



TANVEER ENTERPRISES

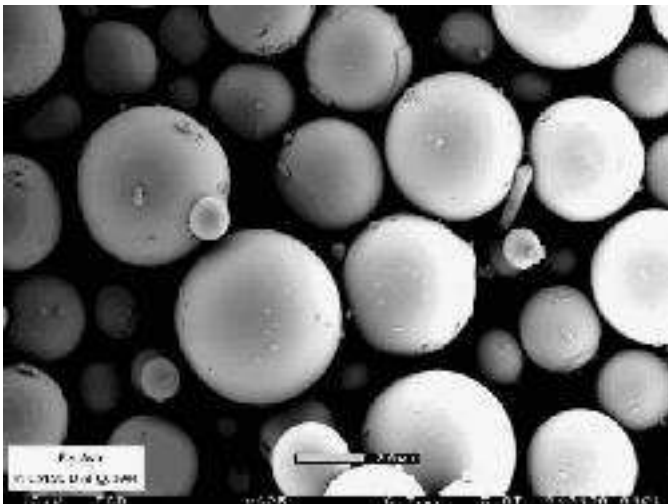
A Modern Day Building Material ASHCRETE™

ABOUT US

TE, with its corporate headquarters in Delhi, India, has recycled 22,50,000 tons approx. of fly ash in India for more than a decade. With Five distribution terminals, we are one of the major fly ash suppliers to Industries like Ready Mix Concrete, Cement Plants, Roofing Sheet Manufacturer, Bricks, Blocks, Interlock Blocks & Pavers, and Building Contractors etc.

Dry Graded Fly Ash from ESP, Silos can be supplied. We have our own fleet of trucks, bulkers & highly trained staff for quality maintenance & round the clock operations. We have installed our own state of art equipment for collection of Fly Ash from ESP's (Electro Static Precipitators) at the power plants. We can supply fly ash of different quality and properties as per your specification at very competitive rates, in bulk carriers, Jumbo Bags.

We are also regularly exporting fly ash to Nepal, the Middle East, Gulf and Saudi Arabia.



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Class F fly ash



Major Benefits

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

Features **ASHCRETE** (Class F Fly Ash)

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

Product Description

ASHCRETE (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. **ASHCRETE** 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 coal.

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

Applications

ASHCRETE 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 **ASHCRETE** class F fly ash is very advantageous in controlling temperature rise.

Quality & Specifications

ASHCRETE Class F fly ash when 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. In addition independent commercial testing laboratories provide additional compliance testing.

Ultra Fine Fly Ash



Major Benefits

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

Features **ULTRAPOZZ** (Class F Ultra Fine Fly Ash)

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

Product Description

UltraPozz is a highly reactive, classified ultra-fine class F fly ash pozzolan which improves workability & strength & further reduces permeability to a greater extent of a properly designed & compacted concrete mix. The tests have proven that Ultrapozz can produce highly durable & comparable strength concrete that can only be achieved with the incorporation of high silica content Microsilica or Rice Husk Ash class super pozzolans.

Concrete, basically is a descending particle size composition of aggregates, sand, cement, pozzolans & other additives. In a particular concrete design the size of its components could range from several centimeters to micrometers. The least particle size used in concrete is of cement. With a mean particle size of 50 microns, an ideal cement may contain particles up to the size of 20-15 microns. When concrete is mixed these components automatically pack themselves in a compact matrix by fitting lesser sized particles between the void spaces of larger sized particles in a descending order, The spaces between lowest sized particle are filled by water or air which after curing of concretes leaves the tiny passages through concrete making it permeable. For packing these voids, a very fine pozzolanic filler is required which can densely pack these void spaces.

It makes sense to use pozzolanic filler of size theoretically below 15 microns to effectively pack the void spaces between cement particles. For an ideal concrete design a pozzolan with particle size distribution of 15 microns to submicron range would be highly appropriate.

Ultrapozz has been proclaimed as one of the finest1 class F fly ash of the world. With a mean particle diameter of just 3-5 microns & almost 92% particles lesser than 11 micron in diameter, its particle size distribution ranges from 15 microns to sub-micron range making it an ideal descending particle size filler for filling the void spaces between aggregates & cementitious materials matrix quite efficiently by making it densely compact & highly impermeable2. This densely packed concrete matrix further leads to reduced water demand.

Concretes exposed to highly hostile environments like marine constructions (sea piers, docs, jetties & bridges) & aggressive soils, sewage, corrosive chemicals (drains, chemical plants, highways, airport runways) & acid rains are highly vulnerable to chloride ion ingress & sulfate attacks. Ultrapozz contains quite high percentage of Alumina which suppresses chloride ions in concrete. Further with Ultrapozz unique fine particle distribution & high reactivity, it is possible to design highly impermeable concrete highly suitable for these aggressive environments.

Applications

Typical application rates of Ultrapozz in concrete could be 5-30% by weight of cementitious content of the mix depending upon the concrete design & application. Ultrapozz in high doses of 30 % are recommended in concrete designs where very low permeability along with flexural strength is critical as in highways & air port runways. Ultrapozz could also be added with normal fly ash, Microsilica or other pozzolanic materials as per specific requirements.

TYPICAL SPECIFICATION OF CLASS F - FLY ASH

ASHCRETE
Dry Fly Ash

Chemical Analysis

S.No.	Characteristics	Results
1	Loss on ignition	1% Max
2	Silica (Si O ₂)	57.65% Min
3	Iron Oxide (Fe ₂ O ₃)	4.26% Min
4	Alumina (Al ₂ O ₃)	26.90% Min
5	Calcium Oxide (CaO)	2.32% Min
6	Magnisium Oxide (MgO)	1.51% Min
7	Total Sulphur (So ₃)	Traces
8	Insoluble Residue	-----
9	Alkalies a) Sodium Oxide (Na ₂ O) b) Potassium Oxide (K ₂ O)	0.11% Min 1.48% Min

Physical Analysis

1	Lime Reactivity, N /mm ²	6 Min
3	Retention On 45 Micron Sieve	<34%
4	Drying Shrinkage, percentage	0.06
5	Soundness by Autoclave expansion, percent	0.05
6	Compressive Strength, as percent of strength of corresponding plain cement mortar cubes	80

Shipping and Delivery

ASHCRETE Fly Ash is normally shipped in Break Bulk & Containers, stored and batched in the same manner as portland cement. We can Supply ASHCRETE in 1.2T, 1.40T Jumbo Bags. Delivery can be as per the order quantity. Minium time require after Purchase Order is issued is 2-3 Weeks.

TYPICAL SPECIFICATION OF CLASS F - ULTRA FINE FLY ASH

Chemical Analysis

S.No.	Characteristics	Results
1	Loss on ignition	1% Max
2	Silica (Si O ₂)	57.65% Min
3	Iron Oxide (Fe ₂ O ₃)	4.26% Min
4	Alumina (Al ₂ O ₃)	26.90% Min
5	Calcium Oxide (CaO)	2.32% Min
6	Magnisium Oxide (MgO)	1.51% Min
7	Total Sulphur (So ₃)	Traces
8	Insoluble Residue	-----
9	Alkalies a) Sodium Oxide (Na ₂ O) b) Potassium Oxide (K ₂ O)	0.11% Min 1.48% Min

Physical Analysis

1	Lime Reactivity, N /mm ²	8 Min
3	Retention On 25 Micron Sieve	>5%
4	Drying Shrinkage, percentage	0.06
5	Soundness by Autoclave expansion, percent	0.05
6	Compressive Strength, as percent of strength of corresponding plain cement mortar cubes	80

Shipping and Delivery

ULTRAPOZZ Fly Ash is normally shipped in Break Bulk & Containers, stored and batched in the same manner as portland cement. We can Supply ULTRAPOZZ in 1.40T Jumbo Bags. Delivery can be as per the order quantity. Minium time required after Purchase Order is issued is 2-3 Weeks.

Material Safety Data Sheet

PRODUCT: ASHCRETE (FLY ASH) & ULTRA POZZ (ULTRA FINE FLY ASH)

Hazardous Nature: This product is potentially classified as hazardous depending on jurisdiction and use.

PRODUCT IDENTIFICATION

Pozzolan, Fly Ash, Class F Fly Ash, Class C Fly Ash

Use

Supplementary cementitious material for concrete and concrete products. Also used in soil stabilization and as a fine filler in asphalt and other products.

Hazardous Chem Code

Not Applicable

Poisons Schedule

Not Scheduled

Dangerous Goods Class

Not Applicable

PHYSICAL DESCRIPTION / PROPERTIES

Appearance: Fine powder - light to dark grey or shades of brown or buff in color.

Boiling/Melting Point: Melting point > 1400 o C

Vapour Pressure: Not Applicable

Percent Volatiles: Not Applicable

Specific Gravity: 2.05 to 2.8

Flash Point: Not Applicable

Flammability Limits: Not Applicable

Auto Ignition Temp: Not Applicable

Solubility In Water: Essentially insoluble. Some Class C fly ashes may have soluble sodium sulfate (1-8%).

Respirable Fraction: Approximately 20% - 40% of particles are below 7 micron in diameter (i.e. in the respirable range).

Other Properties: Not Applicable

Ingredients

Chemical Entity Proportions

Silica-Crystalline, as Quartz 1-5%

Mullite 1 - 5%

Material Safety Data Sheet

Note: Fly ash is a by product of coal combustion. The material is composed primarily of complex aluminosilicate glass, mullite, hematite, magnetite spinel and quartz. The proportion of quartz (crystalline silica) in the fly ash varies depending on the quartz content of the coal. Class C fly ash may have 1-7% free CaO and calcium sulfate as well as calcium aluminosilicate glass.

HEALTH HAZARD INFORMATION

Short Term Exposure

Swallowed: Unlikely under normal conditions of use. Swallowing fly ash may cause abdominal discomfort.

Eyes: Irritating to eyes causing watering and redness.

Skin: Irritating to skin - can cause irritant/contact dermatitis from mechanical abrasion or alkaline composition(Class C fly ash).

Inhaled: Irritating to the nose, throat and respiratory tract causing coughing and sneezing.

Long Term Exposure

Swallowed: Not Applicable

Eyes: Not Applicable

Skin: Not Applicable

Inhaled: Repeated inhalation of dust containing crystalline silica can cause bronchitis, silicosis (scarring of the lung) and lung cancer. It may also increase the risk of scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels and internal organs). Studies have shown that smoking increases the risk of bronchitis, silicosis and lung cancer in persons exposed to crystalline silica. It is recommended that all storage and work areas should be smoke free zones. Inhalation of high levels of fly ash dust may result in severe inflammation of the small airways of the lung and asthma-like symptoms.

First Aid

Swallowed: Give plenty of water to drink. If any acute gastrointestinal distress, seek medical attention.

Eyes: Flush thoroughly with flowing water for 15 minutes. If symptoms or irritation persist, seek medical attention.

Skin: Wash thoroughly with mild soap and water. Some Class C fly ashes are quite hydraulic and alkaline; contact with wet skin may result in burns.

Inhaled: Remove to fresh air, away from dusty area. If symptoms persist, seek medical attention.

Exposure Limits

Crystalline Silica (Quartz): 0.2 mg/m³ TWA (time-weighted average) as respirable dust.

Dust (NOS - not otherwise specified): 10 mg/m³ TWA as inspirable dust. However, where a state, territory or local authority prescribes a lower exposure standard, the lower standard applies.

Recommendations: Keep exposure to dust as low as practicable. Respirable crystalline silica levels should be kept below 0.1 mg/m³ TWA, and respirable dust below 5 mg/m³ TWA.

Material Safety Data Sheet

Engineering Controls

Avoid generating dust. When handling fly ash, use local mechanical ventilation or extraction in areas where dust could escape into the work environment. For bulk deliveries, closed pumping systems are recommended. For handling of individual bags, follow instructions below if no local exhaust ventilation is available. Work areas should be cleaned regularly by wet sweeping or vacuuming. If generating dust cannot be avoided, follow personal protection recommendations below.

Personal Protection: Skin: Wear loose comfortable clothing. Wash work clothes regularly. Apply barrier cream to hands or wear cotton or light duty leather gloves or equivalent.

Eyes: Safety spectacles with side shields or safety goggles should be worn if dust likely to be generated.

Respiratory: None required if engineering and handling controls are adequate. If dust is generated wear a suitable particulate respirator . Use only respirators which bear the standards mark and are fitted correctly. Note that persons with facial hair will have difficulty in obtaining a satisfactory face seal.

Ventilation: Refer to Engineering Controls

Flammability: Non-flammable

Storage and Transport

Keep in a dry place. When handled pneumatically use standard dust filters on vehicles and silos.

Spills and Disposal: Follow above safety requirements under "Precautions for Use" and wet sweep or vacuum dust with industrial vacuum cleaner. A fine water spray should be used to suppress dust when sweeping. Collect in containers and dispose of as trade waste in accordance with local authority guidelines. Keep out of stormwater and sewer drains.

Fire/Explosion Hazard: Not flammable. Does not decompose on heating.

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