if any pain or redness persists.

Skin

Wash skin thoroughly with soap and water as soon as reasonably practical.

Ingestion

If contamination of the mouth occurs, wash out thoroughly with water.

Inhalation

If inhalation of dust causes irritation of the nose or throat or coughing, remove to fresh air. If symptoms persist, obtain medical advice.

Fire Fighting Measures

There are no risks of fire or explosion as the product is identified as non-combustible.

Accidental Release Measures

Environmental Precautions

Prevent entry to drains or water courses.

Personal Precautions

See section on Exposure Controls / Personal Protection.

Clean up Methods

Large spills of dry material should be removed by a vacuum system, conditioned (dampened) material should be removed by mechanical means where possible and then recycled or disposed of to a licensed site.

The potential for dust blow can be reduced by applying a fine spray of water.

Physical and Chemical Properties

Appearance	A fine grey powder
Odour	Virtually none
pH	Moderately alkaline when damp
Boiling point / boiling range	Not applicable
Melting point / melting range	Not applicable
Flash point	Not applicable
Flammability	Not applicable
Auto flammability	Not applicable
Oxidising properties	Not applicable
Vapour pressure	Not applicable
Bulk density	0.7 – 1.0 g/cm^3
Specific gravity	2.1 – 2.4 g/cm^3
Solubility	<2% in water

Stability and Reactivity

DIRK Phoenix DP fly ash is predominantly an inert glassy material containing small amounts of neutral salts and some lime.

Conditions to avoid	Dry material can become airborne in moderate winds. Dry material should be stored in silos. Materials stored out of doors should be maintained in a damp condition.
Materials to avoid	None
Hazardous decomposition products	None

Ecological Information

Mobility	DIRK Phoenix DP fly ash has no currently known ecotoxic effects in existing patterns of production, handling storage and use.
Persistence and degradability	
Bioaccumulation potentials	Fresh material has been shown to have some Boron Phytotoxicity but this rapidly diminishes with weathering and amelioration
Aquatic toxicity	

Handling and Storage

Storage

DRY FORM – DIRK Phoenix DP fly ash should be stored in silos or sealed in containers/bags.

CONDITIONED FORM – when stored in stockpiles, keep exposed surfaces damp. Small stockpiles may be covered with sheeting.

Handling

Avoid creating airborne dust wherever possible. Where dust is generated then engineering control measures should be considered to maintain the airborne dust concentration as low as is reasonably practicable.

Avoid prolonged skin contact especially where the product is dampened.

Wear protective clothing. See the next section, Exposure Controls / Personal Protection.

Good Working practices as well as high standards of housekeeping and personal hygiene should be maintained.

Exposure Controls / Personal Protection

Exposure Limits

Relevant UK Occupational Standards as published in HSE Guidance note EH40 are:

DIRK Phoenix DP fly ash

Total Inhalable dust 10mg m^3 8 hr TWA

Respirable dust 5mg m^3 8 hr TWA

Control Measures

Engineering control measures, such as enclosing transfer chutes and pipes should be used wherever reasonably practicable to prevent/ control dust generation and exposure.
Conditioning / dampening the dust can also reduce exposure.

Protective Clothing

To prevent eye and skin irritation, where contact can occur, then goggles, gloves, overalls and boots should be worn.

Change heavily contaminated clothing as soon as possible, launder before re-use. Wash any contaminated underlying skin with soap and water.

Respiratory Protection

If operations are such that the airborne dust level is likely to exceed the concentrations quoted above, suitable approved respiratory protection should be worn. The highest probable dust concentration should be estimated or measured and appropriate equipment selected.

The use of respiratory equipment must be strictly in accordance with the manufacturer's instructions and any statutory requirements governing its selection and use.

Toxicological Information

Eyes

Due to the reaction with moisture in the eye, irritation of the conjunctiva occurs if dust remains in contact with the eye.

Skin

Dry DIRK Phoenix DP fly ash will have little effect on the skin. However, when moist it is alkaline and prolonged or repeated contact can cause abrasion and irritant dermatitis.

Ingestion

There are no known adverse health effects following ingestion.

Inhalation

After 60 years of exposure experience there is no clinical evidence of a significant risk of harm to the respiratory tract or lungs. Heavy exposure in power stations(of the type no longer found) over a number of years has been shown to cause only small changes in lung function testing and minor symptoms, neither of which is considered to be of clinical significance. Pneumoconiosis does not occur. The Health & Safety Executive have reviewed the scientific literature and assigned DIRK Phoenix DP fly ash an Occupation Exposure Limit of 10 milligrams per cubic metre total inhalable dust, both 8 hour time weighted averages.

There are insufficient data on potential carcinogenic or mutagenic effects.

Disposal Considerations

Classification of waste disposal route

DIRK Phoenix DP fly ash has no special requirements for its disposal at appropriately licensed facilities.

It is a "Green List" material for transfrontier shipment.

Transport Information

Category under CPL Regs etc –
Non Hazardous

Regulatory Information

Hazard Label Data

This product is NOT classified as dangerous for supply in India.
DIRK Phoenix DP fly ash is governed by the following legislative requirements:

The Environment Protection Act 1986

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Other Information

This product is supplied on the understanding that it will be used in the manner and for the purpose(s) specified in the data sheet, the user having taken all the precautions stipulated. Failure to follow such directions may adversely affect any rights the consumer may have against the company.

If you have purchased the product for supply to a third party for use at work, it is your duty to inform your employees and others who may be affected, of any hazards described in this sheet and any precautions which should be taken.

In circumstances where products are to be used outside the jurisdiction of India, such usage must be in conformity with national standards or those described on this sheet, whichever are more stringent.

For further information simply contact our office and our technical experts will be pleased to advise you.