



DESCRIPTION

POLYCRETE is a liquid, acrylic thermoplastic copolymer dispersion. It is used to modify cementitious mixes significantly increasing bond, tensile and flexural strengths, while improving resistance to abrasion, chemical attack, water and vapor transmission. Complies with PCI MNL 130 for use with GRC also suitable for use with gypsum based products to improve strength and water resistance, especially in GRG products.



APPLICATION AREAS

- Heavy duty troweled floors.
- High strength bonding of concrete.
- Curing aid and reinforcing polymer for glass reinforced concrete.
- Waterproof renders for tiling and brickwork.
- Resurfacing old concrete or granolithic floors.
- Self levelling floor screeds.
- High strength repair and patching mixes.
- Mortar lining of areas subject to abrasive or mild chemical action, effluent ducts, tanks etc.
- Waterproof slurry coats to level and seal walls, floors and tanks.
- Improving tile grouts.



FEATURES & BENEFITS

- Improves adhesive, compressive and tensile strengths of cementitious mixes.
- Greatly increased impact and abrasion resistance.
- Self levelling, flowing consistency mixes can be produced to enable placement under difficult conditions.
- Mixes containing POLYCRETE have low permeability, and are suitable for waterproof sealing and lining of tanks, pools etc.
- Chemical resistance to oils, greases, salt solutions and mild acids is very good.



TECHNICAL INFORMATION

Appearance	White liquid
Specific Gravity	1.03 at 20°C
Shelf Life	9 months in sealed containers at 20°C
VOC Content	Nil



METHOD OF APPLICATION

SURFACE PREPARATION

In any situations, the surface to be treated or coated, must be clean, sound and free from dirt, dust and other loose particles. All oil and grease contaminants must be removed. Grinding or scrubbing machines should be used for large areas.

It is recommended that edges of concrete repair areas be squared off/cut back to allow for maximum adhesion and structural soundness of the repair. Surface preparation of exposed steel should ensure that the surface to be coated is rust-free before application.

Concrete surfaces should be saturated with water before application, to minimize absorption into the substrate. Free standing water must be removed.

Alternatively, if the substrate is porous and particularly for flooring applications, it is recommended that the surface be sealed with POLYCRETE, diluted with 2 parts of water.

In majority of applications using wet mixes, bond coats are not required, but for semi-dry mortars, a bonding coat should be used.

Never allow bond coats to dry before applying the mortar screed, render or repair material. If this happens then scratch mark the coating and apply a further wet bond coat.

DOSAGE

POLYCRETE can be used neat or diluted with water. Levels quoted in the 'Application' section are given only as a guide. Dosage will vary depending upon the application.

APPLICATION

1. As a primer for self levelling flooring compounds

Objective: To seal concrete to prevent air bubbles in the flooring caused by air release from the base concrete.
Mix design: Dilute 1: 1 with water and brush/roller into floor allow to dry before flooring application.

2. As a bond coat

Objective: Bond/adhesion coat for concrete, brick, masonry surfaces and steel rebar, to accept cementitious renders, screeds or repair mixes. Waterproof slurry coating for concrete surfaces.

Mix design:

Cement, OPC/SRC	50kg
POLYCRETE	8 litres
Water	8 liters
Coverage	1-2 kg/m ² equivalent to 0.4 litres POLYCRETE per m ²
Bond Strength slant shear method BS 6319 Part 4	25.5N.mm ²

3. Waterproofing protective coat

Objective: Waterproof slurry render for sealing basements, tunnels, reservoir pipes, and areas where water seepage is undesirable. Protection of stone and metals against stains and corrosion.

Mix design:

POLYCRETE	20 litres
Coverage	2-3kg/m ² equivalent to 0.6 litres POLYCRETE per m ²
Tensile Strength	4 N/mm ²
Bond Strength slant shear method BS 6920, Part 4	24.0N/mm ²
Flexural Strength - BS 6319 Part 3	11.0N/mm ²
Compressive Strength - BS 6319 Part 2	50.2N/mm ²
Moisture Permeability Flux	205 g/m ² /deg

4. Concrete/ Flooring Repairs

Objective: Troweled repair mortars of plastic consistency to provide impact and abrasion resistant patching to flooring, stairway, walls, columns etc.

Mix design:

Floor/Repair Thickness	15-25mm	10-20mm
Cement, OPC	50kg	50kg
Sand Grade M	100kg	100kg
Gravel 3mm	100kg	50kg
POLYCRETE	15 litres	10 litres
Water	7 litres	10 litres

Abrasion and Impact Resistance:	High	Medium
Compressive Strength - BS 6319 Part 2	65.0N/mm ²	67.3N/mm ²
Flexural Strength - BS 6319 Part 3	12.7N/mm ²	13.0N/mm ²

5. Self Levelling Floors

Objective: Thin bed mortar screed of medium duty, laid at flowing consistency to provide seamless, abrasion and mild chemical resistant flooring.

Mix design:

Cement, OPC	50kg
Sand, 0.3mm-0.6mm	50kg
Sand, 1mm-2mm	50kg
POLYCRETE	20 litres
Water	2 litres
Floor Thickness:	10mm-25mm
Abrasion and Impact Resistance:	Medium-High
Compressive Strength - BS 6319 Part 2	68.0N/mm ²
Flexural Strength - BS 6319 Part 3	15.0N/mm ²

6. Adhesive Mortars

Objective: Trowelable or putty-like adhesive mortar suitable for surfacing and fixing, eg slip bricks.

Mix design:

Cement, OPC/SRC	50kg
Sand, 0-0.3mm	50kg
POLYCRETE	20 litres
Coverage	4-6kg/m ² equivalent to 0.8 litres POLYCRETE per m ²
Bond Strength - BS 6319, Part 4	33.2N/mm ²
Compressive Strength - BS 6319 Part 2	53.5N/mm ²
Flexural Strength - BS 6319 Part 3	14.5N/mm ²

7. Polymer Concrete

Objective: Production of flooring grade wet concrete mixes with improved adhesion and flexural strength – without excessive air entrainment.

Mix Design: To BS 5075, Part 2

	Mix 1 – Control	Mix 2 – POLYCRETE
Dosage	Nil	20% by weight of cement
Water/Cement Ratio	0.70	0.53
Initial Slump	90mm	160mm
Air Content	1.8%	2.8%
Compressive Strength – BS 6319 Part 2		
At 3 days	17.5N/mm ²	25.5N/mm ²
At 7 days	24.5N/mm ²	34.0N/mm ²
At 28 days	32.0N/mm ²	45.5N/mm ²
Flexural Strength – BS 6319 Part 3	3.7N/mm ²	6.9N/mm ²

8. Polymer Screeds

Objective: Troweled polymer screed of heavy duty and low permeability, laid at 10mm-25mm thickness.

Mix Design:

Cement, OPC	50kg
Silver Sand Grade M	100kg
Granite Chips, 3mm	125kg
POLYCRETE	9 litres
Water	12 litres
Abrasion Resistance	High
Compressive Strength – BS 6319 Part 2	55.0N/mm ²
Flexural Strength – BS6319 Part 3	10.0N/mm ²

CURING

Thorough curing is essential on all exposed surfaces, particularly in dry or windy conditions. One or two coats of Sealers will provide protection for all newly

laid concretes. Other curing methods such as water misting, polythene sheeting and similar techniques are also suitable.

PACKAGING / STORAGE

POLYCRETE is supplied in 20 litre and 210 litres, non-returnable containers.

POLYCRETE is a stable, non-flammable product. Store in closed containers, at temperatures of 10 C – 40 C for maximum storage life.

HEALTH & SAFETY

While POLYCRETE is nontoxic, skin and eye contact should be avoided. Avoid contact with eyes, if such contact occurs irrigate with water for 20 minutes and seek medical advice. If mistakenly ingested, drink plenty of clean water and seek medical advice.

TECHNICAL SERVICE

Application of the POLYCRETE should be done according to the procedure mentioned in this technical data sheet. IKAN INC will not be held responsible for any claim arising out of non-performance of the product due to incorrect application procedure or usage of product for non- recommended purpose. Please contact IKAN INC. technical team for more details on application of POLYCRETE for any purpose other than mentioned above or on surfaces with other special construction additives.

DISCLAIMER

To the best of our knowledge and belief, this information is true and accurate, but as conditions of use and any labor involved are beyond our control, the end user must satisfy himself by prior testing that the product is suitable for his specific application, and no responsibility can be accepted, or any warranty given by our Representatives, Agents or Distributors. Products are sold subject to our Standard Conditions of Sale and the end user should ensure that he has consulted our latest literature.