

# BORAL FLY ASH

## Class F fly ash

For **improved** durability  
and ASR resistance.



### *Features*

*In plastic concrete,  
Boral Fly Ash:*

- *Reduces bleeding and segregation*

*In hardened concrete,  
depending on mixture  
proportions used,  
Boral Fly Ash:*

- *Increases ultimate strength*
- *Reduces drying shrinkage*
- *Decreases permeability*
- *Lowers heat of hydration*
- *Reduces creep*

### **Product Description**

Boral Fly Ash is a pozzolan for concrete, consisting of the “finely divided residue that results from the combustion of ground or powdered coal” as defined by ASTM C 618. A pozzolan, as defined by ASTM, reacts chemically with calcium hydroxide produced by the hydration of portland cement to form additional cementitious compounds.

Boral Class F fly ash significantly increases the ability of concrete to resist attack from sulfates in soil or ground water. Additionally, Class F fly ash has been proven through extensive research and field experience to be highly effective in mitigating the deleterious effects of expansive alkali-silica reactions (ASR) in concrete. It is produced from the combustion of pulverized bituminous or Texas lignite coal.

When correctly proportioned, concrete which contains fly ash can have equivalent or greater 28-day compressive strengths when compared to plain Portland cement concrete. Due to the pozzolanic reaction fly ash concrete will continue to gain strength beyond 28 days exceeding that of plain Portland cement concrete.

### **Major Benefits**

- Makes for easier placement.
- Improves pumpability.
- Improves finishability.
- Reduces water requirements.
- Improves durability.

### **Applications**

Boral Class F fly ash can be used as a pozzolan in virtually any concrete application. When correctly proportioned Class F fly ash will add many benefits such as increased strength, increased durability and reduced permeability. Class F fly ash is particularly beneficial in high performance concrete applications where high compressive strengths are required or where severe exposure conditions demand highly durable concrete. Class F fly ash is also very effective at mitigating problems associated with alkali-silica reactions. In mass concrete placements where low heats of hydration are required class F fly ash is very advantageous in controlling temperature rise.

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### Enhance concrete performance.

#### Quality & Specifications

Boral Class F fly ash which is provided for use in concrete applications will meet or exceed the performance requirements of ASTM C 618. To ensure compliance with ASTM C 618 our on-site and central quality control laboratories carefully sample and test the fly ash according to the requirements of ASTM C 311. In addition independent commercial testing laboratories provide additional compliance testing.

#### Shipping and Delivery

Boral Fly Ash is normally shipped, stored and batched in the same manner as portland cement. Your trained Boral representative can suggest the most appropriate and economical procedure for given conditions.

#### Boral Material Technologies

Boral Material Technologies is a major processor and marketer of coal combustion products in the United States. With over 40 years of marketing experience, Boral is committed to supplying quality products broadly supported with skilled technical sales professionals. To meet both our customer's present and future needs with coal combustion products Boral continues its commitment to customer based research and development and broad based marketing programs.

For more information on our complete line of products, contact your local Boral representative, corporate office or visit us online at [www.boralmti.com](http://www.boralmti.com).



*Boral Class F fly ash provides enhanced characteristics in plastic and in hardened concrete. This pozzolan improves finishability and achieves higher ultimate strengths compared to plain portland cement concrete.*

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