

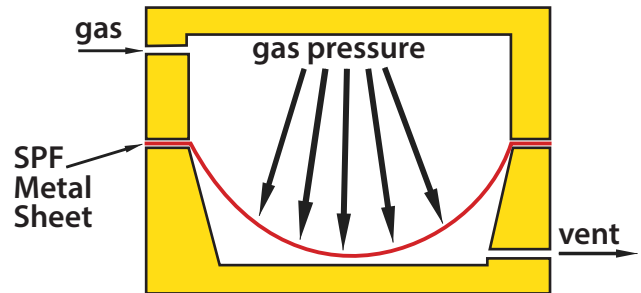


120 Valley Court  
Oak Ridge, TN 37830  
Ph: 865-482-5717  
FAX: 865-482-1281  
zypcoatings.com

## Superplastic Forming

### Lubricant Coatings for Superplastic Forming

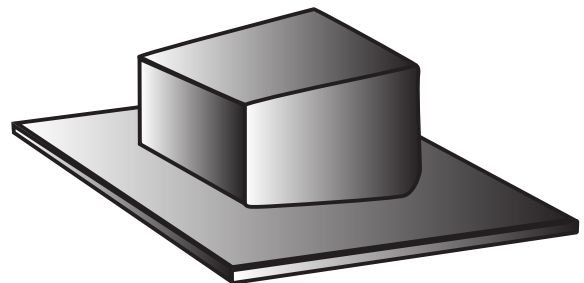
ZYP Coatings, Inc. is the world's major supplier of Boron Nitride (BN) lubricant coatings for use with Superplastic Forming (SPF) and Quick Plastic Forming (QPF) operations. A complete family of BN products is available for aluminum sheet that is used in lightweight transportation structures as well as for titanium sheet and bulk which is used for aerospace applications and dental inserts. Many other specialty superplastic alloys also enjoy the benefits of Boron Nitride as the lubricant of choice.



Through years of development and perfection of particle geometry and adherence characteristics to assure ideal performance with SPF and QPF operations, ZYP Coatings produces all its BN products for Superplastic use with precise formulation techniques that provide critically-sized BN powder along with controlled adhesion and elongation properties which provide lubrication over the entire SPF/QPF cycle – while permitting easy removal after forming, yet avoiding coating buildup on dies. No other Boron Nitride coatings/materials can provide the excellent results that are regularly achieved with the BN lubricant coatings for Superplastic Forming which are produced by ZYP Coatings, Inc.



Formed Metal



- DRY FILM LUBRICATION
- FLOWS WITH THE METAL
- EXCELLENT RELEASE
- EASY REMOVAL
- MAXIMUM EFFICIENCY
- MINIMUM DIE BUILDUP
- IDEAL FOR ROBOTIC SPRAY APPLICATION TECHNIQUES

#### PRODUCTS

**JK 41** - A major "work-horse" water-based formulation used for most applications; ideal for controlled spray-application.

**JK SD** - A fast-drying, solvent-based formulation for specialty-dip as well as thin-coat-spray applications.

**BN Aerosol Lubricoat** – A 13-oz. aerosol, solvent-based formulation that is ideal for small-scale and laboratory- development work.

**SPFY** - 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.

ZYP Coatings, Inc. (ZYP) makes no warranties, express or implied, including the warranty of merchantability or fitness for a particular service. Product is for industrial/commercial use only. Users should determine suitability for their use. In no event will ZYP be liable for any direct, indirect, incidental, special or consequential damages or losses including, but not limited to loss of profits, in any way related to this product regardless of the legal theory asserted.