Chartek® 7

International

Epoxy Intumescent

PRODUCT DESCRIPTION

Chartek 7 is a high performance, widely certified epoxy intumescent fire protection solution.

The product is a high build, two pack material providing excellent durability and combined corrosion and fire protection with 25 years proven track record for exceptional pool and high heat flux jet fire scenarios.

Certified for structural fire protection on carbon and galvanized steel. Tested in accordance with ANSI UL 1709, BS476:476-20/21 (Part 20 Appendix D), ISO TR834-3(1994), ISO 834:1975, ISO 22899-1:2007, IMO Res.A 754(18), OTI 95 634, IMO Res.MSC(61/67), IMO Res.MSC 307(88), GOST-EN 1362-2:2014, IMO Res.A 753(18) ISO 22899-2, ISO/TR 834-1, ASTM E1529, IMO Res.A 517(13), NORSOK M501-Rev6.

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 of structures and process equipment for a specified period of time.

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

PRACTICAL INFORMATION FOR CHARTEK 7

Gloss Level	Not applicable
Volume Solids	100%
Typical Thickness	Depends on protection required.
Theoretical Coverage	1 kg of Chartek 7 will provide 1 m² (based on plural component application) to 1 mm of fire protection
Practical Coverage	Allow appropriate loss factors
Density	62.427 lb/ft³ (1000 kg/m³)- plural spray applied (ISO 1183-1 (2019))
Method of Application	Heated Plural Component Airless Spray

Drying Time

			Overcoating Interval with recommended topcoats	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
50°F (10°C)	3 hours	18 hours	18 hours	*
68°F (20°C)	1.5 hours	8 hours	8 hours	*
104°F (40°C)	1 hour	4 hours	4 hours	*

* Please consult AkzoNobel for further information

REGULATORY DATA

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

VOC	0.00 lb/gal (0 g/lt) 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 AkzoNobel Chartek 7 Application Manual.

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 is typically applied to surfaces which have been abrasive blast cleaned to a standard of Sa2½ (ISO8501-1:2007) or SSPC-SP10 and suitably primed.

Primers

Selected primers or priming systems must be stated on the qualified primer list from AkzoNobel. The preferred primer shall be an epoxy type at a specified thickness not exceeding 3 mils (75 microns). Alternatively, a two coat primer system, such as epoxy zinc and tie coat may be used; the combined specified thickness should not exceed 4.5 mils (110 microns).

APPLICATION

Mixing

For trowel application individual components should be stored at (95°F) 35°C and fully power agitated before mixing.

Mix Ratio

2.45 part(s) : 1 part(s) by weight
(Refer to the Chartek 7 Application Manual)

Working Pot Life

50°F (10°C)	68°F (20°C)	104°F (40°C)
110 minutes	70 minutes	15 minutes

Pot life values refer to trowel workability without thinning, heated to (95°F) 35°C before mixing. If material is not pre-heated pot life will be extended but mixing will be more difficult. Working pot life is not applicable for plural airless spray application as the product is only mixed at the static mixer close to the spray gun, at the point of application. Refer to the Chartek 7 Application Manual.

Plural component airless spray	Recommended and preferred	Heated plural equipment approved by AkzoNobel. No thinners required
Airless Spray	Suitable	Recommended use minimum 68:1 modified airless spray unit, as qualified by AkzoNobel. Typically thinned by up to 5% solvent by volume.
Trowel Thinner	Suitable International GTA123	Refer to the Chartek 7 Application Manual Only for pre-mix and trowel application - consult Chartek 7 Application Manual

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	50°F (10°C)
Maximum Humidity	85%
Surface Temperature	A minimum of 5ºF (3°C) 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 as soon after the minimum overcoating interval has been achieved or before the coating has had any chance to become contaminated.

Where Chartek 7 is overcoated with cosmetic topcoats, the following overcoat intervals will apply:

	Minimum	Maximum*
50°F (10°C)	24 hours	7 days
77°F (25°C)	18 hours	7 days
104°F (40°C)	6 hours	4 days

(*For Interthane 990 maximum overcoating interval is six months)

Mesh Application (if applicable)
Some ratings do not require any reinforcement mesh. If mesh reinforcement is required, AkzoNobel HK-1 or HK-2 carbon fibre mesh should be installed in accordance with specific fire design and as detailed in the Chartek 7 Application Manual. For mesh requirements seek specific advice from AkzoNobel.

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

Equipment
Only equipment qualified by AkzoNobel shall be used as detailed in the Chartek 7 Application Manual and by the AkzoNobel Technical Service Representative.

Applicator Qualification
Only companies in receipt of Qualified Applicator status from AkzoNobel 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 and qualified 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 AkzoNobel 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 AkzoNobel Chartek QC Manual

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

Alternative Surface Preparation
Under certain project specific circumstances, AkzoNobel has developed procedures for wet blasting, ultra high pressure water blasting (hydroblasting) and power tool cleaning.

Maximum Surface Operating Temperature
At service temperatures of between 176-248ºF (80-120ºC) a suitable thermal barrier, e.g. Intertherm 7050, should be used between the substrate and the Chartek 7.

Note: applied density values are typical and are provided for guidance purpose only. Please refer to the Chartek 7 Application Manual.

SYSTEMS COMPATIBILITY

Chartek 7 is designed for application to correctly prepared substrates which have been suitably primed. The following primer examples are qualified for use with Chartek 7:

Intergard 269	Intershield 300
Intergard 251	Intershield 4000USP
Intergard 2511	Interzinc 52/Intergard 269
Intergard 2575	
Intergard 7500	

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.

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The following topcoats are recommended for Chartek 7:

Interthane 990
Interfine 2080*
Interzone 954

* As regionally available