



BCR Ltd. UK

BUILDING CHEMICAL RANGE

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BCR THIOSEAL 4254

DESCRIPTION

BCR THIOSEAL is a two component polysulphide polymer sealant which when mixed cures to form an elastic rubber like seal. It is available in gun and pouring grades. Use of primer is essential.

STANDARDS SPECIFICATION

ISO 11600 : 1993;

British Standard BS 4254 – 1983;

British Standard BS 6920 – 1988 (gun grade grey);

Us Federal Specification TT-S-00227E-November 1969 (amended 1970);

ASA 1161 – 1960;

Water Research Council – Potable Water Approval Ref: 9305508.

ADVANTAGES

High movement accommodation.

Wide range of colours.

Gun and pouring grades for vertical, overhead and horizontal joints.

Non-biodegradable – ideal for use in sewage plants and exposed atmospheric conditions.

Good chemical resistance – safe to use in environmentally sensitive conditions.

Non Toxic – Water Research Council approved for use in contact with potable water.

TYPICAL AREAS OF USE

Sealing of expansion joints in most structures.

Sealing of glazed units, curtain walling systems and similar structures where thermal movement can be high and large variations in wind pressure are expected.

In difficult situations such as sewage farms, reservoirs and swimming pools, where non-biodegradation of sealant is an essential factor.

Bridge decks and associated abutments subjects to very large movement and vibration.

Expansion joints in concrete roads, tiled walkways, roofs, warehouses, or any other concrete paved areas subject to traffic.

In water retaining structures such as water tanks and reservoirs, suitable for use when in contact with potable water, WRC byelaws Scheme – Approved Product.

COVERAGE / USAGE RATES

BCR THIOSEAL 4254: Length of joint filled in meters

Depth of Joint (mm)	Width of joint (mm)					
	10	15	20	25	30	40
10	10.0	6.70	5.0	-	-	-
15	-	4.45	3.33	2.67	2.20	-
20	-	-	2.50	2.00	1.70	1.25
25	-	-	-	1.60	1.30	1.10

BCR PRIMER P: 1 LITER TO 50 LITRES OF BCR THIOSEAL 4245

BCR PRIMER N: 1 LITER TO 180 LITRES OF BCR THIOSEAL 4254

BCR EPOXY FLOOR PATCH / PRIMER: 1 LITER TO 7 LITERS OF THIOSEAL 4254.

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STORAGE

12 months in original containers in dry conditions. Storage temperature range +5 to +27 degree centigrade.

TECHNICAL DATA:

35% Movement Accommodation Factor (M.A.F) BS 6093:1981

Joint Size: Width: 5-50mm, Depth: 5mm min. Trafficked Joints: 10mm minimum. Optimum width/depth ratio: 2:1

Application Temperature Range: +4 deg. C to +50 deg. C

Service Temperature Range: -40 deg. to +80 deg.

Pot Life at 25 deg. C. : Gun Grade: 3 to 4 hours: pouring grade: 2 to 3 hours

Cure Time at 25 deg. C.: Initial set within 24 hours. Full cure within 7 days.

Tensile Strength: 156N at 150% extension (zero area of failure)

Elongation at Break: Over 500%

Solids Contents: 100%

Specific Gravity: Gun grade – 1.6kg/litre; Pouring Grade – 1.4kg/litre

Bleeding /Staining: No staining after 14 days.

Hardness Shore 'A', 25 deg: Gun Grade : 18 to 25; Pouring Grade: 18 to 25.

Contact with potable water: Water Research Council Approval No.9305508

Hydrochloric Acid 10%		U	U	U	UD
Nitric Acid 10%		U	A	A	A
Sulphuric Acid 10%	U	U	U	LA	
Acetic Acid 5%		U	U	U	UD
Citric Acid 5%		U	U	U	UD
Lactic Acid 5%		U	U	U	UD
Ammonium Hydroxide 5%	U	U	U	U	
Caustic Soda 30%	U	U	U	LA	
Bleach 5%	U	U	U	UD	
Brine	U	U	U	U	
Sugar Solution		U	U	U	U
Detergents	U	U	U	U	
Hydraulic Fluids		U	U	U	LA
Iso Propyl Alcohol	U	U	U	U	
Linseed Oil	U	U	U	U	
Lemonate Concentrate		U	U	U	UD
Water		U	U	U	U
Petrol & Jet Fluids	U	U	U	U	
Chlorinated Solvents	U	LA	A	A	
Aromatic Solvents	U	LA	A	A	

Key: U= unaffected; UD= discoloured only; A= attacked;

L= slightly attacked.

APPLICATION PROCESS:

Before Priming thorough preparation is essential. The joint must be completely dry and free from all traces of dirt, dust, grease, previous sealants (if any) and any other foreign matter. Cleaning can be carried out by mechanical wire brushing, angle grinding or sand/grit blasting. All joints should be blown out with clean, dry, oil-free compressed air to remove loose matter. When re-sealing old joint, prepare by use of a mechanical concrete saw or similar to obtain a clean, contamination-free substrate. In all cases a clean bonding surface must be obtained. Following preparation, place into the base of the bond breaker or back up material such as BCR SEALROD to form the correct cross section for the joint sealant form bonding to the base of the joint.

The joint can then be primed with the appropriate primer, care being taken to ensure complete coverage of joint sides.

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PRIMER

Glazed, metallic or GRP Primer N,
Concrete, GRC and other cementitious materials, timber, epoxy nosings, etc
Primer OP.

After priming allow 20 minutes for the solvent to evaporate. If application of BCR THIOSEAL 4254 is delayed for more than two hours after priming, the joints should then be re-primed.

(Not subject to percolating water): Apply EPOXY FLOOR PATCH / PRIMER, this primer is supplied in two tins marked A&B. These must be thoroughly mixed together and applied by brush as soon as possible after mixing. Care must be taken to ensure a 100% coating/membrane is formed over the prepared substrate before applying the sealant. Pot life is approximately half an hour at 20 degrees centigrade and treated surfaces will remain tacky for up to 1 hour, depending on temperature. Application of BCR THIOSEAL 4254 must be carried out whilst this primer is still tacky.

Apply two coats of EPOXY FLOOR PATCH/PRIMER (as described above) allowing first coat to become tough dry, and apply BCR THIOSEAL 4254 whilst the second coat is still tacky

N.B. For application to oily woods and all plastic surfaces refer to TECHNICAL SERVICES DEPARTMENT. It is important that for optimum performance of BCR THIOSEAL 4254 the correct primer is used.

MIXING AND APPLICATION OF SEALANT

Thoroughly stir the two components with a slow speed mechanical stirrer (e.g. a slow speed mixer drill at 300 – 500 r.p.m) until a homogenous paste is obtained. Take care not to stir air into the mix.

Application can be made by pouring, gun or spatula, according to the grade used. It is advisable to prime first and then mix the BCR THIOSEAL 4254. Ensure complete contact between the sealant and the substrate and avoid air pockets.

Low temperatures retard cure, with the added liability of atmospheric condensation within the joint, resulting in a spoiled bond.

The edges of the joint may be kept clean and to a neat line by use of masking tape applied prior to priming. This masking will protect the surfaces adjacent to the joint and should be removed after application of BCR THIOSEAL 2 – 3 M² per liter per coat depending on substrate porosity, and before it has set. The surface of the joint may at the same time be smoothed with a clean knife or similar tool moistened with a little detergent solution, pouring grade will self level and should not require any finishing.

CLEANING OF TOOLS

Tools should be cleaned with BCR CLEANING SOLVENT as soon as possible after use.

Packing

BCR THIOSEAL 4254: GUN GRADE 2.5 litre tin. Pouring grade: 4.5 litre pack

BCR PRIMER P: 250ml and 1 litre tins.

BCR PRIMER N: 250ml tin.

BCR EPOXY FLOOR PATCH/PRIMER: 250ml, 500ml and 1 litre packs.

HEALTH & SAFETY

BCR THIOSEAL 4254 contains a manganese compound. It is harmful if swallowed and in contact with skin and eyes. Wash hands thoroughly with soap and water after use.

BCR PRIMER N contains xylene and is highly flammable, flash point 10 degrees centigrade. Harmful by inhalation. Do Not breathe fumes and keep away from sources of ignition.

BCR PRIMER P contains a moisture curing urethane and hydrocarbon solvent. Flammable, flash point 40 degrees centigrades. Harmful by inhalation if swallowed, and in contact with skin.

BCR EPOXY FLOOR PATCH/PRIMER contains liquid epoxy resin and a polyamine compound. Irritating to the eyes, skin and respiratory system. Do not breathe fumes. Harmful if taken internally.

N.B. It is advisable to wear gloves and eye/face protection when applying primers, especially in confined areas.

RELATED PRODUCTS:

ALPEX JOINT Fil bitumen impregnated filler board in thicknesses of 10, 13, 19 and 25mm

SEALROD closed cell polyethylene backer rods in 6, 10, 15, 20, 25, 30 40 and 50mm diameters.

CELLFOAM AND CELL FOAM 100 closed cell polyethylene sheet: 2m x 1m, thickness 10, 15, 25, 25 mm

BARREL GUN

MIXING & FILLING EQUIPMENT.

CLEANING SOLVENT.