

# TECHNICAL DATA

Revision Date 01/2008

## SPRAYCRETE SUMMER - WINTER

### Product Codes

ACR18(S) ACR19 (W)  
Packaging listed overleaf

### Description

Spraycrete is a pre-packed product designed for application by spray to concrete, brick and masonry structures. The product mix design incorporates a unique blend of fine Portland, blast furnace and microsilica cements, quality graded sands and aggregates, an acrylic co-polymer powder and a synergistic blend of admixtures. The product, when mixed with water, produces a shrinkage compensated, homogenous sprayed concrete which is non-slumping, strong bonding and has low permeability. The concrete is dry sprayed with minimal rebound. Spraycrete is packaged in 25kg, durable, moisture resistant bags ready for loading into spray application plant.

The Spraycrete formulation is specially designed to the Department of Transport Highways and Traffic Standard BD27/86 pt 5.

The sprayed product is thixotropic, non-slumping and set accelerated which gives high build with minimal rebound. The inclusion of microsilica and acrylic polymer produces an applied product which is strong bonding, has low permeability and is long term durable.

Spraycrete is shrinkage compensated and uses low alkali cements giving an equivalent  $\text{Na}_2\text{O}$  content of below  $3.0\text{kg/m}^3$ . In addition the sand aggregates used are of the unreactive type giving a product which is safe from ASR attack.

The product is chloride free and can be safely used in contact with reinforcing steel.

Two grades of Spraycrete are available for Summer and Winter use.

**Uses include:** Large scale and rapid repairs to concrete, masonry and brick structures  
Water tanks and reservoirs  
Extension sections on existing structures  
Protective overlay in mechanical and chemically aggressive environments

**Examples include:** Marine defences, tunnels, culverts and moving water situations.  
Containers of brine and fertiliser  
Sewerage tanks

### Standards

Spraycrete has been tested in accordance with the appropriate parts of the following standards:

B.S. 1881 B.S. 4550 B.S. 4551  
ASTM C827 UASEC CRD C39

### Specification Outline

Shotcreting works shall be carried out using Spraycrete as manufactured by Tecroc Products Ltd. The product must be stored, handled and used strictly in accordance with the manufacturer's instructions.

### Quality Assurance

Tecroc Products Ltd is a firm of Assessed Capability. The Company's quality system conforms to BS EN ISO 9001:2000 and is assessed by SGS Ltd Systems and Services Certification.

### Typical Concrete Properties @ 20 °C

**Water content 12% by weight**

**Added at the nozzle**

**Compressive Strength Tested To BS 1881**

1Day	3 Days	7 Days	28 Days
20N/mm <sup>2</sup>	35N/mm <sup>2</sup>	45N/mm <sup>2</sup>	60N/mm <sup>2</sup>

**Consistency** Stiff concrete

**Surface finishing life**  
30 minutes

**Setting times** Initial 40 minutes  
**To BS 4550** Final 60 minutes

**Volume stability** Non shrink to ASTM C827

**Bond strength**  
**To BS1881** 2.4N/mm<sup>2</sup>

**Compressive modulus**  
24kN/mm<sup>2</sup>

**Coefficient of thermal expansion**  
**To UASEC CRD C39**  
 $11.1 \times 10^{-6} \text{p } ^\circ\text{C}$

**Water permeability**  
 $2.4 \times 10^{-15} \text{m/s}$

**Chloride ion diffusion**  
 $2.3 \times 10^{-13} \text{m}^2/\text{s}$

**Resistivity** 9.4 kohm.cm

**Density** 2210kg/m<sup>3</sup>

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Grouts



Structural Support Mortars



Concrete Repair Products



Construction Adhesives



Resin Et Cementitious Anchors



Highway Products



Coatings



Waterproofing



Ground Engineering

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## Instructions For Use

**Preparation**

Correct and proper preparation of the substrate is essential. Remove all contamination and weak material from the surface to produce a strong, sound substrate with a good mechanical key. Any steel reinforcing must be carefully prepared.

Remove any dust and debris from the surface to be sprayed. If possible, thoroughly wash, and soak the substrate for several hours before applying the material. Remove any standing water prior to application. If prior soaking is not possible use Acrylic Latex as a priming coat. The Acrylic Latex should be allowed to go tacky before application of the Spraycrete.

**Mixing**

No mixing is required as Spraycrete is applied using a dry delivery spraying process. The "mixing" water is introduced at the spray nozzle.

**Placing**

Spraycrete is placed using proprietary construction plant. Loading and application should be carried out in accordance with the instructions given by the plant manufacturer.

**Curing**

Spraycrete is cured using Polycure. As soon as the concrete is in place, immediately spray the curing agent at the rate of 10m<sup>2</sup>/litre. During adverse weather conditions, such as high temperatures and drying winds, a second coat should be applied as soon as the first coat has dried.

**Precautions****Health and Safety**

Spraycrete is alkaline when mixed with water and should not come into contact with skin or eyes. Avoid inhalation of dust during mixing and wear safety glasses, dust mask and gloves. If skin contact occurs wash thoroughly with clean water. Should eye contact occur rinse immediately with plenty of clean water and seek medical advice.

Full health and safety data are given in Product Safety Data Sheet.

**Fire**

Spraycrete is non-flammable

**Yield**

Each 25kg bag of Spraycrete will yield approximately 12.25 litres of mixed material.

**Storage And Shelf Life**

Spraycrete will have a storage life of 6 months in unopened bags when kept in dry conditions at a temperature between 5°C and 45°C. Storage at higher temperatures or high humidity may reduce shelf life.

**Packaging And Ordering**

Spraycrete is supplied in:

25kg valvesack bags Summer Grade

Product Code ACR18(S)

25kg valvesack bags Winter Grade

Product Code ACR19(W)

Polycure is supplied in:

5 litre polybottles

Product Code

AF03

For further information and sales please contact your local Tecroc Products office as listed below.

Tecroc Products Ltd products are guaranteed against defective materials and manufacture. Products are sold subject to the Tecroc Products Ltd Terms and Conditions of Sale, copies of which are forwarded on invoice and are available on request. Tecroc Products Ltd endeavours to ensure that the above data and any further advice is correct, however, it cannot accept any direct or indirect liability for the use of its products as such usage is beyond its control.

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