

EMSEAL LLC

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EMSEAL JOINT SYSTEMS, LTD

25 Bridle Lane
 Westborough, MA 01581-1228 USA
 PH: 508-836-0280, FX: 508-836-0281



DECLARATION OF PERFORMANCE EMSHIELD DFR /EMSHIELD WFR

Number of the declaration of performance	07.13.2018-CA-FR-vs01
1. Unique identification code of the product-type:	EMSHIELD DFR / EMSHIELD WFR
2. Intended uses :	<p>The intended use of fire rated movement joints EMSHIELD WFR and EMHIELD DFR is to reinstate the fire resistance performance of separating building elements where they are interrupted.</p> <p>EMSHIELD DFR is used as a joint seal in a floor or as horizontal joint abutting a floor, ceiling or roof (configurations) A and D in figure 1 in EA 350141-00-1106).</p> <p>EMSHIELD WFR is used as a vertical joint seal in a wall (configuration B in figure 1 in EAD 350141-00-1106)</p> <p>Joints are made of dual-sided silicone sealing surfaces adhered to a fire-retardant impregnated polyurethane foam backing.</p>
3. Manufacturer	EMSEAL Joint Systems Ltd. 25 Bridle Lane Westborough, MA 01581 – U.S.A.
5. System of AVCP	System 1
6-b European Assessment Document	EAD 350141-00-1106 (Fire Stopping and Fire Sealing Products)
European Technical Assessment	ETA-17/0893 of 9 th may 2018
Technical Assessment body	Centre Scientifique et Technique du Bâtiment (CSTB)
Notified body	Centre Scientifique et Technique du Bâtiment (CSTB) identification number 0679

9. Declared performance:

Harmonized technical specification			
Essential Characteristics	Performance	Standard	Classification report Number
Reaction to Fire:	Class B –S2, d0	EN 13501-1	CSTB N° RA17-0223
Resistance to Fire DFR	4 hours	Class according to EN 13501-2	CSTB RS16-074
Resistance to Fire WFR	4 hours	Class according to EN 13501-2	CSTB RS16-028
Water permeability	No leakage was measured	EN 12155	CSTB N° FaCeT 17-26068812
Air permeability	No leakage was measured	EN 12155	CSTB N° FaCeT 17-26068812

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Airborne sound insulation	$R_{s,w} (C, Ctr) \geq 54 (-1; -3)$	EN 10140-2	CSTB N° AC17-26067126
Movement Capability	100% (+/- 50%) of normal supplied size.	EN 1366-4	CSTB RS16-074
			CSTB RS16-028
Durability and serviceability	Type X : intended for use in conditions exposed to weathering.		

The classement is only valid with conditions :

Respect the arrangement and corresponding installation parameters:

- Fire is under the concrete floor (DFR); Fire is behind a concrete wall (WFR)
- Respect configurations A and D in figure 1.1 in ETAG 026-3 only.
- Density and thickness of the supporting construction must be those required
- Respect the compression ratio of sealing joint.
- Minimum density of the supporting construction (rigid concrete floors) in which DFR2 is used for linear joint ≥ 2400 kg/m³.
- Minimum thickness of the supporting construction (rigid concrete floors) in which DFR2 used for linear joint ≥ 150 mm of concrete.
- Minimum density of the supporting construction in which WFR2 is used for linear joint ≥ 2400 kg/m³
- Minimum thickness of the supporting construction in which WFR2 used for linear joint ≥ 115 mm of concrete

Emshield DFR and WFR must be applied using the component listed in table 1.1 below according to the installation described in annex A :

Name	Trade reference	Characteristics	Supplier
EPOXY ADHESIVE PART A and B (on the concrete substrate walls)	NOMAD	2-3mm of thickness	NORTHERN MANUFACTURING
	SIKADUR 31 CF	2-3mm of thickness	SIKA FRANCE
Linear joint	Emshield DFR or WFR	ρ polyurethane + silicone = 540 kg/m ³ +15% /- 5%, Silicone thickness = 2,5 to 4 mm (valleys : 1,5 mm +/- 0.5mm) total width = 12 to 100 mm (compressed) total thickness = 100 to 110 mm	EMSEAL Joint Systems Ltd
Sealant (between the joints)	Fire Barrier Sealant CP 25WB+	2-3mm thickness	3M™
Silicone sealant (between joint and building element)	PECORA 890 NST	4-6mm diameter	PECORA Corporation
	Dow Corning® 790	4-6mm diameter	Dow Corning
	Dow Corning® 748	4-6mm diameter	Dow Corning
	PECORA DynaFlex	4-6mm diameter	PECORA Corporation

Table 1.1 : Component list

The seal is not sold as a kit, only Emshield DFR or WFR are covered by the ETA. It is the responsibility of the installer to obtain the other components for incorporation into the assembled system.

