

FUERZA LIGNOVA

HIGH RANGE WATER REDUCING RETARDER SUPER PLASTICIZER ADMIXTURE

FUERZA LIGNOVA is a **chloride-free, high-range water-reducing and set-retarding superplasticizer** formulated from advanced-generation chemical modifiers combined with selected lignosulphonate materials. Supplied as a dark-brown liquid, it readily disperses in water and provides efficient control of concrete rheology, setting characteristics, and workability.

The admixture promotes effective dispersion and deflocculation of cement particles, enabling more efficient utilization of mixing water and improved concrete consistency. This allows enhanced workability at a constant water content or significant water reduction while maintaining workability, thereby contributing to increased strength, density, and overall concrete performance through the synergistic action of powerful plasticizing and dispersing agents.

KEY PERFORMANCE BENEFITS

- **Ready-Mix Concrete:** Ideal where extended workability retention and controlled retardation of initial setting are required.
- **Enhanced Strength:** Enables substantial water reduction, contributing to higher compressive strength at both early and later ages.
- **Improved Durability:** Promotes low-permeability concrete with enhanced resistance to moisture ingress and improved long-term durability.
- **Hot-Weather Concreting:** Maintains workability and mitigates placement difficulties under elevated ambient temperatures.
- **Chloride-Free Formulation:** Suitable for reinforced and prestressed concrete without increasing the risk of reinforcement corrosion.
- **Workability Enhancement:** Increases concrete fluidity and placement efficiency without additional mixing water.

FEIELDS OF APPLICATION

- Extended **workability and slump retention**
- Concrete for **densely reinforced structural elements**
- **Pumped concrete** applications
- Compatible with **all conventional cement types**
- **Ready-mix concrete** requiring prolonged workability
- **High-Performance Concrete (HPC)** and **Very High-Performance Concrete (VHPC)**
- **Industrial flooring** and heavy-duty floor systems
- **Structural and architectural slabs**
- **White, plain, and architectural concrete**

TECHNICAL INFORMATION

Supply form:	Liquid
Specific gravity:	1.15 at 25±2° C
Color:	Dark brown
Toxicity:	Non-toxic
Chloride content:	Nil

STANDARDS COMPLIANCE

FUERZA LIGNOVA conforms to the performance and classification requirements of **ASTM C494/C494M, Type G**, applicable to chemical admixtures providing **high-range water reduction combined with controlled set retardation** in hydraulic-cement concrete.

DOSAGE

Recommended dosage is **0.8–3.0 kg per 100 kg of cement**, depending on the required water reduction, workability retention, and setting characteristics.

INSTRUCTIONS FOR USE

- A typical dosage is approximately **1.0% by weight of cementitious material**.
- Add the admixture directly to the **mixing water** to ensure uniform dispersion.
- When dosed into fresh concrete in the mixing truck, mix at **high speed followed by low speed**, for a minimum of **3 minutes at each speed**.
- Determine the optimum dosage through **preliminary trial mixes**, considering the required rheological properties, workability retention, setting characteristics, and mechanical performance of the concrete.

EFFECTS OF OVERDOSAGE

Excessive dosage of **FUERZA LIGNOVA** may result in:

- **Extended initial and final setting times** due to increased retardation.
- **Slightly increased air entrainment** within the concrete matrix.
- **Enhanced workability and slump retention**.
- With proper curing, **ultimate concrete strength is generally maintained or improved** compared with normally dosed concrete.
- At very high dosages, the **retarding effect may become more pronounced**, particularly when used with **SR (sulfate-resisting) cement**.

HEALTH & SAFETY PRECAUTIONS

FUERZA LIGNOVA is not classified as hazardous under applicable current regulations; however, standard chemical-handling precautions shall be observed. Avoid ingestion and contact with skin or eyes. Appropriate **protective gloves and safety goggles** should be worn during handling and application.

In case of skin contact, wash thoroughly with clean water. In case of eye contact, rinse immediately with copious amounts of clean water and seek medical attention. If swallowed, obtain immediate medical assistance and **do not induce vomiting**. For comprehensive safety, handling, and emergency information, refer to the current **Safety Data Sheet (SDS)** for **FUERZA LIGNOVA**.

PACKAGING, STORAGE & SHELF LIFE

FUERZA LIGNOVA is supplied in **210 L drums**, with bulk deliveries available for site installations requiring dedicated storage tanks. When stored under cover and protected from direct sunlight, the product maintains a **minimum shelf life of 12 months**.

TECHNICAL SUPPORT

FUERZA provides **comprehensive technical support** to consultants, specifiers, contractors, and end users, including **on-site technical assistance** to facilitate correct product selection, application, and system performance.

The information and recommendations above are given in good faith based on our current knowledge and experience of the products when properly stored, handled and applied in accordance with current best practice, national standards and our recommendations. As we have no control over site conditions or methods of application, no liability can be derived from the contents of this information sheet, or from any written recommendations, or from any other advice offered. The user of the product is solely responsible for the product's suitability for the intended application and is recommended to test the suitability prior to use. We reserve the right to change the properties of our products without notice. All orders are sold subject to our current terms of sale and delivery. With the publication of this Technical Information Sheet all previous editions are no longer valid.



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