QUICSEAL 218

Elastomeric Pavement Joint Sealant

Description

QUICSEAL 218 is a two-part, self-leveling, chemical resistant, polysulphide-based sealant designed to effectively seal horizontal joints and cracks in concrete paved areas. The sealant has been formulated to accommodate repeated and pronounced cyclic movements in extremes of climatic conditions.

Specification Compliance

EN 14188-2
ASTM C920

Advantages

- Jet blast resistant
- UV-stable
- Resistant to motor fuels such as petrol, diesel, kerosene and LPG
- Resistant to extreme climate/weather conditions

Typical Uses

For sealing horizontal joints and cracks in concrete pavements on:-

- Airports
- Roads and motorways
- Harbours
- Petrol stations
- Chemical plants
- Industrial floors
- Parking facilities

Technical Data

	Test Method	**Results**
Colour	Black	
Base	Polysulphide	
Density (EN 542)	Approx. 1,720kg/m^3	Approx. 1,620kg/m^3
Solids content	Approx. 100%	
Pot life (23^{0}C, 50% RLV)	Approx. 60 – 90 minutes	
Properties	**Test method**	**Results**
Extrudability	EN 29048	≥ 70ml / min
Rate of cure	EN 14187-1	≥ 31% at 72 hours
Tack free time	EN 14187-2	≤ 5.5 hours
Self leveling properties, Type sl	EN 14187-3	0.48mm at horizontal 5ºC 2.97mm at 2.5% slope 23ºC
Loss of volume	EN ISO 10563	≤ 5 % by volume
Change in mass and volume after immersion in liquid chemicals	EN 14187-4 class B, class C, class D	≤ - 25 % by mass, no increase ≤ ± 30 % by volume
	Test Method	**Results**
Resistance to hydrolysis	EN 14187-5	Change of hardness Shore A ≤ ± 50 %
Resistance to flame	EN 14187-7	No flow, cracking, flaking hardening, ignition
Cohesion	EN ISO 9047	No failure At - 20ºC ≤ 0.6 MPa
Cohesion	prEN 14187-9	No flow, cracking, flaking, Hardening, ignition
Bonding strength	EN 28340	Tensile modulus at 100 % extenson At 23 ºC ≥ 0.15 MPa
Elastic recovery	EN ISO 7389	≥ 70 %
Artificial weathering by UV irradiation	EN 14187-8	Change of tensile modulus at 100 % extension ≤ ± 20 %
Adhesion/cohesion properties after immersion in liquid chemicals	EN 14187-6 class B, class C, class D	No failure
Working Temperature	-	+ 5ºC to + 35ºC
Service Temperature	-	-50ºC to + 120ºC

Joint Preparation
Joints should be accurately formed and prepared to provide the correct sealing slot dimensions. The degree of performance efficiency obtained with any sealant depends on the thoroughness of joint preparation.

Joint sealing slot surfaces must be dry, sound, clean and free from frost. Remove all dust and laitance by grit blasting, grinding or rigorous wire brushing. The prepared sealing slot should be blown out with dry, oil-free compressed air. The temperature of the bonding surfaces must be below 60°C, and dew point must be at least 3°C above the working temperature. The moisture content of the bonding surfaces must not be greater than 15 on the Protimeter, and the air humidity must be below 75%.

Ensure that any expansion joint filler is tightly packed in the joint and removed to the required depth to provide the seal dimensions specified. Make sure that no gaps or voids exist at the base of the joint.

Joint fillers must either be separated by **QUICSEAL 404**, closed cell polyethylene backer rod or vinyl tape. However, joints caulked with **QUICSEAL 406**, closed cell polyethylene expansion joint filler will not require a separate bond breaker as it is compatible with **QUICSEAL 218**.

Priming
Pour the Part B component into Part A and mix using a clean rod for 3 – 5 minutes. Apply the primer to the bonding surfaces using a brush or pressurized sprayer. Ensure that all sealant bonding surfaces are covered and no breaks in the primer layer. Please note any spillage onto the pavement will show stain marks. Allow **QUICSEAL 218 PRIMER** to dry for approximately 30 minutes prior to sealant application. After 6 hours, any primed surfaces must be re-primed before applying sealant. Therefore avoid priming more areas that can be sealed in a 6-hour period, to avoid unnecessary re-priming work. Re-priming is also necessary if the primed surfaces get wet prior to application of sealant. Alternative primer systems are available for asphalt surface. Consult QUICSEAL technical service.

Mixing
Using QUICSEAL universal mixer, mount the Part A metal drum onto the platform and pour Part B completely into Part A and start the mixer. Scrape the sides and bottom of the can to ensure all materials are transferred into Part A. Mix for 8 - 10 minutes. Use a long spatula to scrape material from the wall of the tin during mixing.

Note: Do not use partial quantities of the parts as this may produce incorrect mix ratio between part A & B, which could result in incomplete curing of QUICSEAL 218.

Application
Apply by caulking gun (hand or pressure type), or QUICSEAL Application Machine to dispense sealant.
Care should be taken to ensure that the sealant applied is recessed in the joint to prevent the sealant from extruding above the level of the concrete pavement during the movement cycles.

Note: Avoid storing the sealant under the sun as this will shorten the potlife/working time of the sealant.

<u>For replacing old sealant</u>
Remove the old sealant by cutting it out completely from the joint. Clean the bonding surface where the old sealant will connect to the new sealant using QUICSEAL Solvent. Apply QUICSEAL 218 Primer along the sides of the joint and apply QUICSEAL 218 Sealant as described in the above.

Packing
15 litres per set (component A + B)

Estimated Consumption / Coverage
The sealant depth is dependent on the joint width and is calculated using the formula:

$$\text{Sealant depth} = \frac{\text{Joint width}}{3} + 6\text{mm}$$

Joint Size (W x D) (mm)	Metre run per 15 litres set
10 x 10	150
12 x 10	125
15 x 11	90
20 x 13	57
25 x 15	40
30 x 16	31

Storage
The shelf life for QUICSEAL 218 in unopened & undamaged packaging is 18 months if stored between 5ºC - 25ºC. The product must be kept unopened & store under cool condition and protected from direct sunlight.

Health & Safety
Avoid skin contact and apply a suitable barrier cream or wear disposable rubber or plastic gloves. Hands should be thoroughly washed before eating. In the event of contact with the eyes, wash liberally with clean cold water and seek medical advice.

Ask for Safety Data Sheet (SDS).

Reference No. QS218/191021

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