



NATIONAL INTUMESCENT PAINT  
DECORATIVE COATINGS

TECHNICAL DATA SHEET

## NATIONAL INTUMESCENT PAINT

<b>PRODUCT DESCRIPTION</b>	A special resin based single component Intumescent paint for fire protection (FP), of structural steel work up to 120 minutes.
<b>RECOMMENDED USES</b>	Suitable to be applied on steel structures internal or external. Provides fire protection up to 120 minutes.

### TECHNICAL DATA

<b>COLOUR, DRY FILM</b>	White
<b>FINISH, DRY FILM</b>	Smooth / Matt
<b>VOLUME SOLIDS (ASTM D2697)</b>	63 ± 2%
<b>SOLID BY WEIGHT</b>	76 ± 2%
<b>SPECIFIC GRAVITY</b>	1.33 ± 0.05
<b>THEORETICAL SPREADING</b>	3.15 M <sup>2</sup> /Ltr – 1.80 M <sup>2</sup> /Ltr
<b>RECOMMENDED DFT (DRY FILM)</b>	200 – 350 Microns/Coat
<b>RECOMMENDED WFT (WET FILM)</b>	318 – 555 Microns/Coat
<b>NOTE</b>	An experienced applicator can apply up to 700 – 1000 microns per coat, depending on section factor and time of FP, but over coating time will be extended significantly.

### DRYING TIME

Drying time @ 30°C (Temperature, humidity, air movement, film thickness and number of coats all affect the drying time.)	
<b>TOUCH DRY</b>	4 hours (at 30°C & 60% RH) at 350 microns
	8 hours (at 30°C & 60% RH) at 700 microns
<b>DRY TO RECOAT</b>	24 hours minimum, with itself
<b>HARD DRY/FULL CURE</b>	7 days at 350 microns
	12 days at 700 microns

### **OVER COATING INTERVAL:**

Average DFT, of Intumescent Paint System	200 – 400 microns	200 – 400 microns	750 – 1,000 microns	>1,100 microns
Minimum Over coating Time	24 hours	48 hours	60 hours	72 hours
Maximum desired over coating time	4 days	4 days	4 days	4 days



**ADVANTAGES**

<b>NATIONAL INTUMESCENT PAINT SYSTEM</b>	Single component system, easy to apply and effective for metal structures. Suitable at various film thicknesses for desired period of fire protection.
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**APPLICATION INSTRUCTION**

<b>SURFACE PREPARATION</b>	<p>Steel preparation before priming should be done in accordance with the recommended primer's product data sheet.</p> <p>(To be Clean the steel structure with abrasive blast clean to Sa 2 ½ with minimum surface profile 30 microns for DFT up to 500 microns, and minimum surface profile 50 microns for DFT more than 700 microns. Abrasive used for blasting should be dry and free from dirt, oil grease or contamination and have content of water soluble matter not exceeding 0.05%.</p> <p>Remove weld spatter and smooth weld seems and sharp edges. Clean the primed steel substrate film from oils, fats, grease, dirt etc. in accordance with SSPC-SP1 solvent cleaning.</p> <p>The steel substrate temperature should be between 10°C and 45°C and at least 3°C above the Dew Point, during application and curing periods.</p> <p>Relative humidity, during application and curing periods to be less than 85%).</p>
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**APPLICATION DATA**

<b>APPLICATION METHOD</b>	Airless, Spray, Brush, roller
<b>CLEANING/THINNING</b>	National Intumescent Thinner
<b>THINNER (VOLUME)</b>	0-5% depending upon the required DFT and application condition
<b>CONV. SPRAY REQUIREMENTS</b>	Possible
<b>AIRLESS SPRAY REQUIREMENTS</b>	Pressure : 120 – 150 Bar (1700 – 2125 psi)
<b>NOZZLE SIZE</b>	0.015" - 0.018"
<b>NOZZLE ANGLE</b>	20° - 50°, depending on shape of steel structure
<b>MIXING RATIO (BY VOLUME)</b>	One Pack
<b>POT LIFE @ 30°c (100 ml)</b>	NA



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**SYSTEM**

<b>RECOMMENDED SYSTEM</b> To be applied on prepared surface. - Clean the surface of metal. - Sand blast the surface, if ferrous. - For non-ferrous surface, contact Tech. Dept./coating advisor of National Paint.	For ferrous surfaces:
	National Guard Zinc Phosphate Epoxy Primer : 1 coat
	National Intumescent Paint : Thickness as recommended by Technical service.
	Nationalthane Topcoat (Clear/Shade) : 1 – 2 coats
<b>SPECIFIC PROPERTIES AS INTUMESCENT PAINT</b>	The dried film, reacts above 200°C in a fire test situation, resulting into swelling to many times the original thickness to produce an insulating foamed carbonaceous char that reduces the rate of temperature increase, of the steel and hence prolongs its load bearing capacity. National Intumescent Paint can be applied at different film thickness for achieving fire protection up to 2 hours.

**NATIONAL/INTERNATIONAL TEST CERTIFICATES**

Sr. No.	Test Description	Test Reference	Compliance
1	VOC	USEPA 24 ISO 11890 – 2	Local Regulatory Requirements
2	Reaction to Fire	ASTM E 84	
3	Fire Resistance Test	EN 1363 – 1:2012 EN 13381 – 8:2010 (Issued by LGAI Technology Center (APPLUS) & Directorate of Civil Defence, Sharjah, UAE)	

**ADDITIONAL DATA**

<b>SHELF LIFE @ 30°C</b>	12 months, in original, sealed container, with proper storage conditions.
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**HEALTH & SAFETY**

<b>SAFETY PRECAUTIONS</b>	<p>As a general rule, avoid skin and eye contact by wearing overalls, gloves, goggles, and mask etc. Spillage on skin should immediately be removed by thorough washing with water and soap or suitable cleaner. Eye should be flushed with fresh water. Avoid inhalation of vapours and paint mist by wearing suitable mask. In the event of ingestion and eye contact, seek medical attention immediately. Painting must be carried out in well-ventilated area.</p> <p>This product contains flammable materials and should be kept away from the sparks and open flames, smoking in the area should not be permitted. Local safety regulations should be followed.</p>
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**STORAGE & HANDLING**

<b>STORAGE</b>	<p>Store the paint in proper storage conditions as per the local regulations. Keep the paint container in sealed condition under shed, away from direct sunlight and extreme temperatures. Do not stock paint material near to any ignition sources. Do not put back the half or unused material back in original container, containing the supplied paint, to avoid contamination. Handle with care. Stir well before use.</p>
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**NOTE:** We warranty only the quality of our product and this data sheet is based on results obtained from experience and tests. We reserve the right to change data without prior notice. For surface preparation, safety details refer specifier and safety data.

This data sheet supersedes all previous issued.  
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