Technical Data Sheet

Techniset™ 6400 PART II ISOCYANATE RESIN

Phenolic Urethane NoBake Part 2 Binder Designed for Ferrous Applications

Product Features

Techniset 6400 has been specifically developed for general foundry use. Tecniset 6400 offers a number of features and advantages when used with a Techniset Part 1 resin. These features include:

- High Tensile Strengths
- Superior Hot Strength
- Improved Work Time on Reclaimed Sands

Product Description

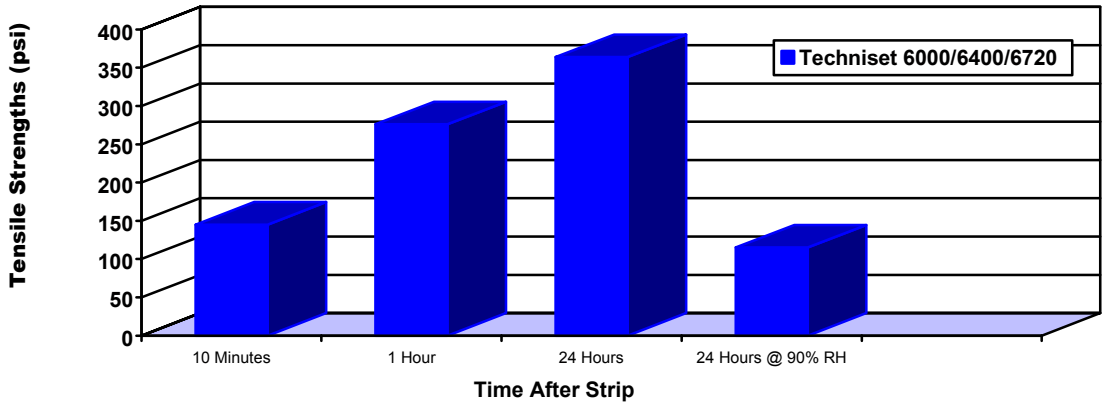
Techniset 6400 is a polymeric MDI-type isocyanate resin that is used in conjunction with a phenolic resin, such as Techniset 6000, for ferrous nobake applications. Typically, the Part 1 and Part 2 resin components are mixed with a suitable new sand, normally a silica or lake sand, or a reclaimed sand, in ratios ranging from 50/50 to 60/40, and at a total resin level in the range 0.8 to 2.0%, based on the weight of the sand. The sand mix also includes an amine catalyst, which is typically pumped into the Part 1 resin stream just prior to discharge into the sand. This catalyst is typically used at a level of from 2- 10% based on the Part 1 resin and is used to accelerate the formation of a urethane bond. A broad range of catalysts are available. The selection of an appropriate catalyst will allow a wide range of strip times to be achieved.

Typical Properties - Techniset 6400	
Flash Point, oF, TCC	146
Density, pounds per gallon	9.33
Viscosity, cps	20
Refractive Index	1.583

Tensile Strength Development

Work time / strip time characteristics and tensile strength development related to the use of the Techniset nobake binders is dependent upon the catalyst chosen, as well as a number of other parameters such as sand quality, sand temperature, and catalyst level used. The graph given below indicates typical tensile strength development achieved when Techniset 6400 is used with Techniset 6000 Phenolic Urethane Part 1 Resin and a typical Techniset catalyst, on a mechanically reclaimed sand.

TENSILE STRENGTH DEVELOPMENT



Sand tests conducted under the following conditions:

Base Sand	**Mechanically Reclaimed Sand**
% Binder	**1.25% Based on Sand Weight**
Part 1/Part 2 Ratio	**55/45**
Sigma Set 6720	**2.5% (B.O.B.)**

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Storage Guidelines

Recommended storage temperature is between 60 - 90 ° F. At lower temperatures, viscosity will increase, making pumping and mixing more difficult. At high temperatures, solvent loss can occur. Drum storage should be in a dry area, out of direct sunlight. Partially used drums should be tightly closed, to prevent contamination, primarily from water, which can adversely affect performance.

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. This material will react with the Part 2 component, without catalyst, in an exothermic reaction, to give a solid polymer. Do not mix Part 1 and Part 2 except on sand during use.

Technical Service

Proper selection of a binder system that meets your specific needs is key to achieving maximum performance benefits. HA International, LLC provides in-depth technical assistance and a wide range of urethane nobake binder systems. Both our in-house and field experts are available to assist you in your most challenging foundry applications. Please contact your HA International, LLC representative so that we may assist you in putting together a binder system and foundry team that will help you achieve your goals.

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