Chartek® 1960CSP

Cold Spill Protection

PRODUCT DESCRIPTION

Chartek 1960CSP is a unique intumescent material that provides combined hydrocarbon fire protection and insulation against cryogenic liquid exposure. A high build, solvent free, two pack epoxy material, Chartek 1960CSP also provides excellent corrosion protection and blast resistance.

INTENDED USES

Optimised to protect steel from brittle fracture caused by the release of all types of cryogenic liquids such as liquid nitrogen and LNG, Chartek 1960CSP also provides resistance to pool and jet fires.

Suitable for all types of offshore and onshore cryogenic liquid handling facilities such as LNG liquefaction plants, re-gas terminals, FLNGs and FSRUs, Chartek 1960CSP can be used on decks, structures, pipework and vessels.

Approved to the ISO 20088-1 standard (Determination of the resistance to cryogenic spillage of insulation materials - Part 1:Liquid phase).

PRACTICAL INFORMATION FOR CHARTEK 1960CSP

Colour	Buff
Gloss Level	Not applicable
Volume Solids	100%
Typical Thickness	Depends on fire and CSP protection required
Theoretical Coverage	1 kg of Chartek 1960CSP will provide 1 mm of fire protection to 1.25 m² (based on plural component application)
Practical Coverage	Allow appropriate loss factors
Density	Nominal: 800 kg/m³ (50 lb/ft³) Note: Final density depends on method of application and may vary.
Method of Application	Heated Plural Component Airless Spray or trowel applied (see Application section)

Drying Time

			Overcoating interval with self	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
25°C (77°F)	2 hours	9 hours	60 minutes	7 days[1]
40°C (104°F)	60 minutes	4 hours	60 minutes	7 days[1]

[1] See International Protective Coatings Definitions and Abbreviations

REGULATORY DATA

Flash Point (Typical) Part A >101°C (214°F); Part B >100°C (212°F); Mixed >101°C (214°F)

VOC	0.00 lb/gal (0 g/lt) 35 g/kg	EPA Method 24 EU Solvent Emissions Directive (Council Directive 1999/13/EC)

See Product Characteristics section for further details

Cold Spill Protection

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

Steel

Abrasive blast clean to Sa2½ (ISO 8501-1:2007) or SSPC-SP10. If oxidation has occurred between blasting and application of Chartek 1960CSP, the surface should be reblasted to the specified visual standard. Surface defects revealed by the blast cleaning process should be ground, filled, or treated in the appropriate manner.

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 1960CSP application.

APPLICATION

Mixing

Individual components must be stored at 25-30°C (77-86°F) for 24 hours prior to mixing.

Mix Ratio

2.3:1 by volume for plural component application
2.5:1 by weight for trowel application

Working Pot Life

25°C (77°F)	40°C (104°F)
90 minutes	30 minutes

The above figures apply to trowel application.

Plural Component Airless Spray	Recommended and preferred	Heated plural equipment approved by International Paint
Trowel	Suitable	Small areas only
Thinner	International GTA123	Thinning not required for plural spray application.
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.

Cold Spill Protection

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 1960CSP 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 1960CSP with itself is 'wet on wet' or within 12 hours of application and before the coating has had any chance to become contaminated.

Where Chartek 1960CSP is to be overcoated with recommended topcoats, the following overcoating intervals will apply;

	Minimum	Maximum
25ºC (77ºF)	10 hours	7 days
40ºC (104ºF)	4 hours	7 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 1960CSP 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 1960CSP application. Companies shall document that they comply with this requirement prior to work commencement.
The Chartek 1960CSP 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.

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 1960CSP.

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

The following primers are approved for use with Chartek 1960CSP

Intergard 269
Intershield 300
Interzinc 52

The following topcoats are approved for use with Chartek 1960CSP

Interfine 878
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 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
30 kg (66.1 lb) kit	10.7 kg (23.6 lb)	8.6 kg (19.0 lb)

30 kg (66.1 lb) kit supplied as 2 drums of Part A and 1 plastic pail of Part B.

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

SHIPPING WEIGHT (TYPICAL)

Kit Size	Part A Weight	Part B Weight
30 kg (66.1 lb) kit	2 x 12.5 kg (27.6 lb)	10.4 kg (22.9 lb)

STORAGE

Shelf Life	10 months at 25°C (77°F) in original, unopened containers. Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.

Important Note

www.international-pc.com