

International Technical Ceramics products sold by Dempsey's Forge

ITC-100 HT Ceramic Coating

Surface Preparation

Remove all loose and weakened fiber, bricks, debris, particles, dust and grease from interior walls, door, crown, floor and grooves behind electrical elements. Immediately before applying ITC-100 HT, dampen surface by spraying lightly with water.

Mixing - Dilution

To 1 part ITC-100 HT add 1/2 part water by volume and mix well. Power mixing is required for large quantities. Mixing then letting set for a few hours or overnight then mixing again produces a smooth mixture.

Applying

Spray large surfaces using a texture paint system of the type used for ceilings. A canister type spray gun with nozzle suitable for ceramics can be used for medium size surfaces. Agitate as necessary to prevent settling. For small areas a brush can be used. Generally an inexpensive 1" (25mm) brush is suitable but for tight places a large artist's paint brush of about 1/2" (12mm) works well.

When brushing onto ceramic fiber two coats are usually needed. The first coat may be fired briefly prior to second coat.

ITC-296 A High Purity Ceramic Coating

Surface Preparation

Apply ITC-100 HT or other ITC products according to instructions. Fire thoroughly (ITC recommends two or three times) before applying ITC-296A.

Mixing - Dilution

To 1 part ITC-100 HT add 1/2 part water by volume and mix well. Power mixing is required for large quantities. Mixing then letting set for a few hours or overnight then mixing again produces a smooth mixture.

Applying

Spray large surfaces using a texture paint system of the type used for ceilings. A canister type spray gun with nozzle suitable for ceramics can be used for medium size surfaces. Agitate as necessary to prevent settling. For small areas a brush can be used. Generally an inexpensive 1" (25mm) brush is suitable but for tight places a large artist's paint brush of about 1/2" (12mm) works well. A thin top coat of a maximum of 1/32" (.08 mm) is all that is necessary.

ITC-213 Ceramic Coating for Metals

Surface Preparation

Remove all loose rust layers, grease, dirt and molten metal or scale buildup. If possible roughen the surface by using a file or hacksaw blade. Sandblasting is not recommended but is not detrimental. Wash surface with a 1 : 1 solution of liquid Chlorox bleach and water. DO NOT use solvent based degreasers.

Mixing - Dilution

To 1 part ITC-213 add 1/3 part water by volume and mix well. Power mixing is required for large quantities. Mixing then letting set for a few hours or overnight then mixing again produces a smooth mixture.

Applying

The best results are obtained by using a paint edger or a piece of cloth dipped in the ITC-213 and then vigorously rubbing the coating onto the surface as thinly as possible. A thin top coat is all that is necessary.

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ITC-148 Heavy Duty Patching Compound

Surface Preparation

Remove all loose and weakened fiber, bricks, debris, particles, dust and grease from interior walls, door, crown, floor and grooves behind electrical elements. Dampen with a light spray of water and apply ITC-100 HT and let air dry or fire briefly.

Mixing - Dilution

To 1 part ITC-148 add approximately 1/8 part ITC-100 HT (previously mixed with water per instructions) to achieve desired consistency.

Applying

Apply over ITC-100 HT . Use trowel, spatula or putty knife as best suits the application. Allow to air dry thoroughly before firing.

ITC-200 EZ Patching Compound

Surface Preparation

Remove all loose and weakened fiber, bricks, debris, particles, dust and grease from interior walls, door, crown, floor and grooves behind electrical elements. Dampen with a light spray of water and apply ITC-100 HT.

Mixing - Dilution

Varies. Use a small amount of water to moisten if necessary. Diluted ITC-100 HT may also be used, especially if thinning to a mortar like consistency.

Applying

Apply over fresh ITC-100 HT . Use trowel, spatula or putty knife as best suits the situation. Allow to air dry thoroughly before firing. Top with ITC-100 HT and optionally ITC-296 A.

ITC Product general application information

Compatibility

All ITC products are compatible with each other and with all other refractories as noted. The exception is ITC-213 which is formulated to use on metals and graphite. It can be used as a primer to apply other ITC products over metals.

Temperature Rating

ITC products have a higher temperature rating than any material it is applied over. Application of ITC-100 and ITC-296A increase the surface temperature resistance of the materials they are applied over by reflecting more Infrared energy reducing the temperature of those materials under the coating.

Strength

ITC coatings are harder and stronger than the materials they are applied over. As coatings they can be harder than the substrate but no stronger.

Drying

ITC products air dry but become harder upon firing. For multiple coatings ITC products can be dried by firing briefly. Cast refractories should be thoroughly dried and then slowly fired to maximum temperature before applying ITC coatings. ITC patching compounds should also be air dried completely prior to initial firing. Drying time for coatings is not long (about 1/2 hour), but varies according to temperature and humidity. Patching compounds take longer according to thickness.

Energy Efficiency

ITC coatings are highly efficient reflectors of Infrared (heat) energy. This efficiency is much higher than other refractory materials and has been proven to reduce fuel costs. Note that this efficiency degrades over time as the surfaces becomes sooted or contaminated with other material.

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