



HITEPOZZO® R12

HI - TECH FLY ASH (INDIA) PRIVATE LIMITED

PREMIUM CLASSIFIED MICRO FINE FLY ASH

PERFORMANCE & ECONOMICS BETTER THAN RAW FLY ASH

Manufactured to meet Standards across the Globe

BS EN 450-1 Category S

ASTM C618 Class F

NZS / AS 3582 Class 1

IS 3812 Part 1



20+ YEARS

CLASSIFICATION & EXPORT
EXPERTISE

750,000 MT

PRODUCTION CAPACITY/
ANNUM

25+

COUNTRIES
SERVED

3 MILLION + MT

CLASSIFIED FLY ASH
EXPORTED

WHY CLASSIFICATION MATTERS

✗ Raw Fly Ash and Its Limitations

- Inconsistent quality from batch to batch
- Higher coarse fraction
- Variation in unburnt carbon content
- Variable fineness and particle size distribution
- Can affect workability, water demand, strength & durability
- Variability can create technical and commercial risks
- Less predictable for RMC, precast and infrastructure projects
- Less suitable for high-performance applications
- Not always compliant with advanced standards

✓ Benefits of Classified Fly Ash

- Controlled classification ensures consistent quality
- Uniform particle size distribution for predictable performance
- Improved fineness control for optimized performance
- Better particle packing with reduced voids and permeability
- Improved workability, strength, and long-term durability
- Reliable export-quality consistency
- Preferred for RMC, precast, and infrastructure
- Ideal for high-performance and advanced applications
- Compliant with international quality standards

WHAT IS HITEPOZZO® R12?

HITEPOZZO® R12 is a precision-classified micro fine fly ash manufactured from carefully selected raw fly ash and by using state-of-the-art advanced classification system. Developed to deliver consistent fineness, controlled particle size distribution, improved pozzolanic performance and batch-to-batch quality consistency made for performance enhancement and cost optimization in ready-mix concrete, high performance concrete, precast, infrastructure and various advance cementitious applications worldwide. Every shipment of HITEPOZZO® R12 passes through a 5-stage stringent quality control system – raw material inspection, in-process classification control, pre-dispatch in-house laboratory testing, batch testing, and third-party inspection.

TYPICAL CHARACTERISTICS

TEST PARAMETER	RESULT
Size Retained on 45µ Sieve	11.62%
SiO ₂ + Al ₂ O ₃ + Fe ₂ O ₃	94.23%
SO ₃	0.18%
Total CaO	1.54%
MgO	0.36%

TEST PARAMETER	RESULT
Loss on Ignition	0.30%
Reactive SiO ₂	33.55%
Chloride as Cl	0.017%
Na ₂ O	0.24%
Moisture	0.11%

KEY PERFORMANCE ADVANTAGES



Improved Workability & Pumpability

Optimized particle size and spherical particles reduce internal friction, producing smoother, more cohesive concrete.



Reduced Shrinkage & Improved Crack Resistance

Lower heat generation and a denser cement matrix help minimize shrinkage stresses and reduce the risk of cracking.



Increased Resistance to Chloride Ingress

A refined pore structure slows chloride penetration, helping protect embedded reinforcement from corrosion.



Mitigation of Alkali-Silica Reaction (ASR)

Reduces available alkalis and refines the pore solution, helping suppress harmful alkali-silica expansion.



Consistent Early Strength & Faster Production Cycles

Uniform cementitious reaction, reliable finishing and strength development, improves demoulding & precast production.



Reduced Permeability

Fine particles fill microscopic voids and the pozzolanic reaction refines the concrete microstructure, reducing water penetration.



Enhanced Resistance to Sulphate & Chemical Attack

Consumes calcium hydroxide and forms stable cementitious compounds, improving resistance to aggressive chemicals.



Reduced Heat of Hydration

Replaces a portion of cement, lowering the heat released during hydration and reducing thermal stresses.



Enhanced Long-Term Strength & Durability

The continued pozzolanic reaction forms additional C-S-H gel, increasing strength and improving long-term durability.



Low LOI for Reliable Admixture Response & Crack Control

Low unburnt carbon minimizes admixture adsorption, reducing variability that can contribute to shrinkage & cracking.

COST BENEFITS IN CONCRETE & PRECAST MANUFACTURING

HITEPOZZO® R12 should not be evaluated against raw fly ash on purchase price per tonne alone. Its commercial value lies in its potential to reduce the total cost per cubic metre of accepted concrete and the total cost per saleable precast element.

BINDER COST

Controlled fineness and consistent performance can support higher OPC replacement levels than raw fly ash, reducing total binder cost while maintaining the specified concrete performance

CEMENT OVERDESIGN

Reduces the need for excess cement typically added as a safety margin to compensate for variability in the fineness, reactivity and performance of raw fly ash

ADMIXTURE COST

Reduced water demand and improved rheological control can optimise superplasticiser dosage and reduce dependence on rheologymodifying admixtures, lowering total admixture cost per m³.

PRODUCTION COST

Reduces the costs associated with batch corrections, repeat testing, material wastage and production interruptions caused by inconsistent incoming raw fly ash.

REJECTED CONCRETE

Lowers the risk and associated cost of rejected, downgraded or returned concrete — including material loss, disposal and replacement production — arising from variability in raw fly ash.

DELIVERY COST

Reduces the potential for returned loads, site delays, corrective additions and replacement deliveries, and their associated costs, arising from out-of-specification concrete caused by raw fly ash.

PUMPING COST

More fine and spherical particles in classified fly ash support more consistent pumping, reducing costs from pumping interruptions, line blockages, labour downtime and truck waiting time.

PLACEMENT COST

Improved concrete consistency, cohesiveness and finishability can reduce labour and equipment costs from site adjustments, excessive vibration, compaction finishing operations.

REWORK COST

Reduces the material, labour and equipment costs associated with rectifying honeycombing, segregation-related defects and surface imperfections in variable concrete.

PRECAST PRODUCTION COST

More consistent fresh and hardened concrete performance can reduce costs from inefficient mould utilisation, production delays, surface repairs and rejected elements, while saleable yield.

CONSTRUCTION-TIME COST

More predictable concrete performance can reduce additional formwork, equipment-hire, labour and project-overhead costs arising from avoidable construction delays.

LIFECYCLE COST

A denser and more durable concrete matrix can reduce whole-life repair, maintenance and operational-shutdown costs associated with variability in raw fly ash

TYPICAL APPLICATIONS



Blended Cement Manufacturing



High Performance Concrete (HPC)



Ready Mix Concrete (RMC)



Precast & Pre-stressed Concrete



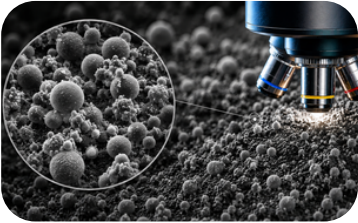
High Rise Infrastructure



Bridges & Highways



Marine & Demanding Concrete Applications



Advanced Cementitious Materials

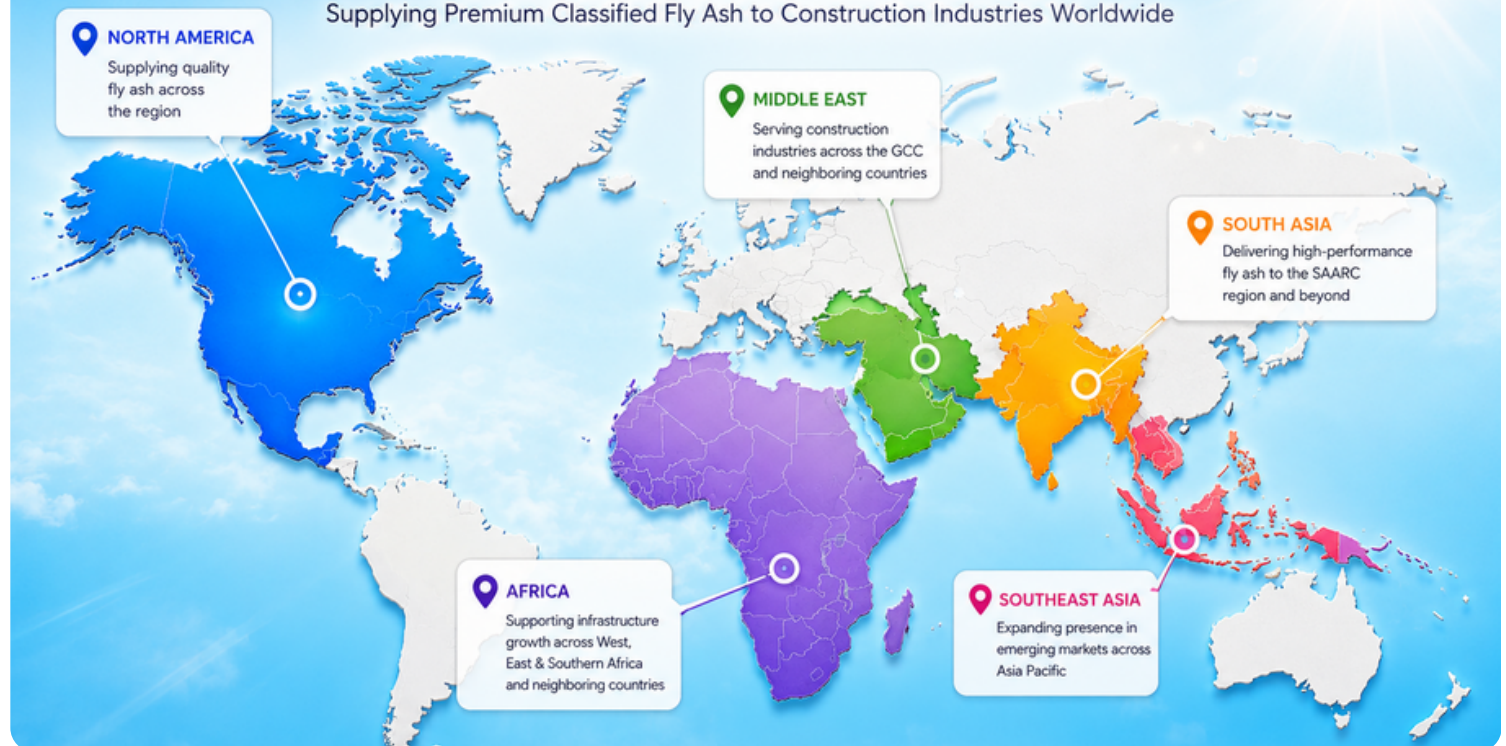
WHO WE ARE

- ✓ South India's 1st Fly Ash Processing Plant
- ✓ India's One of the Largest Fly Ash Classification Plant
- ✓ One of Asia's Largest Independent Fly Ash Facility Built Outside a Power Plant
- ✓ One of World's Few Integrated Plants with Multiple Process Trains
- ✓ Belongs to 7 Decades Old Heavy Engineering Group – Thiraviam Engineering serves industries like thermal & nuclear power, cement, copper smelting, fertilizer, chemical, ports & infrastructure



GLOBAL PRESENCE

Supplying Premium Classified Fly Ash to Construction Industries Worldwide



WHY CLASSIFICATION MATTERS

- Burj Khalifa, UAE
- Hamad International Airport Expansion, Qatar
- Tanzanite Bridge, Tanzania
- Lotus Tower, Sri Lanka
- Sinamalé Bridge, Maldives
- Kundankulam Atomic Power Plant, India
- Holcim
- Qatar National Cement Company
- Ready-mix Qatar
- Tremix Aljabar
- ETA Star
- Various RMC across Continents

MANUFACTURED BY

Hitech Fly Ash India Private Limited

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EXCLUSIVELY MARKETING BY

Higgsmond

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FOR ENQUIRY

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