

Epoxy Intumescent

PRODUCT DESCRIPTION

Chartek 7 is a high performance epoxy intumescent fire protection coating system.

The product is a high build, two pack material providing excellent durability and combined corrosion and fire protection.

Tested and certified by Lloyd's Register (LR) and Det Norske Veritas (DNV) for structural and divisional fire protection.

INTENDED USES

Suitable for the protection of steel, aluminium and other substrates from the effects of hydrocarbon pool and jet fires.

To preserve functional integrity for a specified period of time of structures, pipework, vessels and fire resistant divisions.

Primarily intended for use in high risk environments such as oil, gas, petrochemical and power generation industries.

PRACTICAL INFORMATION FOR CHARTEK 7

Colour	Medium Grey (Part A - Dark Grey: Part B - White)
Gloss Level	Not applicable
Volume Solids	100%
Typical Thickness	Depends on protection required. Normally in the range of 4-20 mm (150-800 mils)
Theoretical Coverage	1 kg of Chartek 7 will provide 1 mm of fire protection to 1 m ² (based on plural component application)
Practical Coverage	Allow appropriate loss factors
Density	1000 kg/m ³ (62.427 lb/ft ³)- plural spray applied (ISO 1183:2004 Method A)
Method of Application	Two component heated plural spray unit, modified airless spray unit or trowel applied (see Application section)
Drying Time	

Temperature	Touch Dry	Hard Dry	Overcoating Interval with recommended topcoats	
			Minimum	Maximum
15°C (59°F)	2 hours	12 hours	12 hours	*
25°C (77°F)	1 hour	6 hours	6 hours	*
40°C (104°F)	1 hour	4 hours	4 hours	*

* Consult International Protective Coatings

REGULATORY DATA

Flash Point (Typical) Part A >106°C (223°F); Part B >106°C (223°F); Mixed >106°C (223°F)

VOC 0.00 lb/gal (0 g/lit)
1 g/kg EPA Method 24
EU Solvent Emissions Directive
(Council Directive 1999/13/EC)

See Product Characteristics section for further details

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SURFACE PREPARATION

Surface preparation and application should be carried out in accordance with the advice given in International Protective Coatings' Chartek Application Guidelines.

All surfaces to be coated should be clean, dry and free from contamination. Prior to paint application all surfaces should be assessed and treated in accordance with ISO 8504:2000.

Abrasive Blast Cleaning

Chartek 7 should only be applied to surfaces prepared by abrasive blast cleaning to Sa2½ (ISO 8501-1:2007) or SSPC SP10.

Primers

Selected primers or priming systems must have completed the primer qualification procedure from International Protective Coatings, feature on the International Protective Coatings published qualified primers list and be applicable to the appropriate certification. The preferred primer shall be an epoxy polyamide (e.g. Intergard 251) at a thickness not exceeding 75 microns (3 mils). Alternatively, a two coat primer system, such as epoxy zinc (e.g. Interzinc 52) and tie coat (e.g. Intergard 269) may be used, and should not exceed 110 microns (4.5 mils) combined dry film thickness.

APPLICATION

Mixing	If applying Chartek 7 by modified single feed airless spray pump or trowel, it will first be necessary to thoroughly power mix a kit of Chartek 7. Individual components must have been stored for 24 hours at 21 - 27°C (70 - 80°F) and fully power agitated before mixing.	
Mix Ratio	Always mix full kits. (For trowel application refer to the Chartek Application Guidelines).	
Working Pot Life	15°C (59°F) 90 minutes	25°C (77°F) 50 minutes
	The above figures are for trowel application. Working pot life is not applicable for plural airless spray application as the product is only mixed at the spray gun, at the point of application. For pre-mix airless spray, working pot life will be reduced in relation to the above figures. Refer to the Chartek Application Guidelines.	
Plural Component Airless Spray	Recommended and preferred	Heated plural equipment approved by International Paint. No thinners required
Airless Spray	Recommended - Small areas only	Recommended use minimum 68:1 modified airless spray unit, as qualified by International Protective Coatings. Typically thinned by up to 5% solvent by volume
Trowel	Suitable - small areas only	Typically thinned by up to 5% solvent
Thinner	International GTA123	Only for pre-mix and trowel application - consult Application Guidelines
Cleaner	International GTA007	
Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with International GTA007. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.	
Clean Up	Clean all equipment immediately after use with International GTA007. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays.	
	All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.	

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PRODUCT CHARACTERISTICS

The following conditions shall apply (or be generated) throughout the application:

Minimum Air Temperature	10°C (50°F)
Maximum Humidity	85%
Surface Temperature	A minimum of 3°C (5°F) above dew point of surrounding air.
General	Surfaces must be clean, dry and free from contaminants immediately prior to coating.

Application

Chartek 7 should be spray applied to ensure total wetting of the substrate is achieved. Where this is not possible by spray alone, then the first coat should be thoroughly trowelled and rolled to achieve this. The best time to overcoat Chartek 7 with itself is 'wet on wet' or within 12 hours of application and before the coating has had any chance to become contaminated.

Mesh Application

If mesh reinforcement is required, International Paint's HK-1 carbon composite mesh should be installed in accordance with specific fire design and as detailed in the Chartek Application Guidelines. For mesh requirements seek specific advice from International Protective Coatings.

Specific fire scenarios, e.g. those containing a portion of the duration where jet fire is anticipated, may require specific meshing and coating thickness. Details need to be addressed on a project specific basis for the acceptance of the Certifying Authority, e.g. LR or DNV.

After Mesh Application (if applicable)

Continue to spray apply Chartek 7 to bring up to the required film thickness

Equipment

Only equipment qualified by International Protective Coatings shall be used as detailed in the Chartek Application Manual or by the International Protective Coatings Technical Service Representative.

Applicator Qualification

Only companies in receipt of Qualified Applicator status from International Protective Coatings shall be used for Chartek 7 application. Companies shall document that they comply with this requirement prior to work commencement.

The Chartek 7 application shall be conducted by the Applicator Company using employees trained in the proper application procedures. As a minimum, Supervisory and QA/QC personnel on site shall be in receipt of individual qualifications, having attended an International Protective Coatings Chartek Applicator Training School. This is a minimum requirement and shall be documented prior to work commencement.

Inspection & QA

This is the responsibility of the Applicator but as a minimum must conform to the procedures laid down in International Protective Coatings Chartek QC Manual

Technical Service

This is available from International Protective Coatings and should be co-ordinated to ensure attendance at job start up. The Applicator Company is responsible for ensuring International Protective Coatings is notified of start up date.

Alternative Surface Preparation

Under certain project specific circumstances, International Protective Coatings has developed procedures for wet blasting, ultra high pressure water blasting (hydroblasting) and power tool cleaning. Consult International Protective Coatings for specific advice.

Maximum Surface Operating Temperature

At service temperatures of between 80°-120°C (176°-248°F) a suitable thermal barrier, e.g. Intertherm 7050, should be used between the substrate and the Chartek 7.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in colour and normal manufacturing tolerances.

SYSTEMS COMPATIBILITY

Chartek 7 is normally applied over a suitably primed substrate. Please contact International Protective Coatings for confirmation of suitability of selected primer.

Generally Chartek 7 will be topcoated to meet owners' colour schemes and finish requirements. International Protective Coatings recommends the use of topcoats in all external applications.

The following topcoats are recommended for Chartek 7:

Interfine 629HS	Interthane 990
Interfine 878	Interthane 990HS
Interfine 979	

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ADDITIONAL INFORMATION

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the International Protective Coatings data manual, Chartek Application and Quality Manuals.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

PACK SIZE

Kit Size	Part A Weight	Part B Weight
20 kg (44.1 lb) kit	14.2 kg (31.3 lb)	5.8 kg (12.8 lb)
50 kg (110.2 lb) kit	35.48 kg (78.2 lb)	14.52 kg (32.0 lb)

20 kg (44.1 lb) kit supplied as 1 drum Part A and 1 plastic pail Part B. Part A drum is partially filled to allow Part B to be added and pre-mixed prior to application by single leg spray or hand trowel application.
50 kg (110.2 lb) kit supplied as 2 full drums Part A and 1 full drum Part B. Suitable for use with plural component airless spray pumps.

For availability of other pack sizes, contact International Protective Coatings.

SHIPPING WEIGHT (TYPICAL)

Kit Size	Part A Weight	Part B Weight
20 kg (44.1 lb) kit	16.0 kg (35.2 lb)	6.4 kg (14.1 lb)
50 kg (110.2 lb) kit	39.1 kg (86.0 lb)	16.3 kg (36.0 lb)

STORAGE

Shelf Life 1 year under normal temperature conditions. Should be stored indoors and out of direct sunlight. A temperature range of 1-30°C (34-86°F) must be maintained.

Important Note

The information in this data sheet is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability at all for the performance of the product or for (subject to the maximum extent permitted by law) any loss or damage arising out of the use of the product. We hereby disclaim any warranties or representations, express or implied, by operation of law or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local representative that this data sheet is current prior to using the product.

This Technical Data Sheet is available on our website at www.international-marine.com or www.international-pc.com, and should be the same as this document. Should there be any discrepancies between this document and the version of the Technical Data Sheet that appears on the website, then the version on the website will take precedence.

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