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Toughseal for Oxidation Protection

Stops Oxidative Degradation of Carbon-Carbon and Ceramic-Matrix Parts

Toughseal for Oxidation Protection is a water-alcohol-based, liquid penetrant which is applied to carbon-carbon composite and/or carbon-ceramic (C/SiC ceramic-matrix composite) brake disks and components. Toughseal allows excellent oxidative protection of the carbon-based materials.

Key Attributes

- Protects carbon-based materials from oxidation
- Use temperature to 800 C (1472 F) with thermal cycling
- Water-resistant after curing.
- Water-alcohol-based, safe and easy to use and cleanup

Ideal Uses

- Infiltrant for stopping oxidation deterioration of carbon-based materials

Use Notes

1. Clean surfaces to be painted of any oils, dirt, scale, etc.
2. Apply by brush, spray, or dip to saturate the part
3. Allow to thoroughly dry at room temperature.
4. Cure by heating to 260 C (500 F) in air atmosphere for 1 hour.



Specifications

Active Ingredients	>99% $\text{Al}_2\text{O}_3\text{-P}_2\text{O}_5$
Use Atmosphere, air	$\geq 800\text{ C } (\geq 1472\text{ F})$
Fired Composition	52.5% P_2O_5 – 46.5% Al_2O_3
Liquid Carrier	Water/Ethanol
Brookfield Viscosity (cps)	90 @2/60
Specific Gravity	1.2
Color	Pink
Shelf Life (months)	3-6
Coating pH	2-3
H F R Ratings	1-1-0
Substrate Use	C-C and C/SiC parts
% Volatiles	76

Sizes and colors

Toughseal is a pink-tinted liquid
Standard Size: 1 gallon pail

Safety Information

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

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