

GROUND GRANULATED BLAST FURNACE SLAG

ECO-Friendly GGBFS

NEW



ECO-TIBAY SLAG is a fine Ground Granulated Blast Furnace Slag (GGBFS), a non-metallic by-product of iron production consisting primarily of silicates & alumina-silicates of calcium and other bases. Produced by rapidly chilling molten iron blast-furnace slag using a water-quenching process to form a glassy, sand-like granulated material. The granules are then ground to a fineness of less than 45 microns, which is somewhat finer than most Ordinary Portland Type I Cement. The production of ECO-TIBAY Slag is considered harmless to the environment since it declines the creation of Co2.

ECO-TIBAY SLAG is a latent hydraulic type of material, meaning, it has its own cementitious properties but need to be activated by the use of cement.

ECO-TIBAY Slag is a high quality type of Ground Granulated Blast Furnace Slag marketed by Lemery Cement Silo & Tank Inc. The quality of ECO-TIBAY Slag was derived from (3) three important factors; (1) process on which the granulated blast furnace slag is abruptly cooled down to maintain its glass content; (2) the high quality of raw materials that dictate the quality and consistency of slag; and (3) the process by which the granulated blast furnace slag is ground/pulverized into a very fine powder.

BENEFITS OF USING ECO-TIBAY SLAG

- Improves Concrete Workability
- Increases Concrete Strength
- Increases Concrete Resistance To Fire
- Helps Reduce Concrete Life Cycle Cost
- Reduces Heat Build-up In Massive Structures
- Low carbon emissions
- Improves Concrete Durability
- Reduces Concrete Permeability
- Improves Concrete Resistance To Sulfate Attack
- Helps Mitigate Alkali-silica Reaction



**LEMERY
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CORPORATION**

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CHEMICAL AND PHYSICAL CHARACTERISTICS (PSP vs OPC)

Chemical and Physical Characteristics	ECO-TIBAY SLAG	Ordinary Portland Type I Cement
CaO	33.0 – 35.0	62.0 – 65.0
SiO ₂	30.0 – 33.0	19.5 - 21.5
Al ₂ O ₃	17.0 – 19.0	4.5 – 6.0
Fe ₂ O ₃	0.45 - 0.55	2.9 – 3.4
Fineness, Blaine (g/cm ²)	4500 - 4800	3,500 – 3,700
Fineness, -325 mesh	97.0 – 99.0	92.0 – 95.0
Specific Gravity	2.92	3.14

ECO-TIBAY SLAG powder's chemical entity is closely related to Ordinary Portland Type I Cement, reason why it can be used in much larger amounts to replace Ordinary Portland Type I Cement in concrete.

Physical Characteristics of ECO-TIBAY Slag *(Source: CTC Results, May 31, 2024)*

	Pure ECO -TIBAY Slag Powder	50% ECO -TIBAY Slag + 50% Pure OPC	Specifications / REMARKS
1 day Strength (as per ASTM 1073 Test Method)	16.0 MPa	-	Part of quality monitoring acceptance
SAI @ 7days, %	-	84%	70% min for grade 100
SAI @ 28 days	-	113%	90% min for grade 100
3 days, MPa	-	19.2	13.0
7 days, MPa	-	34.2	20.0
28 days, MPa	-	57.3	25.0

Note: Pure Cement used in study is LONGSON Type I with 28D strength of 49.3MPa

APPLICATION OF ECO-TIBAY SLAG

- Production of quality-improved cement
 - Type IS Slag Cement (bulk & bagged)
 - Masonry Type of Cement
- Production of ready-mixed or site batch concrete
 - Durable concrete (pumpable / ordinary)
 - High strength concrete / Ultra high performance concrete
 - Pre-casted concrete
 - Portland Cement Concrete Pavement
 - Self-compacting/self-consolidating Concrete
 - Other Special types of Concrete
- Production of Do-It-Yourself (DIY) Products



AVAILABILITY & DELIVERY

- Supersack (1MT)



- BULK



PACKAGING & SHELF LIFE

ECO-TIBAY SLAG is stored in cylindrical silos and can be withdrawn directly by bulk truck or pack in tonner bags for deliveries.

Shelf life is highly dependent on how you store the material. Do not allow it to have a direct contact with moisture. When stored correctly in silos or in warehouses, ECO-TIBAY Slag can have an indefinite shelf life.



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