

## DESCRIPTION

DuraForce(i) is a water-based liquid integral hardener that increases the abrasion resistance on concrete flooring. The formula is chloride free and is recommended for both interior and exterior use. The result is the creation of additional hydration products forming in the capillaries, therefore hardening the slab during the curing process. This process results in 3-Dimensional performance throughout the entire slab, which provides an abrasion resistant slab and surface. DuraForce(i) is non-toxic and volatile organic compound (VOC) free.

## PROPERTIES

Physical State	Liquid
Odor	Odorless
Color	Hazy Whitish Liquid
Turbidity	60-70
Freezing Point	32°F (0°C)
Boiling Point	212°F (100°C)
VOCs	0.0 g/L
Active Solids	20-25%
pH	11.0-12.0
Specific Gravity	1.19-1.23

## FEATURES & BENEFITS

- Integrated in the concrete mix at the plant
- Increased wear resistance per ASTM C779 and ASTM C944
- Reduces long term shrinkage up to 35% based on ASTM C494 in compliance with ASTM C157
- 3-Dimensional hardening performance
- Closed capillaries restrict bleed water pass through
- Helps retain moisture promoting internal cure and early strength gain with decreased set time
- Can reduce cement content up to 10%
- Reduces hydrostatic permeability
- Type S Admixture per ASTM C494/C494M
- VOC compliant

## APPLICATIONS

- Interior and exterior slabs-on-ground
- Industrial warehouse/distribution centers
- Automotive plants
- Heavy duty traffic
- Manufacturing plants
- Transfer stations
- Bridge decks

## MIXING INSTRUCTIONS

DuraForce(i) should be added directly to the freshly mixed concrete at the end of the batch process with the tail water. Mix for 7 minutes at full charging speed to ensure complete uniform distribution. DuraForce(i) is compatible with fly ash, portland-limestone cement, granulated ground blast furnace slag, all chemical admixtures, and polyolefin and steel fibers. It does not promote corrosion of embedded traditional steel reinforcement.

## PACKAGING & STORAGE

DuraForce(i) is available in 275 gal (1040 L) totes, 55 gal (208 L) drums, and 15 gal (56 L) minidrums.

Store product above 32°F (0°C) and never allow to freeze. Do not store in direct sunlight for long periods nor in unopened containers. DuraForce(i) is water-based and significant evaporation could occur if not protected from excessive heat or sunlight. It has no shelf-life if stored properly in original, unopened packaging material. However, it is recommended that all product be used within one year of purchase for best results.

## GENERAL SPECIFICATIONS

The dosage rate for DuraForce(i) is 10 oz (295 mL) per 100 lb (45 kg) total cementitious material. Mix water shall be adjusted on a one-for-one basis with the added DuraForce(i). However, a specific dosage rate should be established by the project engineer or government agency for a given application based on project conditions and requirements.



*As used herein, the term "FullForce" shall refer to FullForce by ABC Polymer Industries, LLC, and its subsidiaries.*

*A trial batch is recommended if the mix design falls outside the parameters of a 0.30 and 0.54 water to total cementitious material ratio. FullForce warrants that its DuraForce(i) for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by FullForce, the product is free of manufacturing defects and conforms to DuraForce(i)'s product properties in force on the date of acceptance by FullForce of the order. FullForce shall only be liable under this warranty if the product has been applied, used, and stored in accordance with DuraForce(i)'s instructions, in force on the date of FullForce's acceptance of the order. Site environmental conditions, substrate conditions and construction have a major effect on product selection, application methods, procedures and rates, appearance and performance. Full warranty information by request at 205.620.9889 or Sales@FullForceSolutions.us.*