Shell Tixophalte Wet

Shell Tixophalte is a professional bituminous adhesive and sealant with permanent flexibility giving superior adhesion, even under wet conditions.

Issued: October 2010

Description: Tixophalte is a plasto-elastic, neutral hardening mastic, based on a (thixotropic) high-quality modified bitumen/rubber composition and contains additives, filler and a non-toxic solvent. Stable between -35°C and +90°C, it has excellent deformation resistance. It adheres to many surfaces (brick, hydraulic concrete, blocks, PVC, PP, PE, PUR, EPS, metals, glass, bituminous concretes, waterproofing layer) even when it is applied under water.

Area of use

Shell Tixophalte can be used as a sealant, adhesive or filler with many domestic and commercial applications including:

Buildings: Sealing leaks and making repairs even on wet surfaces, fixing roofing felt overlaps and many other roofing, plumbing and waterproofing tasks.

Hydraulic Applications: For waterproofing cracks and joints in waterways, canals, dams, bridges and reservoirs taking advantage of its unique wet-weather and underwater properties.

Infrastructure Applications: Applications include sealing joints and drainage systems in concrete drainage channels, concrete bridge decks and sealing induction loops for intelligent traffic management systems.

		Typical values*
CHARACTERISTICS	**Appearance**	Black, shiny and smooth
	Consistency	Thixotropic paste
	Skin formation	About 2 hours at room temperature
	Complete Curing	About 4 weeks (depending on the surface)
	Dripping point (after evaporation of the solvent)	200°C

			Reference method	Typical values*
SPECIFICATIONS	**Density at 25°C**	g/cm	ASTM D 70	**About 1.27**
	Elastic recovery at 23°C	%	ISO 7389	**< 40**
	Extension to break on dry support at 23°C	%	ISO 8339	**> 100**
	Extension to break after immersion in water **Flow resistance at 5 to 50°C**	% mm	ISO 8339 ISO 7390	**> 100** **< 3**
	Flash point	°C	ISO 3679	**< 55**

* These are values generally noted the results of which may vary significantly depending on the reproducibility of the tests; no commitment can be contracted regarding this data

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Shell Bitumen, Shell UK Oil Products, Rowlandsway House, Rowlandsway, Manchester M22 5SB
t: 0870201 7777 e: shell-bitumen@shell.com

A patent was registered for Shell Tixophalte Wet with world coverage on 11 November 2002.

It comes under plastic class 12.5P according to the specifications of European norm ISO 11600 regarding the performance of joints applied cold.

Processing recommendations

Applications temperature: From + 5 to + 40°C. At lower temperature pre-heating (e.g. in warm water) is advised.

Substrates: A clean, dry and dust free substrate is recommended. For special applications and/or on wet substrates an adhesion test is advised. For certain circumstances a (bituminous) primer is recommended.

Processing: Tixophalte can be applied with a handgun or a compressed airgun. Using the cartridge, the aluminium seal in the front screw spout has to be cut slantwise so that it has the size of the desired band of Tixophalte. A clean spout is important for a uniform dose and a smooth finish.

In order to obtain adequate adhesion on a wet substrate, it is important that the distance between substrate and spout is as small as possible and not more than 3 mm, so that the initial adhesion is obtained by displacing the water. When compressed-air guns are used (for the sausage-packing) the piston and the cylinder have to be greased properly.

Tixophalte must be applied in thin strips or single spots, so that the solvent is able to evaporate easily. Ensure that there is adequate ventilation during use.

The hardening rate is influenced by factors such as temperature, type of substrate, absorbency behaviour of the materials and the applied layer-thickness of Tixophalte. Immediately after applying Tixophalte, the adhesion is sufficient to resist a low load. Maximum strength is obtained after curing by evaporation of the solvent. The final adhesive strength is strongly dependant on the type and nature of the bond.

Application rate: When bonding insulation material or roofing felt with, for example, 5 strips by 4 cm width, the consumption is minimum 0.4 kg/m^2 (depending the substrate). This can be increased at the corners and edges of the roof.

Cleaning: Tixophalte can be removed with tools, such as a palette knife. Any residue can be cleaned by dissolving in a hydrocarbon solvent (white spirit).

Precautions for use

To prevent the Tixophalte flowing out of the joint base, due to (hydrostatic) pressure on top of the joint, the use of a backing material at the base of the joint is necessary, like a backer rod. The backing material should resist the potential pressure and must stay into position.

Shell Tixophalte Wet is formulated to be applied on wet surfaces, but it can in no case be applied to a new concrete structure with a high level of residual humidity. Residual water, initially coming from the mixing which has not been bonded during the hydration of the cement and

Shell Bitumen, Shell UK Oil Products, Rowlandsway House, Rowlandsway, Manchester M22 5SB
t: 0870201 7777 e: shell-bitumen@shell.com

which has remained free in the porosity of the concrete can evaporate at high heat and form bubbles in the joints. This is why we recommend, as for hot jointing products, that the use of the Shell Tixophalte, in this particular case, is only made once the concrete is completely cured.

To protect the joint when it is subjected to high water pressures, we recommend application of a protective mortar layer on the joint.

Compatibility

Shell Tixophalte can be used for bonding plastics without plasticisers. Compatibility with extruded polystyrene can vary and there are instances where Tixophalte is best applied direct to the substrate. After a while, the boards can be adhered. Avoid making the Tixophalte layers too thick on the polystyrene board.

Contact with hydrocarbon solvents, mineral oils, greases and fuels soften the product. Tixophalte does not tolerate solvent based paint.

Product availability

Shell Tixophalte Wet is supplied in a:

- 100% aluminium cartridges of 310 ml for use in standard sealant guns
- Sausages of 1.4 l (Ø75 mm x 380 mm) for use in compressed air guns
- Sausages of 2.8 l (Ø75 mm x 760 mm) for use in compressed air guns
- 5 l pail
- 15 l pail
- 180 l drum

Storage

Storage life is for the cartridges are at least 3 years in unopened packing. Shell Tixophalte should not be stored in direct sunlight or near a source of heat.

Material Safety Data Sheet

Available on website: www.epc.shell.com

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