

Super Set 500 FNB Resin

Product Features

Super Set 500, Furan Nobake Resin, is a low nitrogen, low water furan resin that offers a number of features that set it apart from conventional furan resins on the market. The following product features characterize this binder:

- Low Water, Low Nitrogen
- Low Formaldehyde
- Low Viscosity
- High Tensile Strength
- Exceptional Sand Reclaimability

Product Description

Super Set 500 is a thermosetting furan resin that is used in conjunction with an acid catalyst which, when mixed with sand, undergoes a condensation reaction to form a cured polymer. Typically the amount of Super Set 500 resin applied to the sand will range between 0.8% to 1.2% resin, based on the weight of the sand. The quantity of acid used in the sand mix is dependent upon the type and strength of the acid, but normally ranges between 20% - 50% based on the weight of the resin.

Recommended practice when using FNB resins is to start with a clean, washed and dried silica sand. Reclaimed sands are also widely used with this type of product. If mechanically reclaimed sand is used, sand that is low in fines and residual binder (Loss on Ignition) is preferred. In continuous or batch-type mixers, the acid should be the first component added to the sand, with the resin added after the acid has been dispersed. Caution should be exercised to prevent the liquid resin and acid components from coming into direct contact with one another since the resulting reaction can be very exothermic.

Typical Physical Properties

Viscosity, cps	40
Water, %	6
Nitrogen, %	1.1
Free Formaldehyde, %	0.5

Performance Characteristics

Measurable tensile strength begins to develop shortly after the sand mix containing the Super Set 500 resin and acid catalyst is discharged into a core box or pattern. The rate of strength development is related to the chemistry of the resin, the catalyst used, and the core geometry. Tensile strength will vary due to the many factors known to affect binder performance, e.g. sand quality, sand temperature, mixing efficiency, etc.

Storage Guidelines

Recommended storage temperature is between 60 - 90 ° F. At lower temperatures, viscosity will increase, making pumping and mixing more difficult. At higher temperatures, shelf life can be adversely affected. Drum storage should be in a dry area, out of direct sunlight. Partially used drums should be tightly closed, to prevent contamination. The recommended stock rotation is six months when properly stored

Safe Handling

Chemically resistant gloves and eye protection should be used when handling or using chemical binders. Material Safety Data Sheets are available for all products. Drum labels also contain handling information. Furan resins will react in a violent exothermic reaction with the acid catalysts or other acids. Do not mix furan resin with any acid except on sand during use. Refer to the Material Safety Data Sheet for additional information.

Technical Service

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