



# Technical Data Sheet

## Techniset® 6433 UNB Part 2 Resin

### Part 2 Phenolic Urethane No Bake Resin for General Foundry Applications

#### PERFORMANCE FEATURES

Techniset 6433 UNB Part 2 Resin has been designed for general foundry use, with new or reclaimed sands. Techniset 6433 was designed for use with Techniset Part 1 Urethane Resins, and is suitable for ferrous and non-ferrous applications. Features available when using Techniset 6433 Part 2 with the appropriate Part 1 component include the following:

- Good Tensile Strength
- Improved Hot Strength
- Low VOC's
- Reduced Smoke
- Good Performance on Wide Rang of Sands

#### PRRODUCT DESCRIPTION

Techniset 6433 UNB Part 2 is a polymeric MDI-type isocyanate resin that is used in conjunction with a phenolic part 1 resin, such as Techniset 6000 or F6000, for ferrous and non-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.

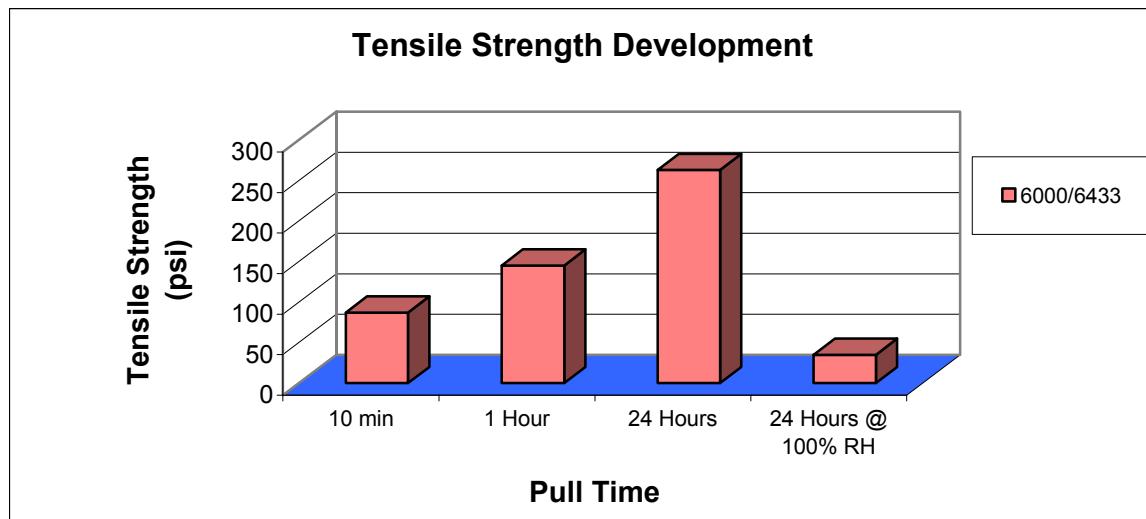
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## PHYSICAL PROPERTIES

<b>TYPICAL PHYSICAL PROPERTIES</b>	
<b>Refractive Index</b>	<b>1.5750</b>
<b>Viscosity (cps)</b>	<b>20</b>
<b>Flash Point (°F TCC)</b>	<b>145</b>
<b>Specific Gravity</b>	<b>1.078</b>
<b>NCO (%)</b>	<b>18</b>

## TENSILE STRENGTH DEVELOPMENT

Both strip time achieved and tensile strength development of the Techniset 6433 Part 2 Resin are 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 some typical tensile strengths achieved when used with Techniset 6000 UNB Part 1 and a typical catalyst.



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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 1 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 cold box 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.

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**HA-International LLC**

**“The Best Total Solution”**

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