

Selection & Specification Data

Generic Type	Nullifire® S707-60 & S707-120 Waterborne Basecoats are thin film intumescent coatings for the fire protection of internal structural steelwork.	
Description	<ul style="list-style-type: none"> S707-60 is optimised for 30 & 60 FRR and up to 90 minutes fire resistance. S707-120 is optimised for 90 and 120 FRR protection. 	
Features	<ul style="list-style-type: none"> Fully tested and certified in accordance with BS476: Part 21: 1987 <ul style="list-style-type: none"> S707-60; Certifire CF445 S707-120; Certifire CF446 Waterborne technology Very low VOC: 15 gm / litre <ul style="list-style-type: none"> 85% below IEQ-3 Indoor Air Quality requirement of ≤ 100 g/lit. Halogen-free formulation Low odour, user friendly No topseal required for interior, dry non-decorative exposures Rapid dry to recoat / topcoat (refer to dry time and ventilation tables overleaf) Other Certification: <ul style="list-style-type: none"> Fire Propagation / Spread of Flame <ul style="list-style-type: none"> BS476: 6/7 Class 0 EN13823 (SBI) and IMO smoke / toxicity Certifire fully tested on cellular beams 	
Gloss	Flat	
Colour	White	
Primers	Wide range of compatible primers including Carbozinc® 859 EZ2 epoxy zinc-rich (surface must be free of zinc salts) and Altex High Build Rust Barrier modified alkyd primer. Do NOT use thermoplastic types such as chlorinated rubber or conventional acrylic etc..	
Topcoats	As specified	
Film Thickness	DFT as specified on relevant fireproofing loading schedule.. NOTE: Maximum 1200 microns WFT (Wet Film Thickness) per coat	
Volume Solids	S707-60:	72% ±2%
	S707-120:	68% ±2%
Theoretical Coverage Rate	S707-60:	1.44 m ² / litre at 500µm DFT
	S707-120:	1.36 m ² / litre at 500µm DFT
Mix Ratio	N/A – single component	
VOC Values	15 gm / litre	

Substrates & Surface Preparation

General	All surfaces should be clean, dry and free of surface contamination.
Steel	Abrasive Blast to AS1627.4 Class 2 or better, or minimum Power Tool Clean to AS 1627.2. Prime with compatible primer.
Galvanized Steel	Ensure all passivation coating is removed and abrade surface. Prime with compatible non-saponifiable primer.
Previously Painted Surfaces	Refer to Carboline / Altex Technical Services

Application Notes & Checklist

Nullifire S707 is recommended for application and use on dry protected structural steel only. If the basecoat is allowed to get wet, it is likely to be damaged – blistering and wrinkling may occur. S707 should only be applied when the air and steel temperatures are above 5°C. Relative humidity should be below 80% for successful application. Steel surface temperature should be a minimum of 3°C above the dew point. Ensure the steel is dry and free from contact with rain, moisture or condensation during the application and drying of S707.

Checklist:

The following instructions are for on-site application only.

Ensure that:

- The primer is compatible with S707 and has been applied correctly.
- The overcoating period for the primer has not been exceeded.
- The correct primer is used for galvanized steel.
- All damage to the primer has been repaired & re-primed.
- Site and weather conditions are within specification.
- S707 is stored correctly.
- Surface is clean, dry and free from contamination.
- Correct spray equipment is available, if appropriate.
- Application instructions have been read prior to commencement of work.
- Ensure different basecoats are not applied on the same section of steel.
- Equipment should be clean and free from contaminants or dried material.
- Wet film gauges are available for use.

Application Equipment

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results. **General Guidelines:**

Conventional Spray	Use only a high capacity remote pressure pot assembly.
Airless Spray	40:1 pump ratio, minimum 9.5mm pressure hose, 0.019" to 0.025" free-flow tip.
Brush & Roller (General)	Brushing only suitable for small areas or touch-up and may result in a ribbed finish. Use a short-nap roller.

Nullifire S707 Series

Drying & Self-Recoat Schedules

Estimated self-recoat times (hours) at varying film thicknesses in still air and with positive air-flow (draught).

Drying of S707 Series products is dependent upon a number of factors including temperature (surface and ambient), air movement, humidity, method of application, and thickness of coating.

S707-60

RH	WFT (µm)	10°C		20°C		30°C	
		Still Air	Air Flow	Still Air	Air Flow	Still Air	Air Flow
30%	300	4.5	2.25	3.75	1.5	2.25	1.5
	600	6.25	3.75	5.25	3	4.5	2.25
	1200	9	4.5	6	3.75	6	3
50%	300	6	3	4.5	2.25	3	1.5
	600	9	4.5	6.25	3.75	6	3
	1200	12	6	9	4.5	7.5	3.75
70%	300	11.25	6	9	4.5	6	3
	600	15	9	15	6.25	12	5.25
	1200	18	12	18	9	15	6

S707-120

RH	WFT (µm)	10°C		20°C		30°C	
		Still Air	Air Flow	Still Air	Air Flow	Still Air	Air Flow
30%	600	6	2.5	4.5	1.5	3.5	1.5
	800	8	3.5	6	3	4.5	2.5
	1200	12	4.5	8	3.5	6	3
50%	600	10	3	6	2.5	5	1.5
	800	12	4.5	8	3.5	6	3
	1200	18	6	12	4.5	10	3.5
70%	600	12	6	10	4.5	8	3
	800	18	9	12	6.5	10	6
	1200	24	12	18	9	12	7

- Brushing or rolling adds about 20% to drying time (compared with spraying figures above)
- Drying times are doubled at 5°C or at over 75% relative humidity (RH)
- Final drying time before topsealing is minimum of 16 hours
- These figures are based on constant conditions, fluctuations of any factor up or down will give variations to the drying time
- If overnight condensation causes wetting a further full drying period should be allowed

Mixing & Thinning

Mixing	Power blend to a smooth homogeneous mix using a Jiffy Mixer or similar non-aerating mixer.
Mix Ratio	N/A –single component product
Thinning	Generally not recommended. Use clean fresh potable water if required

Cleanup & Safety

Cleanup	Clean up with fresh water. Hardened deposits may be removed with Thinner #10
Precautions	For industrial use only. See the Altex Coatings General Safety Data Sheet, product label and Material Safety Data Sheet (MSDS) for health and safety information prior to use. Use with adequate ventilation. May cause eye and skin irritation. Do not breathe vapour or spray. Wear suitable protective clothing such as gloves and eye and face protection.

Packaging, Handling & Storage

Pack Sizes	25 kg pails S707-60: 18.52 litres S707-120: 18.25 litres
Flash Point	> 55°C
Storage Temperature & Humidity	Store at ≥ 5°C and ≤ 25°C; 0 to 95% RH. Store indoors and under cover in temperate conditions. Do not expose to extreme heat; ie if stored outside in shipping containers keep product away from sun heated walls. Do not freeze.
Shelf Life*	9 months
*Shelf Life: Minimum shelf life if stored under cover in original sealed containers and under recommended storage conditions.	

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