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**SPFY**

## SPFY - Yttrium Oxide Coating for SuperPlastic Forming

SPFY is a water-based coating of Yttrium Oxide that is specially formulated to allow lubrication during superplastic forming operations, as well as isothermal forging and back extrusion. SPFY is comparable to JK 41 coating that is based on Boron Nitride. Thus, SPFY has a very uniform and consistent viscosity to allow its use for automatic and robotic air spraying setups.

### Key Attributes

- Provides lubrication for SPF/ Isothermal Forging/ Back Extrusion
- Flows with the metal during forming
- Ideal for deep drawing areas
- Boron free
- Water-based, Easy to Clean Up
- Not Affected by Freezing
- Easily removed after forming with dilute acid solution

### Ideal Use

- Coating metal parts that are to be formed
- For any parts requiring automatic/robotic spray coating for uniform thin layers
- Metals and alloys that require no Boron Nitride due to its oxidation or other reasons

### Use Notes

1. Resuspend if needed. Can dilute with water.
2. Clean surfaces to be painted of any oils dirt, scale, etc.
3. Apply one thin layer by air-spray or dipping.
4. Allow to dry before use

### Safety Information

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



### Specifications

Active Ingredient	Y <sub>2</sub> O <sub>3</sub>
Max Use Temperature	>1400 C (>2552 F)
Use Atmosphere	All
Fired Composition	>92% Y <sub>2</sub> O <sub>3</sub>
Liquid Carrier	Water
Binder Phase	Al <sub>2</sub> O <sub>3</sub>
Brookfield Viscosity (cps)	<100 @3/60
Specific Gravity	1.3
Color	White
Shelf Life (months)	>12
Coverage (ft <sup>2</sup> /gal) on Metals	To 400
Coating pH, typically	8
H F R Ratings	1-0-0
Substrate Use	All

**Note:** Lubrication/performance can be tailored by mixing SPFY with SPFM (MgO)\* and/or SPFB (Boron Nitride)\*

\*Contact ZYP Coatings for SPFM or SPFB  
(not on website)

### Sizes and colors

SPFY is a white colored water-based paint.

Standard Size: wide-mouth 1 gallon pail.  
Also available in 5 gallon pail upon request.

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

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