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## InfuseKote

### Liquid for Infusing into Porous Components

InfuseKote is a clear, water-based liquid that can be used to infuse, infiltrate and impregnate porous refractory ceramic substrates. When heated, InfuseKote forms a vitreous glaze-like sealant surface layer that withstands thermal cycling.

InfuseKote can be used on any high-fired porous material. Application can be by brushing, spraying, or dipping, or by soaking the piece in the InfuseKote liquid for greater penetration. After coating or infusion, drying can be done at 90 C for 1 hour, and then heated to 500-600 C for complete outgassing. Further heating to 950 C will bond the infused material tightly to the substrate. Heating to above 1100 C will form a stable, clear, non-silicate glaze on the porous ceramic.

#### Key Attributes

- Seals porosity
- Can react to form a refractory glass-ceramic
- Forms vitreous layer of non-silica 'glaze'
- Applies like house paint
- Safe, water-based

#### Ideal Use

- Sealing ceramic surfaces from gaseous or liquid/slag penetration and attack
- Preventing moisture pickup during downtime
- Making a denser, stronger material for high-temperature uses

#### Use Notes

1. Infuse/impregnate porous parts by dipping or soaking the parts with the InfuseKote clear liquid. Brushing or air spraying can be done also but are not as effective in filling the pores.
2. The penetration of the InfuseKote can be improved by placing into a container and applying moderate vacuum (such as with a vacuum dessicator or vacuum degassing chamber) over the container of clear liquid InfuseKote with the porous part. Bubbles will be seen coming from the porous part. If bubbles cease being observed, most of the pores are filled: leaving under vacuum for a few minutes is advised, after which the part can be removed after releasing the vacuum to atmospheric pressure.
4. After each infusion, dry at 90 C for around 1 hour. Heating to 500-600 C will fully outgas the InfuseKote and is advised if multiple infusions/cycles are desired.
5. Further one-time heating to 1100-1200 C leads to a glaze-like, clear coating.
6. A part coated with InfuseKote can be used to temperatures over 1100 C.



#### Specifications

Active Ingredient	Proprietary Refractory Mixture
Max Use Temperature	
All Atmospheres	>1200 C (> 2192 F)
Fired Composition	Proprietary
Liquid Carrier	Water
Binder Phase	Stable refractory mixture
Brookfield Viscosity (cps)	60 @2/60
Specific Gravity	1.62
Color	Clear
Shelf Life (months)	>12
Coating pH	2
H F R Ratings	1-0-0
Substrate Use	Porous ceramics

#### Size

Standard Size: 1 gallon pail

#### Safety Information

- Consult SDS before use.
- Avoid breathing of spray/vapors.
- For Industrial Use only.

**NOTES:** After infusing and heating to around 500 C, the surface can be overcoated with any of our many specialty coatings of Boron Nitride, Zirconium Oxide, Yttrium Oxide etc. to provide a very thermodynamically-stable layer for reactive materials/environments. CeraSeal BN, A, or FZM can be used as topcoats for the porous parts, for further sealing.

#### CAUTION: DO NOT CONTACT WET COATINGS WITH MOLTEN METAL

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