Chartek® 1620CSP

International

Cold Spill Protection

PRODUCT DESCRIPTION

Chartek 1620CSP is a high performance, epoxy intumescent cryogenic spill and fire protection solution.

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

Certified for fire protection on carbon and galvanised steel. Tested in accordance with ANSI UL1709, BS476-20/21 (Part 20 Appendix D), ISO TR 834-3 (1994), ISO 22899-1, ISO 20088-1/3, NORSOK-M501 - Revision 6 System 5A.

INTENDED USES

Suitable for protection of steel from the effects of cryogenic liquid release hydrocarbon pool and jet fires. To preserve the 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 1620CSP

Gloss Level	Not applicable
Volume Solids	100%
Typical Thickness	Depends on protection required.
Theoretical Coverage	1 kg of Chartek 1620CSP will provide 1 mm of fire protection to 1.1 m² (based on plural component application)
Practical Coverage	Allow appropriate loss factors
Density	900 kg/m³ (56.185 lb/ft³) plural spray applied (ISO 1183-1 (2019))
Method of Application	Heated Plural Component Airless Spray

Drying Time

			Overcoating interval with self	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
15°C (59°F)	8 hours	18 hours	4 hours[1]	1 week
25°C (77°F)	5 hours	16 hours	3 hours[1]	1 week
40°C (104°F)	2 hours	6 hours	2 hours[1]	4 days

[1] Time at which the base layer can withstand a WFT gauge.
*Please consult AkzoNobel for further information

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/lt)	EPA Method 24
	1 g/kg	EU Solvent Emissions Directive (Council Directive 2010/75/EU)

Coating hazard marker GB 30981.2-S-Pb≤1000-NC Qualified for GB 30981.2-2025

See Product Characteristics section for further details

Cold Spill Protection

SURFACE PREPARATION

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

Abrasive Blast Cleaning

Chartek 1620CSP should only be applied to steel surfaces prepared by abrasive blast cleaning to Sa2½ (ISO 8501-1:2007) or SSPC SP10. A sharp, angular surface profile of 50-75 microns (2-3 mils) is required.

Primers

For cryogenic spill protection it is important that the total coating system shows satisfactory insulation and fire performance. The preferred primer shall be an epoxy or zinc epoxy type (e.g. Intergard 269, Intershield 300 or Interzinc 52/Intergard 269). International Protective Coatings publishes a qualified primers list which should be consulted for thickness tolerances.

Damaged / Repair Areas

All areas requiring repair should ideally be blast cleaned to Sa2½ (ISO8501-1:2007) or SSPC-SP10. However, it is acceptable that areas less than one square metre in size can be power tool cleaned to SSPC-SP11 provided a clean, roughened surface is achieved. A profile of 50-75 microns (2-3 mils) must be maintained. A recommended primer can then be applied prior to Chartek 1620CSP application.

APPLICATION

Mixing

If applying Chartek 1620CSP by approved modified single component airless spray unit or trowel, it will first be necessary to thoroughly power mix a kit of Chartek 1620CSP. Individual components must have been stored for 24 hours at 20 - 30°C (68 - 86°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)	25°C (77°F)
90 minutes	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 approved modified single component 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 AkzoNobel
Airless Spray	Recommended - Small areas only	Recommended use minimum 68:1 approved modified single component airless spray unit (see Chartek Application Guidelines for more details), as qualified by International Protective Coatings. Typically thinned by up to 5% solvent
Trowel	Suitable - small areas only	A maximum of 5% solvent may be added
Thinner	International GTA123	Only for pre-mix and trowel application - consult Chartek 1620CSP 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.

PRODUCT CHARACTERISTICS

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

Minimum air temperature: 10ºC (50ºF)
Maximum humidity: 85%
Surface temperature: A minimum of 3ºC (5ºF) above the dew point of surrounding air
General: Surfaces must be clean, dry and free of contaminants immediately prior to coating.

Application
Chartek 1620CSP 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 1620CSP 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 1620CSP is to be overcoated with recommended topcoats, the following overcoating intervals will apply;

	Minimum	Maximum
10ºC (50ºF)	24 hours	7 days
25ºC (77ºF)	18 hours	7 days
40ºC (104ºF)	6 hours	4 days

Mesh Application
If mesh reinforcement is required, International Paint's HK-1 or HK-2 carbon composite mesh should be installed in accordance with specific fire design and as detailed in the Chartek Application Guidelines. 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
Continue to spray apply Chartek 1620CSP 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 AkzoNobel shall be used for Chartek 1620CSP application. Companies shall document that they comply with this requirement prior to work commencement. The Chartek 1620CSP 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.

Maximum Surface Operating Temperature
At service temperatures of between 80°-120ºC (176°-248ºF) a suitable thermal barrier, e.g. Intertherm 7050, should be used between the substrate and the Chartek 1620CSP.

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 1620CSP is normally applied over a suitably primed substrate. Please contact International Protective Coatings for confirmation of suitabiity of selected primer.

Chartek 1620CSP shall be topcoated to meet owners' colour schemes and finish requirements.

Suitable topcoats are:

Interfine 629HS
Interthane 990
Interzone 954

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

Individual copies of these information sections are available upon request.

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 Safety Data Sheet and the container(s), and should not be used without reference to the Safety Data Sheet (SDS).

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 AkzoNobel 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 AkzoNobel.

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.

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