

# GAS DIFFUSERS - FOAM TEST

## METAL AND STONE



### THE PRODUCT

- A. Cylindrical gas diffuser - sintered five micron porous stainless steel (metallic)
- B. Spherical diffuser stone - fused crystalline alumina grain (non-metallic)

### PURPOSE

Per ASTM D892 and D6082, a 25.4 mm diameter gas diffuser connected to air-inlet tubes disperse gas into the test fluid held at temperature for a specified period of time. The volume of foam generated in the fluid is subsequently measured for acceptability. Out of specification diffusers are a major cause of inaccuracy in these test methods.

### FEATURES

- A. Meets Porosity and Permeability specifications
- B. Cylindrical gas diffuser used for D892 and D6082 are more uniform, easier to clean and holds specification for longer period of time.
- C. Spherical diffuser stone permitted for D892 only.

## MEASURING FOAMING TENDENCY IN LUBRICANTS

The tendency of oils to foam can be a serious problem in systems such as high-speed gearing, high-volume pumping, and splash lubrication. Foaming can cause inadequate lubrication, cavitation, and loss of lubricant due to overflow; these events can lead to mechanical failure.

Gas diffusers supplied by Tannas are available either Verified (w/certificate) or Unverified. Gas diffusers should be checked periodically, preferably after each use, for porosity and permeability, as they will change differently with usage and diffuser type. Please refer to the respective test methods for instruction on the frequency gas diffusers should be checked (verified) for specification acceptance.

Tannas recommends the Cylindrical Stainless Steel diffusers for reasons outlined in the above Features section. However, both diffuser types are available for sale alongside our Tannas Foam Air Bath (TFAB) device as well as for use in liquid foam testing equipment. Contact us to learn more about both gas diffusers and the safe and efficient non-liquid TFAB instrument.

Cylindrical S/S Diffuser* – Verified	P/N 550157
Cylindrical S/S Diffuser* – Unverified	P/N 550023
Round Stone – Verified	P/N 550205
Round Stone – Unverified	P/N 550204
Maximum Pore Size	D892: Not greater than 80 µm D6082: 15 µm – 60 µm
Permeability @ 2.45 kPa (250 mm) water	3000 – 6000 mL of air/min.

*\*For ASTM D6082, only cylindrical metallic diffusers can be used.*



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