**Concrete Admixtures - Cement Replacements**

# Fly Ash (Class F)

Fly ash Class F conforming to ASTM C-618

## Description

Fly ash (class F) is a byproduct of coal based thermal power station generated by the combustion of pulverized coal. Fly ash (class F) is a fine, grey amorphous powder, rich in silica & alumina and spherical in shape. The properties of fly ash (class F) may vary widely, both physically and chemically, depending upon the nature of coal, the efficiency of coal combustion process and the selection process. Therefore, it is important that when considering the use of fly ash (class F) to look no further than a company with the in depth technical knowledge and support to manufacture and supply a high quality product.

Our fly ash (class F) is amongst the first classified and processed material being made. By classifying and processing, we ensure that a large proportion of our fly ash (class F) is composed of fine particles, which results in a more controlled and consistent product. Our fly ash (class F) complies with the stringent International codes of practice such as: BS EN 450 S, ASTM C 618 Class F and IS3812 Grade.

## Characteristics of Fly Ash (Class F)

- Fine particles size.
- Low carbon content.
- Pozzolanic reaction.
- Spherical particle shape.

With these unique features and characteristics, the use of fly ash (class F) will have a number of performance benefits in concrete, both in the fresh and hardened state.

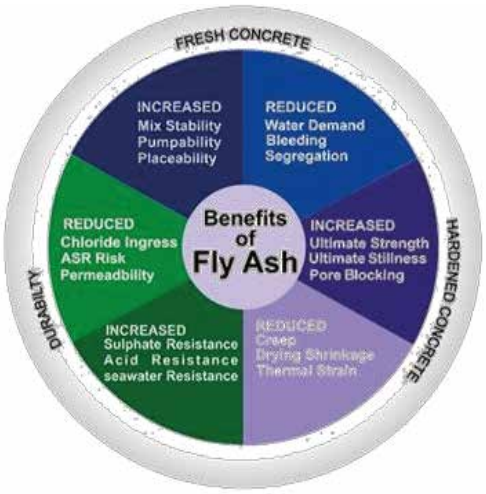
## Advantages

In Concrete Application.

- Better workability.
- Reduces permeability.
- Reduces heat of hydration.
- Improves pumpability.
- Improves sulphate and chloride resistance.
- Reduces risk of alkali aggregate reaction.
- Increase long term strength.
- Better concrete finish.
- Reduces bleeding and segregation.
- Reduces shrinkage.

## In Masonry Application

- Reduces drying shrinkage cracks.
- Good bonding, less rebound hence minimized wastage during plastering.
- Better coverage area in plaster.
- Excellent permeability resistance.
- Improves labor productivity.
- Smooth finish.
- Eco-friendly.
- Cost effective.



## Typical Properties

| Characteristics | BS EN 450 S | ASTM C-618 Class F | IS 3812 Grade 1 | SUPER POZZ | DURACRETE |
|---|---|---|---|---|---|
| Silicon Dioxide (sio2) + Aluminum Oxide (AI2o3) + Iron (Fe2O3) Min % | 70.00 | 70.00 | 70.00 | 95.89 | 92.83 |
| Silicon Dioxide (sIO2) by % mass Min | - | - | 35.00 | 62.57 | 60.80 |
| Maganesium Oxide (MgO) Max % | 4.0 | - | 5.00 | 0.85 | 0.98 |
| Sulphur Trioxide (SO3),Max % | 2.50 | 5.0 | 2.75 | 0.080 | 0.25 |
| Moisture Content Max % | 0.50 | 3.00 | - | - | - |
| Loss On Ignition, Max % | 7.0 | 6.00 | 6.00 | <1.00 | <1.50 |
| Available Alkalies as Sodium Oxide (Na2O),Max % | - | 1.50 | 1.50 | 0.96 | 0.98 |
| Fineness % retained on 45 Micron in wet-sieving, Max % | 12 | 34 | 34 | <10 | <30 |

## Health and Safety

Fly ash (class F) is formulated from chemicals which present no fire or health hazards. For further information see fly ash (class F) Material Safety Data Sheet.

## Packaging and Storage

Fly ash (class F) is supplied in small bags of 40kg or in jumbo bags of 1000kg. Product should be stored in dry conditions, similar to cement.

## Technical Service

The Technical Service Department is available to assist you in the correct and best use of our products. These resources and advice are at your disposal entirely without obligation.

## Contact Information

Al-Faiha for Engineering Products
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