

Product Data Sheet

CasTech ES-435

Nov-2025, Ver. 01.01



Water-Reducing and Accelerating Admixture based on Poly-carboxylate Ether

DESCRIPTION

CasTech ES-435 is a patented, ready-to-use liquid admixture formulated to accelerate time of setting and to increase early concrete strengths. **CasTech ES-435** does not contain calcium chloride and is formulated to comply with ASTM C 494/C 494M Type E, accelerating, admixture requirements.

USES

Recommended for use in:

- Reinforced, precast, pumped, flowable, lightweight or normal weight concrete and shotcrete (wet mix)
- Concrete placed on galvanized steel floor and roof systems which are left in place
- Prestressed concrete
- Fast-track concrete construction
- Concrete subject to chloride ion constraints
- Self-consolidating concrete (SCC)
- Pervious concrete
- Masonry mortar

BENEFITS

- Earlier finishing of slabs — reduced labor costs
- Reduced in-place concrete costs
- Reduced or eliminated heating and protection time in cold weather
- Earlier stripping and reuse of forms
- Superior finishing characteristics for flatwork and cast surfaces

ADVANTAGES

Features:

- Accelerated setting time across a wide range of temperatures
- Increased early compressive and flexural strengths

Effect of increased early strength:

- Earlier stripping and re-use of forms for walls and precast work
- Earlier structural use of concrete, as in lift-slab construction, tilt-up, paving and floors
- Earlier tensioning in post-tensioned concrete

- Earlier de-tensioning in pre-stressed concrete
- Potential energy savings in accelerated steam-cured applications by reducing curing temperatures and/or curing time
- Offsetting the set retardation of stabilised concrete

TYPICAL PROPERTIES

Consistence	Liquid
Colour	Light Brown
Chloride According to EN 934-2	Nil
Classification According to ASTM C494	Type E
Specific Gravity	1.05±0.02 @ 25°C
Air Entrainment	Less than 1.5%
pH (ISO 4316)	4.0 – 6.0
Alkali Content (EN 480-12) (%)	< 3

COMPATIBILITY

CasTech ES-435 is compatible with all Portland cements that meet recognized international standards. **CasTech ES-435** must not be used in conjunction with any other admixture unless prior approval is received from CasTech Technical Department. **CasTech ES-435** is suitable for mixes containing: Micro silica, Pulverized fuel ash, Ground granulated blast furnace slag cement.

INSTRUCTIONS FOR USE

CasTech ES-435 is a ready to use admixture that is added to the concrete at the time of batching. The maximum effect is achieved when **CasTech ES-435** is added after the addition of 70% to 80% of the water. **CasTech ES-435** must not be added to the dry materials. Thorough mixing is essential and a minimum mixing cycle, after the addition of **CasTech ES-435**, of 90 seconds for forced action mixers is recommended.

DOSAGE

The normal dosage for **CasTech ES-435** is between 0.5% and 2.5% per 100 kg of cement (cementitious material). Dosages outside this range are permissible subject to trial mixes.

PRECAUTIONS

Health & Safety:

CasTech ES-435 is non-toxic. Any splashes to the skin should be washed immediately with water. Splashes to the eyes should be washed immediately with water and medical advice should be sought.

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Curing:

As with all structural concrete, normal curing methods apply.

Cleaning:

Spillages of **CasTech ES-435** can be removed with water.

STORAGE

CasTech ES-435 should be protected from extreme temperature. Should the material become frozen, it must be completely thawed and thoroughly mixed before use. **CasTech ES-435** has a minimum shelf life of 6 months provided temperature is kept within range 5°C to 30°C.

Fire:

CasTech ES-435 is non-flammable

PACKAGING

CasTech ES-435 is available in IBC, 210-liter drums and in bulk tanks upon request.

TECHNICAL SUPPORT

CasTech provides technical support service on mix design, admixture selection, evaluation of trials, dispensing equipment etc. Please contact the Technical Department in these cases.

CasTech MIDDLE EAST FZE

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