

Chartek 1709 – Basic Installation Instructions

(For full detailed information refer to the current Chartek 1709 Application Manual)

A. Steel Surface Preparation and Primer Application

1. Clean surfaces of dirt, oil and grease to required standard, generally SSPC-SP1.
2. Blast clean to required standard, generally ISO 8501-1 Sa 2½ or SSPC-SP10, with 50-75 microns (2-3 mils) blast profile.
3. Where primer is required, only an International Paint qualified primer system should be used.
4. Check ambient environmental conditions to ensure the air and steel temperatures and relative humidity are in accordance with the primer manufacturer's requirements.
5. Prime surfaces ensuring primer is kept within specified thickness, generally 50-75 microns (2-3 mils) with maximum of 100 microns (4 mils) at overlap areas, to avoid over thickness of primer.

B. Mesh Reinforcement Using HK-1™ Hybrid Carbon and Glass Fibre Mesh System



1. For Chartek 1709 mesh reinforcement is required in accordance with the ANSI/UL1709 fire ratings on I sections for fire durations of 1½ hours or greater.
2. Firstly, cut mesh to required size. Mesh should be applied across flange and around flange tips (see diagram).
3. Ensure that straight carbon (black) fibre is parallel to flange edges and the hollow section axis.
4. For hollow sections mesh should be wrapped around the member for 100% coverage.
5. Apply mesh into wet Chartek at approximately mid film thickness and roll thoroughly into Chartek with short nap roller lightly dampen with PMA solvent (International Paint's GTA123 or equivalent).
6. Overlap adjacent mesh pieces by a minimum of 50mm (2").
7. After installing HK-1, spray a light coat of Chartek over the mesh to seal the surface or continue to build up the next full layer of thickness.
8. Only use International Paint's HK-1 hybrid carbon and glass fibre mesh.

C. Application of Chartek Using Approved Heated Plural Airless Spray Equipment

1. Ensure ambient environmental conditions are within following parameters: Minimum air temperature 10°C (50°F); maximum relative humidity 85%; surface temperature at least 3°C (5°F) above dew point temperature.
2. Check surface for cleanliness and that primer is correct thickness and sufficiently cured.
3. Ensure surfaces not to be coated with Chartek are suitably masked and protected.
4. Check following parameters on the heated plural spray machine:

Parameter	Part A	Part B
Storage tank temperature:	Max. 60°C (140°F)	Max. 50°C (122°F)
In-line heater temperature:	55-65°C (131-149°F)	45-55°C (113-131°F)
Mix ratio of 2.5:1 (acceptable range 2.37 to 2.61:1)	70-72%	30-28%
Hose heater temperature:	60-70°C (140-158°F)	
Gun exit temperature:	50-55°C (122-131°F)	
Displacement pump pressure:	175-240 bar (2500-3500 psi)	
Spray tip sizes:	0.035-0.041"	

5. Spray first coat and, if required, trowel to thoroughly wet surface.
6. Install HK-1 mesh reinforcement, if required, at mid film (see section B above)
7. Build up thickness uniformly, using short nap rollers lightly dampened with PMA solvent (International Paint's GTA123 or equivalent) to remove trowel marks and achieve uniform finish and thickness.
8. Surface finish of Chartek to be in accordance with client's required specification.

D. Application of Chartek Using Approved Single Component Airless Spray Equipment

1. Follow steps C1, C2 and C3 (see above).
2. Check following parameters for airless equipment:
 - (a) Graco Premier (or equivalent) mounted on a power ram with a follower or induction material feed plate.
 - (b) Pump compression ratio from 68:1 to 74:1 fitted with check valve to eliminate spray fan fluctuation.
 - (c) ¾" ID x 12" long in-line static mixer.
 - (d) ¾" ID fluid line 15-20 m (50-65 ft.) long.
 - (e) ½" ID whip line 4.5 m (15 ft.) long.
 - (f) High pressure airless spray gun with 0.035-0.041" spray tips.
3. Mix Chartek Parts A and B as follows:
 - (a) Add a maximum of 1 litre (0.25 US gallons) PMA solvent (International Paint's GTA123 or equivalent) to Part A and mix to smooth consistency.
 - (b) Pour Part B into Part A container, scraping the sides of Part B container to empty it completely.
 - (c) Mix thoroughly until a smooth texture and uniform colour are achieved.
4. Follow steps C5 to C8 (see above).

E. Precautions

1. Chartek 1709 should be topcoated with qualified topcoat when sufficiently cured, ensuring the surface is clean and dry.
2. Only trained and qualified personnel should install Chartek.
3. Keep yourselves clean (hot water and soap is best) and always use suitable personal protective equipment.
4. Keep equipment clean, well maintained and ensure all hoses and fittings are rated to the high pressures of the pump.
5. Contact International Paint's Field Service for any further information or assistance.

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