

DARACCEL[®] 46

Set accelerator

Product Description

Daracel[®] 46 is a set-accelerating admixture formulated to provide accelerated set during low ambient temperatures whilst increasing early and final strengths.

Daracel 46 is an aqueous liquid solution that is manufactured under controlled conditions to produce a consistent product which ensures uniform and predictable performance when used.

Daracel 46 contains no Triethanolamine. Daracel 46 complies as a Type Ac according to AS 1478.

Advantages

- Daracel 46 offers significant advantages as a concrete set accelerator.
- Daracel 46 will reduce the setting time of concrete thus enabling earlier finishing times to be achieved, especially at low ambient temperature, when concrete temperatures are low.
- Daracel 46 will increase early and latter age compressive strengths. Early strengths can be increased compared to non-accelerated concrete. Increased early strengths will enable the earlier removal of form work.
- When Daracel 46 is used in concrete, that is designed with pozzolans such as fly ash and slag, acceptable finishing times and early strengths are achieved, thus optimising costs.

Product Advantages

- Accelerated set times
- Increases compressive strengths
- Mix economics

Benefits

- Controlled, predictable acceleration of set during low ambient temperatures.
- Early form removal or early use of concrete.
- Bleed reduction due to the greatly improved setting times.
- Denser, less permeable concrete.
- Effective over a wide range of cementitious contents and mix designs.
- Used in conjunction with Type GB cements (and mixes that contain fly ash) to offset slow setting times.
- Temperature of hot water used in winter mixes can be reduced to an optimum level.



Typical Applications

Daracel 46 can be used in virtually all concrete and masonry applications to achieve economic advantage, such as:

- Flatwork and house slabs
- Pumped concrete
- Concrete floors poured inside on plastic with limited or no air flow
- Concrete roads
- Liquid Fill (DaraFill® Applications)
- Applications using Sinta™ M (formerly Grace MicroFibers™)
- Manufacture of concrete blocks, bricks, pavers and roof tiles

Compatibility

Daracel 46 is compatible with all Portland cement systems, including fly ash, slag and limestone blends.

It is also compatible with all known admixture types currently available, but should be added to the mix separately, and not premixed prior to addition.

Addition Rates

Daracel 46 addition rate will normally range from 1,000 – 3,000mL / 100kg total cementitious, depending on mix properties required. In order to determine the optimum dose rate of Daracel 46, either on its own or in conjunction with other GCP admixtures, trials are recommended.

Method of Use

Daracel 46 is a liquid admixture supplied ready to use. It can be added to the mix at the same point as the mix water.

Daracel 46 (mL / 100kg)	NIL	1000	2000	3000
Initial Set (10 °C) (Hr Min)	9.5	8.0	7.0	6.0

Concrete specification

- >300kg / m³ cement
- >100mm slump
- >500mls / 100kg total cementitious MIRA[®] 79N included in all mixes

Dispensing Equipment

Please contact your local GCP representative for further information regarding the dispensing equipment for this product.

Chloride Ion

Daracel 46 contains a low level of chloride ion.

A dose of 1,000mL / 100kg total cementitious content will contribute 140 – 170g / L.

Daracel 46 is not recommended in post-tensioned or pre-tensioned concrete, reinforced concrete with inadequate cover and concrete near marine environments.

Daraset[®] AC50 (a non-chloride accelerator) is available for these applications.

Packaging and Storage

Daracel 46 is delivered in 205L drums, 1,000L bulk boxes and by metered bulk tanker. Shelf life is minimum 12 months.

Safety Information

A Material Safety Data Sheet is available on request. Daracel 46 is not flammable.

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