

Test Report

Report no.	21-5-2026	Laboratory	JSL	Requested by	DQ
Date	21-05-2026	Address	Queluz de Baixo	Tested by	p.oliveira
No. of pages	1/1	Product family	F80 watertight boxes with membrane entries 80x80 - UV resistance and membrane degradation tests	Approved by	p.oliveira

Test specification	Standard / procedure
- Resistance and degradation tests of the rubber membranes of the F80 boxes under ultraviolet radiation by exposure to a black-light source with a total power of 60 W for 30 uninterrupted days. Membrane rupture test and insertion of cables of various diameters after this ageing period.	- adapted from ISO 4892-2 and UL 746C

Identification	
Purpose of the tests	Ageing test by exposure to ultraviolet radiation. Membrane rupture test.
Equipment used	Various: Black-light irradiation device equipped with 4 Philips lamps, ref. CLEO 15W UV type 3
Sample description	100x100 watertight boxes with membranes supplied by the D&D Dept.
Trade mark	FUSION F80
Name	FUSION watertight boxes
Reference	F80 (80x80)
Technical specifications	n/a

Samples			
Characteristics	Quantity	Dimensions	Colour
2 samples of Fusion F80 boxes	2		Grey

Presentation of results
All tests were carried out in accordance with the reference standard. The tests were performed at room temperature and away from any radiation other than that emitted by the 4 CLEO UV type 3 tubular lamps. The boxes were exposed at a distance of approximately 100 mm from the black-light source for 60 days (24 hours per day), for a total of 1420 hours (twice the time specified in the Standard: 700 h). At the end of this period, the boxes were tested for cable and tube penetration from 3.5 to 20 mm in diameter, with and without prior perforation, and subjected to a cable penetration force of more than 50 N. No membrane came out of the side opening, broke or tore beyond what was necessary for the diameter of the cable used. No surface degradation was observed either on the membranes or on the box material. Discolouration of the exposed area is the same as that of boxes subjected to only 700 hours of UV exposure.

Conclusions
The membranes aged under UV radiation for 1440 hours withstand the stress of cable and tube entry well, did not degrade and showed no loss of quality. The membranes do not tear when cables are inserted. Note: the reference of the raw material used in these boxes injection-moulded at JSL is unknown.