

## ECLIPSE® PLUS

Shrinkage Reducing Admixture

### DESCRIPTION

**Eclipse® Plus** is a shrinkage-reducing admixture designed to minimize drying shrinkage, improving dimensional stability, crack resistance, and long-term durability. It is ideal for concrete and other Portland cement-based materials requiring reduced shrinkage and cracking potential. This product features a chemical mechanism that

targets the root cause of shrinkage without relying on expansive materials, making it well-suited for applications where long-term structural integrity is critical.

**Meets or exceeds the requirements of ASTM C-494 Type S**

### ADVANTAGES

- Eliminates dry shrinkage cracking in fully restrained concrete
- Enhances durability with longer usable life

### FIELDS OF APPLICATION

- All Cement Types
- Precast Concrete
- Post Tensioned & Prestressed Concrete
- Ready-Mix Concrete

### Method of Use

#### Dosage

- Dosage rates vary based on cement type, mix design, aggregate properties, environmental conditions, and project requirements.
- The typical dosage range is 0.5 gal/yd<sup>3</sup> to 2.0 gal/yd<sup>3</sup> (2.5 L/m<sup>3</sup> to 10 L/m<sup>3</sup>) of concrete.
  - The recommended addition rate to maximize effectiveness is 1.5 gal/yd<sup>3</sup> (7.5 L/m<sup>3</sup>) and in other mixtures, 5% by weight of mix water.
  - For addition rates between 0.5 gal/yd<sup>3</sup> (2.5 L/m<sup>3</sup>) and 2.0 gal/yd<sup>3</sup> (9.9 L/m<sup>3</sup>), shrinkage reduction as a function of dosage is relatively linear and any dosage within this range may be selected to obtain a desired level of shrinkage performance.
- If conditions require using more than the recommended addition rates, please consult your Chryso® representative.

#### Additional Usage Recommendations

- Structural Concrete (Bridges, Buildings, Foundations)
- Marine and Coastal Structures (Ports, Docks, Seawalls, Offshore Platforms)
- Hydraulic Structures (Dams, Canals, Water Retaining Structures)
- Containment Structures (Nuclear and Radiation Shielding Concrete)
- Transportation Infrastructure (Bridges, Roads, Highways, Airports, Railways)

#### Implementation

- It is recommended that the product be added to the concrete mix after the dry materials and most of the water for optimum performance. Different sequencing may be used if local testing shows better performance.
- Product is added at high dosages and should be accounted for in the mixture design. For a conventional concrete mix with 1.5 gal/yd<sup>3</sup> (7.5 L/m<sup>3</sup>), this liquid volume will contribute to the overall porosity of the concrete in the same manner as an equivalent volume of added water. Additionally, the effect on concrete slump will be virtually identical to that of the same volume of water. When incorporating the admixture into an established mix design, it is recommended to replace an equal volume of water.
- Please see [Admixture Dispenser Discharge Line Location & Sequencing for Concrete Batching Operations](#) for more information on product implementation.

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### Shrinkage Reducing Admixture

- Pretesting of the concrete mix should be performed before use and as conditions and materials change in order to assure compatibility with other admixtures, and to optimize dosage rates, addition times in the batch sequencing and concrete performance.

#### Equipment

- This product can be automatically dispensed using a complete line of accurate and reliable dispensing equipment designed for seamless integration into concrete batching systems.

#### Complimentary Products

- ECLIPSE® PLUS is compatible with most Chryso® admixtures as long as they are added separately to the concrete mix, usually through the water holding tank discharge line.
- When substituted in a mix design for an equivalent volume of water, ECLIPSE® PLUS has little or no effect on concrete slump. However, it has a slight retarding effect (typically less than a one-hour extension of set time) and aids in extending slump life.
- For concrete that requires air entrainment, the use of an ASTM C260 air-entraining agent is recommended to provide suitable air void parameters for freeze-thaw resistance.
- Mixes containing ECLIPSE® PLUS will require increased amounts of air-entraining agents to achieve a specified level of air.
- For concrete mixtures where strength must be maintained, Chryso® high-range water-reducing admixtures can offset the strength reduction of ECLIPSE® PLUS without compromising its shrinkage reduction capabilities.
- Consult your Chryso® representative for guidance on product combinations & compatibility.

#### Performances

- Reduces drying shrinkage up to 80% at 28 days
- Reduces drying shrinkage up to 50% at +1 year
- May reduce concrete compressive strengths by 0% to 15%, with a typical reduction of 10% or less. In mixtures designed for durability, this level of strength reduction is usually not a concern.

### CHARACTERISTICS

<b>Product Nature</b>	Liquid
<b>Color</b>	Dark brown
<b>Shelf life</b>	12 months
<b>Cl<sup>-</sup> Ions content</b>	≤ 0,050 %
<b>Specific gravity (25°C) in g/ml</b>	0,970 ± 0,010
<b>Flash Point</b>	209 °F

### PRECAUTIONS

- Product has a flash point of 209°F (98°C). This is substantially above the upper limit of 140°F (60°C) for classification as a flammable material and above the limit of 200°F (93°C) for classification as a combustible material by DOT requirements.
- This product must be treated with care and protected from excessive heat, open flames or sparks.

### SAFETY

Prior to any use, please read carefully the Safety data Sheet.

### PACKAGING

- Bulk
- 1000L Tote (275 gallons)
- 210L Drum (55 gallons)