



# Sikacrete® Powerpack

## Admixture for Ultra-High Performance Concrete

### Technical Data Sheet

#### DESCRIPTION

**Sikacrete Powerpack** is a modified concrete additive in powder form based on **Sika® Silica Fume Technology**. It is a formulated blend of highly reactive pozzolanic materials and stabilisers designed to produce high quality concrete. **Sikacrete Powerpack** is particularly suitable for chemical resistance, exposure to aggressive atmospheres, abrasion and high strength mixes (in excess of 100 N/mm<sup>2</sup>). It should always be used in conjunction with a superplasticiser from the Sikament range.

#### USES

Concrete exposed to aggressive liquids:–

- \* Farm and food processing industries: silos, floors etc
- \* Chemical industries: floors, chemical fertiliser storage etc
- \* Service Stations: oils, fuels, washing areas etc
- \* Sewage treatment plants: structures, sewers, etc
- \* Foundations: waterproofing structures etc

Concrete exposed to aggressive atmospheres:

- \* Marine constructions
- \* Concrete exposed to air pollution (urban and industrial areas)

Concrete exposed to erosion and abrasion:–

- \* Construction of culverts – dams – concrete subject to heavy traffic or wear and tear

#### ADVANTAGES

**Sikacrete Powerpack** improves wet properties of the concrete, such as cohesion, bond and water efficiency.

In the set concrete the highly active pozzolanic material reacts with the free lime produced by the hydration of the cement to improve strength, density and durability of the concrete.

**Sikacrete Powerpack** will provide the following benefits:–

- \* Increased early strength
- \* Increased final strength
- \* Increased permeability to liquids
- \* Increased impermeability to gases
- \* Reduced chloride penetration
- \* Reduced alkali silica reaction in aggregates
- \* Increased resistance to freeze/thaw cycle
- \* Increased resistance to abrasion

#### Technical Data (typical)

<b>Form:</b>	Powder
<b>Colour:</b>	Dark Grey
<b>Air Entrainment:</b>	Negligible
<b>Chloride Content % w/w:</b>	Nil
<b>Compatibility:</b>	All cement types

All above values are approximate.



## METHOD OF USE

**Sikacrete Powerpack** will only enhance durability if a minimum cement content of 350 kg/m<sup>3</sup> is used. The w/c ratio should not exceed 0.45. If necessary further dosage of superplasticisers can be added. In such cases trials should always be made before full scale production is commenced.

## IMPORTANT CONSIDERATIONS

Concrete with **Sikacrete Powerpack** will not bleed and is, as such, vulnerable to surface water loss. Proper curing is essential.

## DOSAGE

The addition rate of **Sikacrete Powerpack** is generally between 5 and 20% by weight of cement.

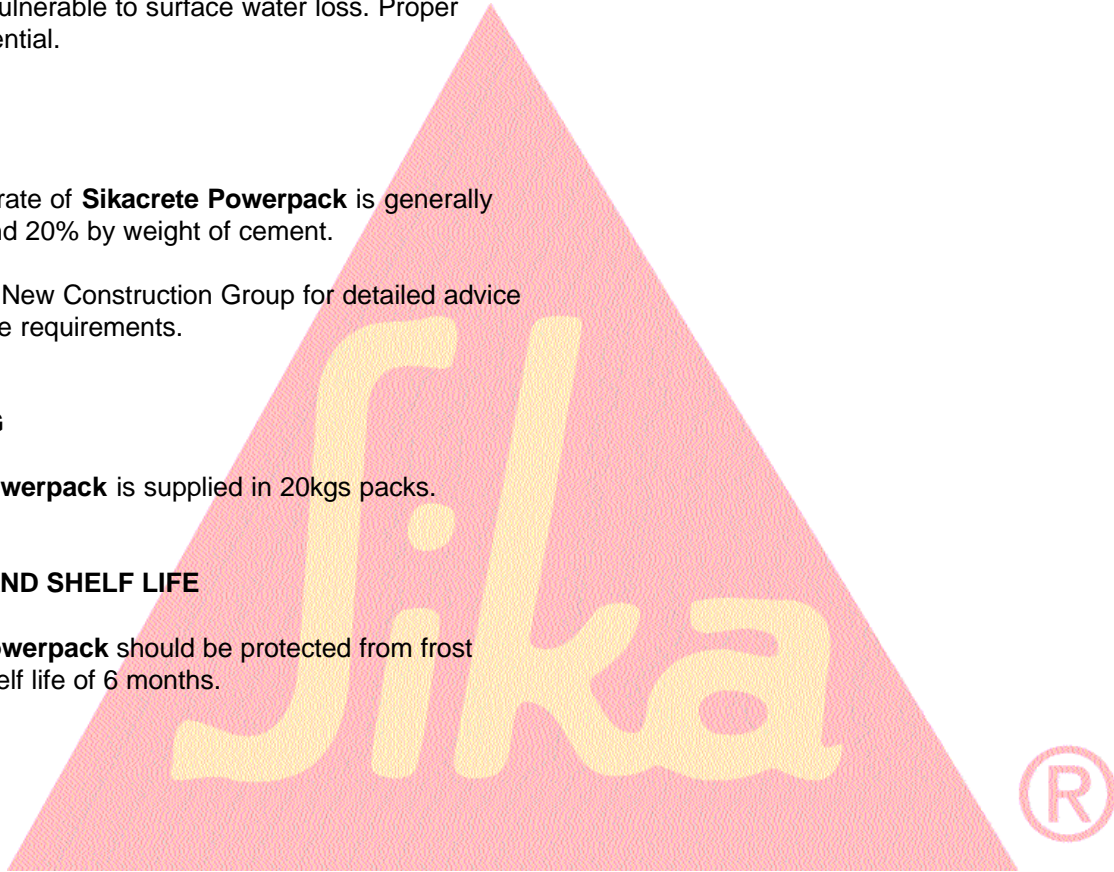
Contact Sika New Construction Group for detailed advice on the dosage requirements.

## PACKAGING

**Sikacrete Powerpack** is supplied in 20kgs packs.

## STORAGE AND SHELF LIFE

**Sikacrete Powerpack** should be protected from frost and has a shelf life of 6 months.



### Handling Precautions

Sika products are generally harmless provided that certain precautions normally taken when handling chemicals are observed. The materials must not, for instance, be allowed to come in contact with foodstuffs or food utensils and measures should also be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The use of protective clothing, goggles, barrier creams and rubber gloves is required. The skin should be thoroughly cleaned at the end of each working period either by washing with soap and warm water or by using a resin-removing cream - the use of powerful solvents is to be avoided. Disposable paper towels - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended. In case of accidental eye or mouth contact, flush with water - consult a doctor immediately. Health and Safety information on Sika Products is available and we strongly advise that this is read prior to their use. Sika products are for professional use and should be stored in sealed containers away from the reach of children.

### Important Note

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

**Please consult our Technical Sales Department for further information**

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