

Sealing Connections

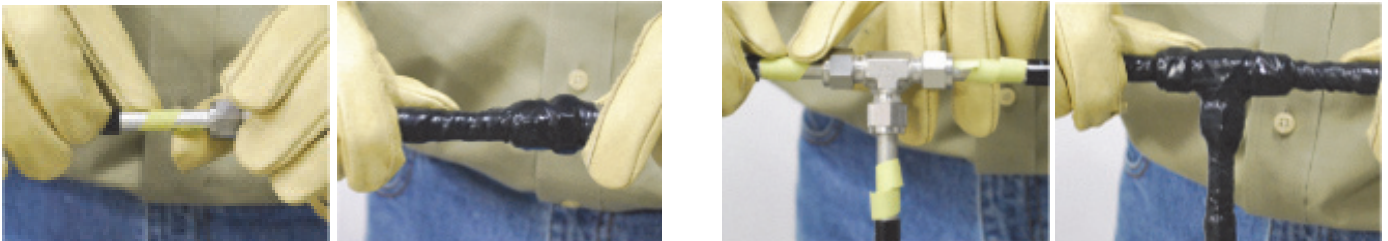
IP66 and High Pressure Wash Down tests were conducted to demonstrate the ability of O'Brien self-bonding silicone rubber tape to seal the jacket and tube as well as the transition to compression fittings.

Test Description: O'Brien self-bonding silicone sealing tape (TPKJP-SR-B) was applied over a compression fitting installed on a TAW05589 polymer coated single 3/8" SS tube (TPJ1U-B3) per the recommended installation procedure. In order to detect any leakage or penetration of water, litmus paper was wrapped around the bare tube under the self-bonding sealant.

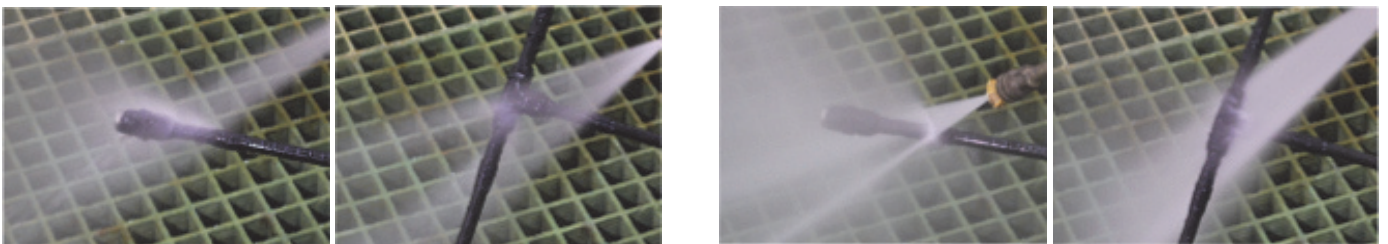
Test protocol for IP66 was utilized but judged insufficient to reflect field conditions. A severe High Pressure Wash Down test was developed as an extension of IP testing. The assembly was sequentially subjected to the test procedure of IP66 and High Pressure Wash Down for 3 minutes each.

During both tests the water stream was directed against the overlapping edges of the self-bonding silicone sealing tape in an attempt to force water between the layers and cause penetration.

Findings: Upon conclusion the self-bonding seal exhibited only minor scuffing of the surface. No tearing or separation was found. No water ingress was detected.



O'Brien TPKJP-SR-B self bonding silicone sealing tape creates a cross-linked bond between layers when applied. Since it does not rely on a secondary adhesive aging only increases the bonding mechanism.



IP66 testing uses deluge of a high volume low pressure spray directed at the sample from a maximum distance of 2.5 – 3M.

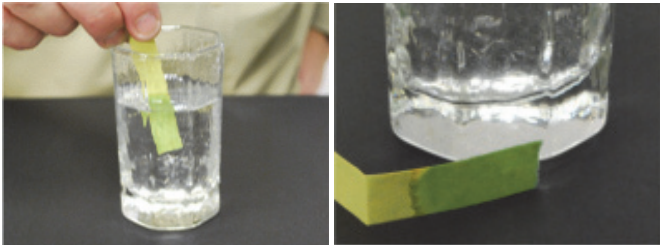
The more severe High Pressure Wash Down test uses a low volume spray at high pressure at close distances, 100 – 150 mm.

	IP66	High Pressure Wash Down
Water Pressure	1.8 bar (26 psi)	186 bar (2700 psi)
Flow Rate	100 l/min (26 g/min)	4 l/min (1 g/min)
Nozzel Distance	2.5 – 3 M (8 – 10 ft)	100 - 150 mm (4 – 6 in)
Duration	3 min	3 min
Nozzel Movement	Occilate over surface	Occilate over surface

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Surface was dried and seal was cut open. Litmus paper remained unchanged. This indicates that no moisture penetrated the self-bonding silicone sealing tape (TPKJP-SR-B) after both IP 66 and high-pressure wash down exposure



Hygroscopic litmus paper positively identifies the presence of moisture.