

FIRE RATING

Up to 2 Hours

TECHNOLOGY

Intumescent Char

STANDARDS & FLAME SPREAD

ISO 11925-2 Ignitability of products

1. PRODUCT DESCRIPTION & OVERVIEW

Scudoflex FlameShield IRC-20/2H is a premium, high-performance intumescent flame retardant coating engineered to provide superior passive fire protection for high-risk structural and cellulosic substrates. Upon exposure to high heat or direct flame, the coating undergoes an endothermic chemical reaction, swelling many times its original film thickness to form a thick, microporous carbonaceous insulating char layer. This barrier starves the substrate of oxygen and significantly reduces heat transfer, delaying structural breakdown and providing critical evacuation time.

2. KEY FEATURES & ADVANTAGES

- 2-Hour Direct Flame Protection:** Resists direct flame exposure for up to 2 hours (tested per ISO 11925-2 criteria).
- High Expansion Intumescence:** Swells rapidly upon heat contact to create a dense thermal char.
- Zero Flame Spread:** Categorized under ISO 11925-2 criteria standards with virtually zero flame propagation.
- Microbial & Fungal Resistance:** Formulated with biocide additives resistant to fungi, mildew, and micro-organisms.
- Smooth Finish & Sandable:** Dries to a tough, hard, sandable coating suitable for aesthetic overcoating.
- Versatile Substrate Adhesion:** Excellent bond strength to wood, MDF, concrete, gypsum, and structural steel.

3. RECOMMENDED APPLICATIONS

- Cellulosic & Timber:** MDF, Plywood, Particle Boards, Wooden Frames & Studs, Joinery, Partitions.
- Structural Steelwork:** Beams, Columns, Steel Reinforcements, Ductwork, Cable Trays.
- Civil Infrastructure:** Fire Walls, Fire Doors, Staircases, Emergency Exits, Concrete & Gypsum Boards.

4. TECHNICAL SPECIFICATIONS

PROPERTY	TEST METHOD / SPECIFICATION
Appearance	White / Light Grey smooth liquid
Consistency	Thixotropic Paint-like liquid
Solid Content	Approx. 76% ± 2% [W/W] (ASTM D1644)
Specific Gravity	1.45 ± 0.05 kg/L @ 20°C (ASTM D1475)
Drying Time (25°C)	Set-to-touch: ~1 hr Full cure: 4 hrs
Service Temp Range	+10°C to +60°C (Substrate surface)
Wet Flammability	Non-flammable in liquid state (ASTM D93)
Fire Class / Rating	ISO 11925-/ 2-Hour Flame Resistance
Theoretical Coverage	10 – 12 sq.ft/kg @ 0.5mm Wet Film Thickness
Recommended WFT	Minimum 0.5mm to 1.2mm DFT total
Cleaner / Thinner	Solvent Naphtha / Petroleum Spirit
Shelf Life	15 Months in sealed containers @ 25°C

5. APPLICATION METHOD & SURFACE PREPARATION

Surface Preparation: Ensure substrate surface is thoroughly clean, dry, structural sound, and free from oil, grease, loose rust, or particulate contamination before application.

Application Technique: Apply via brush, roller, or heavy-duty airless spray equipment. For thick builds, apply in multiple uniform coats allowing a minimum inter-coat drying interval of 4 hours at ambient temperature. Perform compatibility checks on specialized primers or existing decorative topcoats prior to full application.

IMPORTANT NOTICE & WARRANTY: Store in original, unopened containers in a shaded, well-ventilated area between 10°C and 30°C. Keep away from direct frost and moisture. Scudoflex guarantees product compliance to published technical specifications when applied strictly per manufacturer instructions.

