

FUERZA RP-3000

RETARDER PLASTICIZER CONCRETE ADMIXTURE

FUERZA RP-3000 is a **modified lignin-based concrete admixture** formulated to provide **controlled retardation of cement hydration and setting**, while simultaneously reducing **mixing-water demand** and improving concrete workability.

PERFORMANCE

FUERZA RP-3000 extends the **initial and final setting times** of concrete and mortar while reducing **mixing-water demand**, thereby contributing to enhanced **ultimate compressive strength and overall concrete performance**.

METHOD OF USE

FUERZA RP-3000 may be added directly to the concrete mix **concurrently with the gauging water**. The mixing-water dosage should be **appropriately reduced** to achieve the specified consistency and required workability.

ADVANTAGES

- Provides **controlled retardation of concrete setting** under elevated ambient temperatures.
- Facilitates **large-volume concrete placements**, minimizing the risk of cold joints and construction discontinuities.
- Extends the available **placement, finishing, and compaction window** where delays occur between mixing and final consolidation.
- Maintains concrete workability during **extended transportation and long-haul deliveries**.
- Particularly suitable for **ready-mix concrete applications** requiring controlled setting characteristics.
- Contributes to improved **concrete durability** through enhanced placement control and reduced defects.

TECHNICAL INFORMATION

Supply form:	Liquid
Specific gravity:	1.6-0.01
Chloride contents:	Nil to BS5075:1982
Color:	Dark brown
Flash point:	0° C
Nitrate content:	Nil
Air entrainment:	<1%
pH:	4-6 approx.

STANDARDS COMPLIANCE

FUERZA RP-3000 conforms to the requirements of **ASTM C494-98, Type B**, for chemical admixtures used to provide controlled retardation of concrete setting.

PERFORMANCE CHARACTERISTICS

- **Extended Workability:** Prolongs the workable period of concrete by controlling **initial and final setting times** and enhancing **slump retention** in proportion to the dosage.
- **Water Reduction:** Significantly reduces **mixing-water demand**, enabling improved **compressive strength** without compromising required workability.
- **Admixture Compatibility:** Compatible with **FUERZA non-chloride accelerators and set-retarding admixtures** when properly dosed.
- **Naphthalene Sulfonate Compatibility:** Avoid combining FUERZA RP-3000 with **naphthalene sulfonate-based admixtures**, such as FUERZA 400, as this may cause **rapid slump loss**.
- **Equipment Hygiene:** Mixing and transportation equipment should be **thoroughly cleaned between successive batches** containing FUERZA 400 and FUERZA RP-3000 to prevent cross-contamination and inconsistent concrete performance.

COMPABILITY

FUERZA RP-3000 is compatible with most **Portland cement formulations**, including **blended and sulphate-resisting cements**, without adverse effects on **reinforcing steel or prestressing tendons**. It is particularly effective in concrete incorporating **pozzolanic and supplementary cementitious materials**, such as **fly ash, silica fume, and slag**.

The admixture may be introduced into the concrete constituents **except cement**, with addition through the **mixing water being preferred**. It is compatible with other chemical admixtures; however, **each admixture should be introduced separately** to ensure proper dispersion and controlled performance.

RECOMMENDED DOSAGE

The recommended dosage of **FUERZA RP-3000** is **400–800 mL per 50 kg of cement**, depending on the required degree of setting retardation. The optimum dosage should be determined based on **ambient temperature, cement characteristics, and the desired fresh concrete performance**, and verified through preliminary trial mixes.

Higher dosage rates may be employed where **extended workability and prolonged setting times** are required, resulting in proportionally increased **slump retention and retardation**.

EFFECTS OF OVERDOSAGE

Excessive dosage of **FUERZA RP-3000** may result in:

- **Significant retardation** of both initial and final setting times.
- Slight increase in **entrained air content**.
- Increased **fresh concrete workability and slump retention**.
- When adequately cured, the **ultimate compressive strength is not adversely affected** and may exceed that of conventionally proportioned concrete.

TECHNICAL SUPPORT

A **qualified FUERZA technical representative** is available to provide expert assistance in **concrete mix formulation, performance optimization, and troubleshooting of field-related concrete issues**.

PACKAGING & SHELF LIFE

FUERZA RP-3000 has a **practically unlimited shelf life when maintained in sealed, original containers**. For optimum product performance, use within **12 months from the date of manufacture**. Supplied in **210-litre drums**.

HEALTH & SAFETY

FUERZA RP-3000 is **non-flammable and does not present a significant health hazard under normal handling conditions**. Any spillage should be **promptly flushed with clean water**. Appropriate **protective goggles and chemical-resistant rubber gloves** should be worn during handling and application.



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