ECA CSR

CONCRETE SURFACE RETARDER

DESCRIPTION

ECA CSR is a specialized surface retarder designed for creating washed concrete products using a negative application process. It comes in ten different varieties, each intended for achieving varying levels of aggregate exposure depths in the finished concrete surface. While the exposure depths provided are typical standards, actual results may vary based on factors such as the type of cement used, the water-cement ratio, aggregate grading, and the quantity of cement employed in the mix.

USES

ECA CSR is a versatile surface retarder that enhances both the aesthetics and functionality of concrete applications. It is crucial in achieving desired washed concrete finishes for façade coverings, soundproof walls, landscaping features, and specialized concrete products.
Its adaptability makes it especially valuable in architectural projects and the production of intricate forms, helping to maintain the quality and durability of concrete while achieving desired aggregate exposure depths.

ADVANTAGES

- Provides flexibility in achieving different aggregate exposure depths to suit specific design preferences
- Requires only a single coat of formwork for each application, making it cost-effective
- Concrete can be poured after the weather-dependent drying time is met, streamlining the construction process
- Sample tests can be conducted to fine-tune the concrete mix's vibrational qualities
- Can be used with new, polymer-modified casings; alkaline surfaces should be neutralized before the initial ECA CSR application through cleaning

TYPICAL PROPERTIES		
Appearance:	Variable Color Liquid	
Specific Gravity (@20°C)	1.1 ± 0.02	
Color	**Aggregate Size**	**Exposure Depth**
Turquoise	0 - 3 mm	ca. 0.2 mm
Blue	0 - 4 / 8 mm	ca. 0.5 mm
Brown	2 - 4 / 8 mm	ca. 1.0 mm
Green	4 - 8 / 10 mm	ca. 1.5 mm
Yellow	4 - 8 / 10 mm	ca. 2.0 mm
Red	6 - 9 / 12 mm	ca. 2.5 mm
Grey	8 - 11 mm	ca. 3.0 mm
White	12 - 16 mm	ca. 4.0 mm
Orange	16 - 22 mm	ca. 5.0 mm
Red-Violet	16 - 22 mm	ca. 6.0 mm

APPLICATION

Surface Preparation

Before each application of ECA CSR, it's essential to thoroughly stir the product using a power whisk. The suitable ECA CSR type should be determined through practical sample tests considering factors like cement composition, production process, element thickness, and cement setting rate. The drying time is also a critical factor to consider. Mold heating should commence at least two hours after pouring. To maintain consistency, it's crucial to replicate the production process used in sample tests. The exposure cycle should be retained, or adjustments made if there are significant temperature fluctuations, to ensure the desired results for architectural concrete and complex-formed products.

Application Instructions

- Apply ECA CSR sparingly and evenly onto clean, release agent-free formwork using a solvent-resistant short pile paint roller.
- Consider using electrical equipment such as dosing pump motors, Teflon seals, and cleaning tools.
- Typically, wash out the cement matrix 24 hours after the pour; cast elements must remain in the formwork for at least eight hours.
- A delayed washout is possible after a sample test, especially for weekend production.
- Replicate the production cycle exactly for multiple elements.
- To adjust for production fluctuations or reduce exposure depth, expose cast elements to air for two to eight hours before washout, as determined by sample tests.
- The most efficient washout method is using a high-pressure hose; dry brushing and final washout are also options, provided sample tests are conducted.

PACKAGING

ECA CSR is supplied in 20 kg containers.

STORAGE

ECA CSR should be stored in a cool environment, free from frost, well-ventilated, and away from potential sources of ignition.
The shelf life of ECA CSR is 12 months from the date of production.

HEALTH AND SAFETY

For more information, please check the Material Safety Data Sheet.

CONTACT

Al-Faiha for Engineering Products is the exclusive licensee manufacturer for ECA.
For more information, please contact us at techsupport@alfaihaengineering.com.

DISCLAIMER

ECA aims to ensure the accuracy of information and recommendations in the product literature.
However, due to variations in materials, substrates, and site conditions, and without control over product application, storage, weather, and usage conditions, ECA cannot be held liable for any resulting issues.