



**Technical Data Sheet:**  
**R-E-D Fly Ash FA100 type F (OS)**

**R-E-D Fly Ash FA 100** is a pozzolanic material captured in electro-static precipitators as a by-product from coal-fired thermal power stations. It consists of small, hard and spherical particles rich in silica (glass) and alumina. **R-E-D Fly Ash FA100** complements Portland cement upon hydration by reacting with free lime (calcium hydroxide) to form an additional durable binder (calcium silicate hydrate). The spherical particles also have a 'ball-bearing' effect, which allows concrete to be produced using less water.

**Applications:** Cement, concrete, ready mix concrete, CMU block, soil stabilization.

**Packaging:** Bulk tanker, bulk super-sacks.

**Storage:** Dry storage. Avoid contact with moisture.

**Safety:** **R-E-D Fly Ash FA100** is amorphous. Safety data sheet available upon request.

**Advantages:**

- Better flow ability.
- Greater - durability and strength.
- Increased resistance to sulfate attack and alkali-silica reactivity (ASR).
- Reduced - permeability, bleeding, shrinkage, heat of hydration, project costs.



**Physical and Chemical Characteristics**

ANALYSIS	Limits		
	TYPICAL	MIN	MAX
SiO <sub>2</sub> + Al <sub>2</sub> O <sub>3</sub> + Fe <sub>2</sub> O <sub>3</sub> (%)	77.0	70.0	96.0
SiO <sub>2</sub> (%)	48.0	42.0	55.0
Al <sub>2</sub> O <sub>3</sub> (%)	22.0	16.0	27.0
Fe <sub>2</sub> O <sub>3</sub> (%)	6.0	3.0	12.0
CaO (%)	13.0	6.0	16.0
MgO (%)	1.0	0.01 <sup>&gt;1</sup>	2.5
Na <sub>2</sub> O (%)	0.3	0.01 <sup>&gt;1</sup>	2.5
K <sub>2</sub> O (%)	2.5	0.5	5.0
SO <sub>3</sub> (%) <sup>2</sup>	4.5	1.0	4.0
LOI (%) <sup>2</sup>	6.0	1.0	6.0
Particles retained 45 μ sieve (% by mass) <sup>2</sup>	38	15	34
Moisture Content (%)	0.2	0.01 <sup>&gt;1</sup>	3.0

<sup>1</sup> Lower limit detection  
<sup>2</sup> (OS – Off Spec) ASTM 618

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Users must ensure that this material is suitable for their specific application despite reasonable care taken in its preparation. It is not recommended that substitutions be made without batch trialing, as this helps ensure that mixes are consistent with their intended use.