



S706 Intumescent Basecoat



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Product Description

S706 Intumescent Basecoat is a single pack hydrocarbon solvent-based intumescent coating for the fire protection of internal structural steelwork.

S706 is white in colour.

S706 can provide up to 2 hours fire protection.

Application Checklist

The following application instructions are for on-site applications only; for off-site applications, please refer to Nullifire Ltd.

Ensure that:

- The primer is compatible with S706 and has been applied correctly.
 - The overcoating period for the primer has not been exceeded.
 - All damage to the primer has been repaired and re-primed.
 - Site and weather conditions are within specification.
 - S706 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.
 - Equipment should be clean and free from contaminants or dried material.
 - We film gauges are available for use.
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Surface Preparation

S706 should be applied onto a clean, undamaged, dry and primed steel surface.

Certain types of primers can cause adhesion problems and should be avoided. These include:

- Chlorinated rubbers
- Bitumen

Nullifire have carried out compatibility testing on a wide range of primers and can be contacted on +44 (0) 24 7685 5000 for confirmation of compatibility with S706.

Galvanised surfaces should be prepared by an application of T wash or mordant solution followed by a compatible primer. The primer should be applied in accordance with the manufacturer's instructions. If a zinc rich primer is used, it is advisable to seal this with a suitable tie coat or travel coat prior to shipment to site. If the steel is left exposed to the atmosphere with just a zinc rich primer, surface salts may build up on the steel. These salts, if not adequately removed, may cause adhesion problems for any subsequent coating applied. Removal of the salts can be achieved by high-pressure washing. If adequate removal of the salts cannot be guaranteed, a suitable tie coat may have to be applied prior to the S706.

Nullifire should be consulted for technical advice when zinc rich primers or the overcoating of existing paints are specified for use.

Site Conditions During Application

Nullifire S706 is recommended for internal or semi-exposed steelwork.

It can however be applied to steelwork during the construction period subject to the environmental conditions being within specification.

Once applied S706 can be left for up to 3 months before the Topseal is applied prior to the building being fully weatherproof.

S706 should only be applied when the air temperatures are between 0° and 35°. Steel surface temperature should be at least 2°C above the dew point. If the relative humidity exceeds 80% care must be taken to avoid condensation forming during application.

Once applied S706 should be kept protected from water until the product has dried.

Rain or water running over the S706 before the basecoat is cured can damage the coating and may necessitate removal and recoating. Protect until a skin has formed.



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Application Methods

S706 is supplied ready for use and must not be thinned but should be thoroughly stirred prior to use.

The following methods and rates of application are available.

Achieving maximum loadings will depend on site conditions.

Method	Maximum Loading WFT Per Coat At 20°C S706	Remarks
Airless spray finish	2000 g/m ² 1.50mm	Fast application. Best finish.
Lambs wool roller and brush	750 g/m ² 0.56mm	Roller – textured finish Brush – marks remain

Airless Spraying

A single spray coat built up with several quick passes allows greater control over quantities and finish. It may be possible to apply 2 coats of S706 in one day, particularly if the air temperature is above 20°C and there is good air movement (2m/sec). However, before doing this ensure that the previously applied coat is dry particularly in the web/flange junctions.

Airless spray equipment is recommended and should match these guidelines: (tip size will depend on finish required and site conditions).

Operating Pressure	At least 3500 psi (250 kg/cm ²)
Tip Size	21 – 30 thou (0.53 – 0.76mm)
Fan Angle	20° - 40°
Hose Diameter	10mm (3/8")
Hose Length	Max. 60 metres

Brush/Roller Application

For rush application use a "laying off" technique to avoid heavy brush marking. A short piled roller will produce a lightly textured finish.

Thickness Requirements

During application, measure the wet film thickness frequently with the gauge provided to ensure the correct thickness is being applied.

To use the gauge, insert the teeth into the wet basecoat. The last tooth to be coated indicates the wet film thickness achieved.

In the event of over or under applications, adjustment to the loading rates of subsequent coats will be required.



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Drying Times

Drying of S706 is dependent upon a number of factors including:

- Temperature
- Air movement
- Thickness of coating
- Humidity
- Method of application

High humidity and low air movement or low steel temperatures will increase drying times as will low ambient temperatures.

Thicker coats will also take longer to dry than thin coats.

Once the total loading of S706 has been applied, the coating must be completely dry before application of the Topseal. This typically can be between 5 days for lower loading and up to 15 days for maximum loadings.

It may be preferable to apply a greater number of thinner coats (say 1000 g/m²) allowing each to dry thoroughly before overcoating.

This will allow the total coating to be topsealed sooner.

Brush or roller application may take up to 20% longer to dry compared to spraying.

Lower temperatures during the drying period will also extend the time before topsealing is possible.

Final Thickness Check

Take dry film thickness (DFT) readings as soon as the coating is sufficiently hard to allow a reading to be made without indenting the surface.

DFT's may be taken using equipment such as an Elcometer 211 permanent magnet type (banana gauge) or an electromagnetic type Nullifire DFR-a recorder.

Ensure that the DFT of the primer is deducted from the reading of the basecoat.

Do not apply topseal until the readings are in accordance with the specified thicknesses.

Application Of Topseal

Once DFT's have been achieved as specified, either TS616 Topseal (waterborne), TS615 Topseal (solvent borne) can be applied.

Ensure the S706 is completely dry before applying Topseal.

Maintenance

Damaged areas should be abraded back to a sound surface preferably by wet abrasion. The surface should then be clean and dry before re-applying. System S Filler may be used for repairing scratches and chips. Once repaired topseal should be re-applied. Refer to Nullifire System S Maintenance Plan.

Storage

S706 should be stored between 0°C and 35°C. Shelf life is 12-15 months in sealed containers.

To Order

In the U.K., S706 Basecoat can be ordered directly from Nullifire, Coventry on +44 (0) 24 7685 500.

In other countries, S706 Basecoat can be purchased through a network of Distributors, details of which can be obtained from Nullifire or from our Web site on <http://www.nullifire.com>.



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Technical Assistance Further assistance can be obtained by calling the Technical Hotline or by e-mail – protect@nullifire.com.
Contract Support is available on request.
Nullifire run a training school in the U.K. for applicators. Full information can be obtained from Nullifire.

Health And Safety A separate Material Safety Datasheet is available.

The forgoing information is believed to be accurate at the time of preparation of this document, and is provided in good faith. However, no warranty or representation with respect to such information is intended or given.
