ACTFLEX MS PRO.

Technical Data Sheet | Modified Polyurethane Adhesive Joint Sealant | 23/01/2025

Description

ACTFLEX MS PRO is a one-component, moisture-curing modified polyurethane sealant. It boasts excellent sealing performance, causing no corrosion and posing no pollution to the base material, making it environmentally friendly. It exhibits strong bonding performance with glass and aluminum. Additionally, it serves as a Class 3 sealant for corner junctions in waterproofing when used with FORSPEC water-based waterproofing membranes. Its applications extend to construction joints and expansion joints. **ACTFLEX MS PRO** is paintable and offers low VOC emission, making it an ideal choice for joint sealing.

Advantages

- Compliant with ASTM C920 (Class 50) and ISO 11600 (F Class 25 LM) standards
- Good UV resistance
- Low static charge - Less dirt streaking
- Paintable
- Silicone oil-free - non-staining on adjacent substrates
- Isocyanate-free - No air bubbling
- Solvent-free - No shrinkage
- Primeless bonding to most surfaces

Bonds well to

- Concrete and masonry
- Cement plaster systems
- Aluminum, copper, brass, and zinc
- Stainless, mild, or galvanized steel
- Glass and ceramic tiles
- Glass reinforced plastics
- Fiber reinforced cement sheeting
- Butyl rubber products - chase sealing
- Timber, particleboard, hardboard, and plywood (refer to Limitations section)

ACTFLEX MS PRO Properties

Appearance	Black, Grey, White, Homogeneous paste,	**Non-volatile contents (%)**	99
Density	1.63	**Shore A Hardness (DIN 53505)**	45 Approx.
Extrudability(g/15s)	600	**Tensile Strength (DIN 53504)**	1.7
Sagging properties (mm)	0	**Elongation at Break (GB/T 528)**	350%
Sag properties	1 Mm (20 Mm Profile, +25 °C)	**Tear Propagation Resistance**	≥6N/ mm
Tack free time (min)	15	**Movement Accommodation Factor**	12.5%
Curing speed (mm/d)	2.0	**Service Temperature**	-10°C to +65°C

Preparation

Good preparation is Essential. Allow all prep work to dry/cure before proceeding.

- Prior to application, ensure thorough preparation is complete and allowed to dry or cure.
- All surfaces must be structurally sound, meticulously clean, completely dry, and devoid of substances such as oils, grease, paint, and efflorescence that could hinder adhesion, leaving a solid, clean, and dry surface.
- Eliminate any protrusions that could puncture the joint sealant.
- Address any imperfections, voids, or blowholes using a high-strength non-shrink mortar.
- Confirm that all applied surfaces, including screeds, are sturdy and not prone to crumbling. The substrate must possess sufficient strength to withstand stresses caused by the sealant during movement. If necessary, insert backing rod to the required depth. Carefully rinse the detergent off, followed by a comprehensive rinse with clean water.
- Assure the surface is entirely dry, devoid of dampness or moisture.
- Surface Preconditioning: In all cases, the success of waterproofing hinges on a meticulous and comprehensive surface preparation process, warranting optimal adhesion and performance of subsequent coatings.

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Priming

- Ensure that primers are allowed to thoroughly dry according to specified drying times before proceeding with over-coating.
- Proper priming enhances the long-term adhesion of the sealed joint.
- For completely dry internal surfaces, apply one coat of ACTFLEX 600 Primer for water-based or combined coatings.
- On external or surfaces with moisture, utilize ACTFLEX EP 250 as the primer.
- When dealing with non porous surfaces, apply ACTFLEX SUPERPRIME 008.
- For wood and PVC surfaces, opt for ACTFLEX SUPERPRIME 008.
- Exercise caution to prevent excessive primer application, which could lead to the formation of puddles at the joint's base.

Application

1. Start by removing the metal seal from the joint sealant cartridge. Then, trim the gun nozzle to your desired bead size and securely attach it to the caulking gun. Insert the cartridge into the caulking gun.
2. Utilize the caulking gun to extrude the **ACTFLEX MS PRO** sealant into the joint. Ensure that the sealant is in complete contact with the sides of the joint while avoiding any air pockets.
3. Wider joints may necessitate multiple passes to guarantee that the **ACTFLEX MS PRO** sealant fully adheres to the sides and bottom of the joint.
4. When aiming for precise and tidy lines, employ masking tape. Remove the tape while the sealant is still pliable.
5. If necessary, insert a backing rod into the joint after priming to ensure proper sealant support and adhesion.

Joint Design

For **ACTFLEX MS PRO**, it is recommended to apply the sealant to joints ranging between 5mm and 35 mm wide. To ensure optimal performance and durability of the joint sealant, it's essential to design all moving joints with an ideal width to depth ratio of 2:1. However, this ratio is governed by specific minimum sealant depths:

- A minimum sealant depth of 5 mm must be maintained at any point along the joint.
- For bonding against metals, glass, and other non-porous surfaces, a minimum bonding depth of 5 mm is required, assuming the joint faces are in good condition.
- When bonding against masonry or other porous surfaces, or on non-porous surfaces with deteriorated joint faces, a minimum bonding depth of 8 mm is necessary.
- Shear joints should maintain a minimum joint width to depth ratio of 1:2, up to a maximum of 1:1.

Limitations

For **ACTFLEX MS PRO**, the following restrictions apply:

- It should not be used with polyethylene, polypropylene, polybutylene, polycarbonate, and bitumen.
- Avoid applications in structural glazing or floor joints.
- Avoid applications in pipes or where exposure to hydrostatic or pneumatic pressures (other than wind pressure) is likely.
- Do not use in areas with continual exposure to aggressive solvents or chemicals.
- Avoid application on painted timber or wood-based products.
- While **ACTFLEX MS PRO** can accept water-based and multi-component coatings, it's essential to note that, like all elastomeric sealants, coatings may lead to undesired side effects. These may include reduced movement accommodation ability and long-term issues such as dirt pick-up and discolouration.

Storage and Shelf Life

10 Months when stored in the original, unopened/undamaged containers, in cool dry conditions and protected from sunlight at temperatures between 10°C and 25°C. The shelf life of polyurethane sealant is related to the temperature and humidity of the environment.

The recommended storage temperature is 10-25°C, humidity is ＜50% R.H.

Do not transportation or store in areas with temperature is over 28°C or the humidity is over 80% R.H.

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Cleaning

Clean up immediately while still wet. Wipe down with solvent to clean tools & equipment. Once dry, is difficult to remove and mechanical means may be necessary. No.1. Observe all OH&S and MSDS information pertaining to safe usage and handling of solvents.

DO NOT discharge product or water from cleaning into sewer or waterways.
DO NOT touch the spill material.

Safety – When Handling Do Not Eat, Drink or Smoke

ACTFLEX MS PRO is hazardous and may cause skin and/or eye irritations. Use for intended purpose only. Observe good industrial hygiene. Keep all sources of ignition away. Always use in a well-ventilated area and wear Personal Protection Equipment (PPE. Change soiled work clothes and wash hands before breaks and after finishing work. In case of eye contact, rinse with plenty of water: If inhaled, remove to fresh air, if discomfort persists, if any breathing difficulties occur or if swallowed (do NOT induce vomiting), immediately contact Doctor or Poisons Information centre and seek medical attention. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or 0800 764 766 (NZ). or a doctor for advice. IN TRANSPORT EMERGENCY DIAL 000 – POLICE-FIRE BRIGADE. Local regulations as well as health and safety advice on packaging labels must be observed. For more information, please download a copy of the SDS from www.forspec.com.au

KEEP OUT OF REACH OF CHILDREN.

DO NOT allow wash water from cleaning or process equipment to enter drains.
DO NOT discharge into sewer or waterways.
DO NOT seal or stopper drums being decontaminated as CO2 gas is generated and may pressurise containers.

Data Sheet

This Technical Data Sheet and the Material Safety Data Sheet (SDS) may be revised at any time to comply with relevant changes to the Australian Standards or to include changes to current technology. Always read the current SDS and TDS carefully prior to use, as application and performance data may change from time to time. It is always best to request a copy of the latest technical data from FORSPEC Protective Coatings by calling 02 8021 3517 or emailing info@forspec.com.au. Data provided is typical but does not constitute a full specification. This should be sighted from the company for specific projects.

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