

# CHEMFIT BACKING FILLER

**Extruded Polyethylene Closed-Cell Foam, Joint Filler Available in Boards and Strips – For Use as Backing Material for Cold Applied Joints and as Joint Filler**

## PRODUCT DESCRIPTION

**ChemFit Backing Filler** is an extruded, closed-cell polyethylene foam joint filler and backing material, available in boards and strips. The closed-cell structure is non-absorbent, rot-proof, and chemically inert, providing excellent resistance to water, most chemicals, and biological attack. The material acts as a bond breaker (preventing three-sided adhesion) when used as a backing for cold-applied sealants, and serves as a permanent, highly elastic joint filler where specified.

## PRIMARY APPLICATIONS

**ChemFit Backing Filler** is recommended for use in conditions such as:

- Backing material (bond breaker) for cold applied joint sealants to ensure correct depth and prevent three-sided adhesion
- Permanent joint filler in expansion, contraction, isolation, and construction joints in concrete and masonry structures
- Gap filler for floor and wall expansion joints, roadways, bridges, and precast concrete panels
- Suitable for use in water retaining structures, wastewater treatment facilities, and applications requiring chemical resistance
- Used as a bond breaker over bituminous or polystyrene fillers that may be incompatible with sealants

## KEY FEATURES AND BENEFITS

- **Closed-cell polyethylene foam** – Non-absorbent, impervious to water and moisture ingress; rot-proof and resistant to fungal/insect attack
- **Excellent compressibility** – Highly flexible with superior recovery properties after compression
- **Bond breaker function** – Prevents adhesion to the joint base, eliminating three-sided adhesion and reducing stress on sealant during joint movement
- **Compatible with all cold-applied sealants** – Non-staining, non-reactive; works with polyurethane, polysulfide, silicone, acrylic, butyl, and hybrid sealants
- **Available in boards and strips** – Variety of thicknesses and widths; can be supplied with tear-off strip for easy sealant well formation
- **Easy to install** – Lightweight; can be cut on site using a sharp knife; compressible to fit irregular joint profiles
- **Good temperature resistance** – Service temperature range typically -40°C to +95°C

## PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Material	Extruded closed-cell polyethylene foam
Cell structure	Closed-cell (non-absorbent)
Density	25 – 60 kg/m <sup>3</sup> (depending on grade)
Water absorption	< 1% by volume (typically < 0.8%)
Compression resistance (25% compression)	22 – 68 kPa
Compression resistance (50% compression)	100 – 170 kPa
Compression set (24 hours)	< 10%
Tensile strength	0.2 – 0.6 MPa (200 – 600 kPa)
Elongation at break	70 – 110%
Elastic recovery	> 70% (typically > 90%)
Service temperature	-40°C to +90°C (continuous)
Thermal conductivity	~0.032 – 0.05 W/mK
Chemical resistance	Resists water, seawater, brine, dilute acids/alkalis, detergents, alcohols, fungi
Colour	Black, dark grey, or cream (depending on grade)

## DIMENSIONS AND AVAILABILITY

### Boards/Sheets:

- Thickness: 10 mm, 15 mm, 20 mm, 25 mm, 30 mm (other thicknesses available on request)
- Widths: Standard 1.0 m and 1.1 m
- Lengths: 1.0 m, 2.2 m, or as sheets

### Strips/Zip Rolls:

- Thickness: 10 mm, 15 mm, 20 mm, 25 mm
- Widths: 50 mm, 75 mm, 100 mm, 150 mm
- Length: 25 m rolls (typical)

### Backing Rod (Cord):

- Diameters: 6 mm, 10 mm, 15 mm, 20 mm, 25 mm, 30 mm, 40 mm, 50 mm, 60 mm

**NOTE:** For dimensions not listed above, contact ChemFit for availability.

## PACKAGING AND STORAGE

### Packaging:

- Available on demand in boards, strips, rolls, and cut pieces
- Contact ChemFit for specific packaging requirements

### Storage:

- Store in dry conditions, protected from direct sunlight and heat sources
- Cool, dry area preferred to maintain dimensional stability and performance
- Can be stored for extended periods without degradation when kept in original packaging

**Shelf life:** 5 years (typical) when stored properly

## APPLICATION GUIDELINES

### For Use as Backing Material (Bond Breaker):

- Joint must be clean, dry, and free from dust, debris, oil, grease, and loose particles
- Select backing filler diameter approximately 25% larger than joint width to ensure tight friction fit
- Using a blunt instrument (do not use sharp objects), install backing filler to depth recommended by sealant manufacturer (typically half the joint width for 2:1 width-to-depth ratio)
- Ensure backing filler is seated evenly without twisting, puncturing, or excessive compression
- For dynamic joints, ensure backing filler remains in contact with joint walls during movement
- Apply cold-applied sealant over installed backing filler according to sealant manufacturer's instructions

### For Use as Permanent Joint Filler:

- Position board or strip within joint space before or during concrete placement
- For precast applications: attach to concrete using compatible construction adhesive prior to erection
- Ensure joint filler is aligned to required depth; for joints requiring sealant cap, install filler to leave adequate well depth (typically 10-15 mm)
- For zip roll format: slit through 90% of thickness and tear off zip to form sealant well
- After concrete has cured, clean joint well and apply sealant as required

### Limitations:

- Do not install backing filler using sharp objects (may puncture foam and compromise bond breaker function)
- Avoid over-compressing the material as this may affect recovery properties
- Ensure compatibility with sealant; closed-cell polyethylene is compatible with all major cold-applied sealant types
- For joints subject to hydrocarbon exposure, verify chemical resistance prior to use

## HEALTH AND SAFETY

**ChemFit Backing Filler** is chemically inert and non-toxic under normal handling conditions. Cutting or abrasion may generate dust; use adequate ventilation and wear a dust mask if airborne particles are present. Avoid open flame. Use gloves and safety glasses when handling. Refer to the Safety Data Sheet for detailed information.

## CLEANING OF TOOLS

No special cleaning required. Backing filler is disposable. Joints should be cleaned of debris before installation.

## APPROVALS AND STANDARDS

- **ASTM C1330, Type C** – Cold-Applied Joint Sealant Backer Material (closed-cell polyethylene)
- **ASTM D5249, Type 3** – Polyethylene Backer Material for Cold-Applied Joint Sealants
- **ASTM D545 & D3575** – Recovery and compression testing for flexible cellular materials
- **ISO 1798** – Tensile strength and elongation testing
- **ISO 1856** – Compression set testing
- **AS/NZS 2170** – Approved for resistance to fungi and insect attack (food contact applications)
- **ISO 9001** – Quality management system certified
- Extruded polyethylene closed-cell foam joint filler available in boards and strips
- Suitable as backing material for cold applied joints and as permanent joint filler

## LEGAL NOTES

*All technical data provided in this Product Data Sheet is based on laboratory testing under controlled conditions. Actual field performance may vary due to differences in substrates, application methods, site conditions, and environmental factors. ChemFit makes no warranty of merchantability or fitness for a particular purpose. Users shall conduct their own trials to validate product suitability for the intended application. ChemFit reserves the right to modify product specifications without prior notice. For the most current documentation, request the latest Product Data Sheet and Safety Data Sheet from ChemFit.*

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