

Butyl-Nek

**Flexible Sealing Compound
For Pre-Cast Concrete Units**



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Flexible Sealing Compound For Pre-Cast Concrete Units



▲ Manhole joints sealed watertight..



▲ Softer compound for easier box culvert installation.



▲ Hanson box culverts in use at Heathrow Terminal 5 project.



Butyl-Nek flexible sealing compound provides a permanent watertight joint for pre-cast concrete units regardless of shape or size.

This easily compressible product is designed to completely seal and fill the annular space between pre-cast units.

Butyl-Nek associated products have a 50 year proven track record in the most extreme situations and specified and used by pre-casters and contractors worldwide.

Butyl-Nek meets and exceeds the requirements of the federal specifications: SS-S-210(210A0, AASHTO M-198B, and ASTM C-990-91

Chemical Composition

Hydrocarbon, by weight	ATSM D 4-80	55%
Inert Mineral Filler	AASHTO T111	45%
Volatile Matter	ASTM D 6-80	1.69%

Physical Properties

Specific Gravity @ 25C	ASTM D 71-84	1.331
Ductility @ 25C	ATSM D 113-85	6.0cm
Softening Point @ 25C	ASTM D 36-86	325 min
Penetration @ 25C	ASTM D 217-82	75
Flash Point	ASTM D 92-85	620C

Sag or Flow Resistance

In vertical position for 5 days at 57C	FS SS-S-210A sect. 4.5.3/ASTM C 990	No Visible Changes
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Chemical Resistance

30 days immersion @ room temperature in each of the following	FS SS-S-2120A sect. 3.6/ATSM C 990	
5% Solution of Caustic Potash		Complies
5% Solution of Hydrochloric Acid		Complies
5% Solution of Sulphuric Acid		Complies
Saturated Hydrogen Sulphide Solution		Complies

Compliances

Butyl-Nek meets the requirements of the following authorities:

Civil Engineering Specification for the Water Industry. 5th edition, WRc, 1998
 DOT Specification for Highway Works, HMSO, 1998
 BS EN 1917 (supersedes BS8005) sewerage
 BS 8301 (Building Drainage), 1985

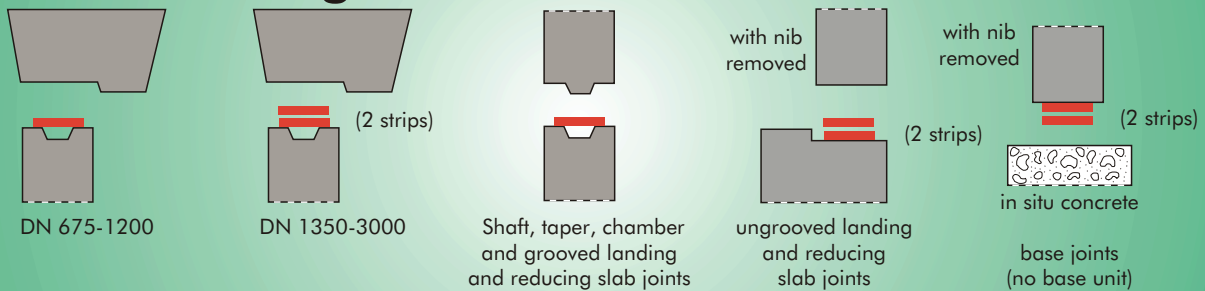
Butyl-Nek with watertight performance



1996 Hydrostatic pressure test complies with BS EN 1917 clause 4.3.4.2 watertightness of assembled units.

The assembly showed no leakage.

Tongue and Grooved Joints



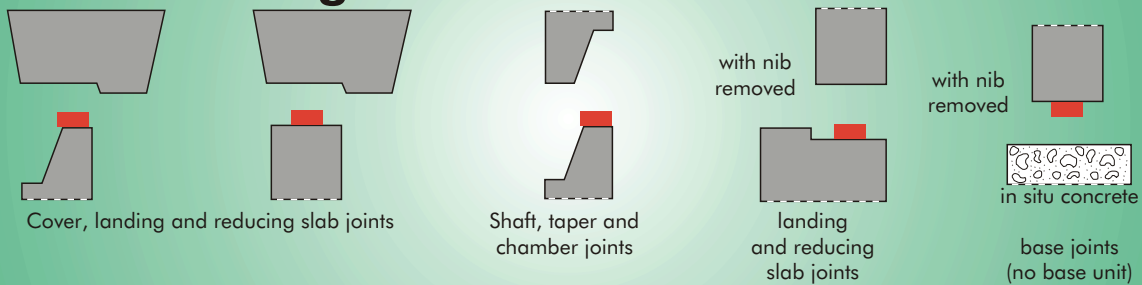
Manhole Joints

Sealant size	12mm x 60mm		12mm x 80mm				12mm x 120mm			
Unit nom. size (mm)	900	1050	1200	1350	1500	1800	2100	2400	2700	3000
Primer	5 litres/100m		5 litres/75m				5 litres/50m			

Inspection Chambers

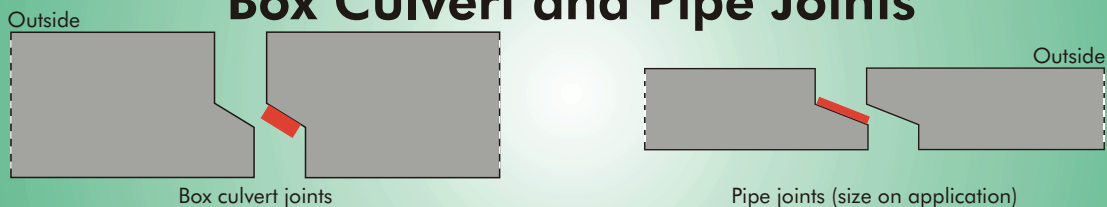
Sealant size (mm)	18mm x 18mm				22mm x 22mm	
Unit nom. size (mm)	600 x 450	750 x 600	1000 x 675	1200 x 750	1475 x 1025	
Primer	5 litre/120m					

Ogee or Rebated Joints



Sealant size	18mm x 18mm		22mm x 22mm		22mm x 30mm				25mm x 40mm			
Unit nom. size (mm)	675	750	900	1050	1200	1350	1500	1800	2100	2400	2700	2700
Primer	5 litres/120m				5 litres/90m				5 litres/60m			

Box Culvert and Pipe Joints



Sealant size	25mm x 40mm	
Primer	5 litres per 60m	

Butyl-Nek Sizes	Butyl-Nek Length	Lengths per Box
12mm x 60mm	6 mtr	4
12mm x 80mm	6 mtr	3
12mm x 120mm	6 mtr	2
18mm x 18mm	4.5 mtr	8
22mm x 22mm	4.5 mtr	8
22mm x 30mm	4.5 mtr	5
25mm x 40mm	4 mtr	4

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Primer

Butyl-Nek Emulsion Primer is a thin penetrating solution of premium, mineral colloid asphalt emulsion. The primer readily penetrates the pores and seals dusty concrete surfaces to provide an optimal surface for the adhesion and bonding of Butyl-Nek flexible sealing compound for precast concrete products. Butyl-Nek Emulsion Primer is odourless, environmentally safe and non-flammable in the wet state. Primer may be applied by brush or spray. Butyl-Nek Emulsion Primer may be applied on damp or "green" concrete surfaces.

Solvent Primer is available for conditions where Emulsion Primer cannot be applied.

Both Emulsion and Solvent Primers are available in 5 and 25 litre containers.



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Instructions for use

Application:

Wire brush all loose dirt and particles from the joint surface to be primed. Joint surface should be free from dirt, dust, form oils, release agents and curing compounds. Brush or spray apply Butyl-Nek Emulsion Primer around entire joint circumference and allow to dry thoroughly. Butyl-Nek Emulsion Primer may be applied at the precast manufacturing plant or on site.

BUTYL-NEK WILL NOT ADHERE TO WET PRIMER.

Drying Time:

Butyl-Nek Emulsion Primer dries in approximately 1 to 3 hours, in good weather conditions. Drying may take up to 24 hours depending on thickness, temperature and condition of surface. Protect from rain or frost until fully dried.

Vertical Application:

Applying primer is recommended but not necessary. If applied ensure primer is completely dry. Unroll Butyl-Nek coil whilst pressing firmly to dry, clean joint surface. Leave plastic film in place to protect Butyl-Nek from contaminants until ready to join units. Form a continuous joint, attach Butyl-Nek end to end. Do not stretch Butyl-Nek. Remove plastic film from Butyl-Nek and align next unit. Each unit is homed by its own weight, compressing Butyl-Nek to tightly pack and immediately seal the joint. After the last section is set and fully homed the installation is complete. Backfilling and compaction can commence immediately.

Horizontal Application:

Applying primer is recommended. Ensure that unit jointing can be accomplished without getting mud, silt, gravel or other foreign material into the joint. Generally the trench should be de-watered and have a firm base. Unroll Butyl-Nek coil whilst pressing firmly to dry, clean joint surface. Leave plastic film in place to protect Butyl-Nek from contaminants until ready to join units. Form a continuous joint, attach Butyl-Nek end to end. Do not stretch Butyl-Nek. Remove plastic film from Butyl-Nek and align next unit. The unit should be partially supported to maintain concentricity until the Butyl-Nek is fully compressed within the annular joint space. Backfilling and compaction can begin immediately after jointing is complete.

