

FUERZA SEALPHIDE

2-PART POLYSULPHIDE JOINT SEALANT

FUERZA SEALPHIDE is a **high-performance, two-component polysulphide joint sealant** engineered to provide durable, elastomeric sealing for movement joints subjected to cyclic expansion and contraction. Upon curing, it forms a resilient, high-strength elastomeric seal exhibiting excellent adhesion and flexibility, with the capability to accommodate **joint movement of up to $\pm 30\%$** of the original joint width without compromising its sealing integrity.

FUERZA SEALPHIDE demonstrates outstanding resistance to environmental ageing and aggressive atmospheric conditions, including prolonged exposure to **rainfall, ultraviolet (UV) radiation, ozone, snow, temperature fluctuations, atmospheric pollutants, and industrial contaminants**. Its exceptional weathering stability enables the sealant to retain its mechanical properties, elasticity, and adhesion over extended service periods. Furthermore, the cured sealant maintains consistent physical performance across a broad service temperature range of **-20°C to $+70^{\circ}\text{C}$** , making it suitable for demanding indoor and outdoor construction applications.

FEATURES & BENEFITS:

- Rapid curing and early strength development, enabling accelerated return to service.
- Develops exceptional adhesive and cohesive bond strength across a wide range of construction substrates.
- Exhibits outstanding adhesion to diverse materials, including metallic surfaces, concrete, masonry, brickwork, and timber.
- Compatible with a wide variety of protective and decorative coating systems following complete cure.
- Provides excellent resistance to fungal and microbial growth and is suitable for applications involving contact with potable water.
- Offers superior resistance to water ingress, chemicals, and aggressive environmental exposure, ensuring long-term durability.
- ****Capable of accommodating high cyclic joint movement in accordance with the performance requirements of **ASTM C719**, while maintaining seal integrity.**

TECHNICAL INFORMATION

The following typical physical and mechanical properties are based on specimens cured for seven days under controlled laboratory conditions at 25°C and 50% relative humidity (RH).

Appearance:	Gun grade and pour grade
Type of cure:	Forced chemical cure
Pot life:	1-2 hours
Initial surface dry time:	4-6 hours
Mixing ratio by w/w:	85:15
Shore A hardness:	30-40 approx.
Tensile strength:	10-15 kg/cm ²
Elongation at break:	>500%
Chemical resistance:	to dilute acid, alkalis, oils, fuels etc.
Application temperature:	10°C - 55°C
Service temperature:	-20°C to $+70^{\circ}\text{C}$

SPECIFICATION COMPLIANCE:

FUERZA SEALPHIDE conforms to the performance requirements of BS 5212, BS 4254, and ASTM C920, ensuring compliance with internationally recognized standards for high-performance elastomeric polysulphide joint sealants.

APPLICATORY USES:

- Sealing of horizontal and vertical movement joints in walls and floor systems.
- Joint sealing and pointing of natural stone installations, including granite, sandstone, marble, GRC (Glass Reinforced Concrete), fiberglass, and other architectural panel systems.
- Weatherproof sealing of metal curtain wall systems and façade assemblies.
- Sealing of potable water reservoirs, tanks, and water-retaining structures.
- Bonding and sealing of façade, cladding, and architectural panel systems to a wide range of construction substrates.
- Sealing of construction, control, isolation, and expansion joints in concrete and masonry structures.
- High-performance sealing of concrete pavement joints in airport runways, taxiways, aprons, and other heavy-duty infrastructure applications.

DIRECTIONS FOR USE:

Surface Preparation:

Proper **substrate preparation** is essential to achieve optimum sealant performance, maximum adhesion, and long-term joint durability. Prior to application, all joint surfaces shall be clean, sound, dry, and free from dust, laitance, existing coatings, bituminous residues, curing compounds, mould release agents, oils, greases, loose particles, and any other bond-inhibiting contaminants. Surface preparation should be carried out by mechanical cleaning using a wire brush and abrasive emery paper to expose a clean, stable substrate. Residual dust and debris shall be completely removed using compressed air or a clean, dry brush. Any traces of oil, grease, or similar contaminants shall be eliminated by wiping the substrate with a clean cloth moistened with a suitable solvent, such as **xylene, toluene, or acetone**, immediately prior to sealant application to ensure optimum bond development.

Back-up material:

Prior to sealant application, a **compressible closed-cell backing material**, such as **polyethylene foam, polysulphide, neoprene, or butyl backer rod**, shall be installed within the joint to accurately control the sealant depth and maintain the specified width-to-depth ratio. The backing material provides a firm support during tooling, prevents three-sided adhesion, promotes the desired hourglass joint profile, and enhances the sealant's ability to accommodate cyclic movement while ensuring long-term sealing performance and durability.

Bond breaker installation:

A suitable **bond breaker tape**, such as **self-adhesive polyethylene tape**, shall be installed over the backing rod prior to sealant application to prevent adhesion of the sealant to the base of the joint. This ensures **two-sided adhesion**, eliminates undesirable three-sided bonding, and enables the cured sealant to accommodate cyclic expansion and contraction effectively while minimizing internal stress concentrations and enhancing long-term joint performance and durability.

Primer application:

Select an appropriate **primer system** based on the substrate type to maximize sealant adhesion and long-term joint performance. Apply **two uniform coats** of the selected primer by brush to the joint faces, maintaining an interval of approximately **30 minutes** between successive coats to ensure adequate solvent evaporation and primer film development.

- **Primer RDL 942:** Recommended for **porous substrates**, including concrete, masonry, timber, and other absorbent construction materials.
- **Primer RDL 947:** Recommended for **non-porous substrates**, including metals, glass, ceramics, and other dense, non-absorbent surfaces.

This priming procedure enhances interfacial adhesion, promotes durable bond formation, and improves the long-term performance of the sealant system under service conditions.

Coverage:

The theoretical coverage of **FUERZA SEALPHIDE** is determined by the dimensions of the joint and may be calculated using the following equation:

$$L = 660 / (W \times D)$$

Where:

L = Theoretical joint length (linear metres)

W = Joint width (mm)

D = Joint depth (mm)

Actual material consumption may vary depending on substrate condition, joint geometry, surface irregularities, and application techniques.

Primer-Consumption:

As a general guideline, **1 litre of primer** is sufficient for approximately **15 kg of FUERZA SEALPHIDE sealant**, subject to substrate porosity and site conditions.

Masking tape Application:

Apply a high-quality self-adhesive masking tape, such as polyethylene, cellophane, or fabric-backed tape, along both longitudinal edges of the joint prior to sealant installation. The tape functions as a temporary protective barrier, preventing unintended sealant contamination of adjacent substrates and ensuring precise joint geometry with clean, well-defined edge profiles. Following sealant application and tooling, the masking tape should be removed immediately while the sealant remains uncured to achieve a sharp, aesthetically uniform finish and eliminate the risk of edge disturbance during curing.

Tooling & Furnishing:

Following sealant placement, the exposed surface shall be tooled immediately using a suitable profiling spatula, putty knife, or flat finishing tool to achieve a smooth, continuous, and uniformly contoured joint profile. The tooling operation should be performed by applying consistent pressure while advancing longitudinally along the joint, thereby consolidating the sealant, eliminating entrapped air voids and surface imperfections, and ensuring intimate contact with the joint flanks to maximize adhesive bond development. Upon completion of tooling, the masking tape shall be removed promptly before the sealant begins to skin over, ensuring crisp and well-defined joint edges. Where required, a compatible soap solution or approved tooling lubricant may be lightly applied to facilitate surface finishing and produce a uniform, aesthetically superior sealant profile without adversely affecting curing or adhesion.

PRECAUTIONS:

- Certain individuals may exhibit sensitivity to epoxy resins, curing agents, solvents, and their associated vapors. Appropriate personal protective equipment (PPE), including chemical-resistant gloves, safety goggles, and suitable respiratory protection where necessary, should be worn throughout handling and application.
- Do not apply the system when the ambient or substrate temperature is below **10°C**, as reduced temperatures may adversely affect curing kinetics, adhesion development, and overall performance.
- Application shall not be carried out on damp, wet, or moisture-contaminated substrates. All joint surfaces must be clean, sound, and completely dry prior to priming and sealant installation.
- Store the material in its original, tightly sealed containers in a cool, dry, and well-ventilated environment, protected from direct sunlight, excessive heat, frost, and sources of ignition.
- Ensure that **two uniform coats of the recommended primer** are applied to the prepared joint faces before sealant application to achieve optimum substrate penetration, interfacial adhesion, and long-term sealing performance.

