

Enviroset 128 PNB Resin

Product Features

HA International's 128 Phenolic No-Bake Resin is a fast curing, high tensile strength phenolic no bake binder designed for use in a broad variety of casting applications. This binder is characterized by the following product features:

- Non-reportable Free Formaldehyde
- Low Initial Viscosity
- Low Nitrogen
- High Tensile Strength
- High Hot Strength
- Excellent Reclaimability
- Low odor at mixing

Product Description

Enviroset 128 is a phenolic resin that will react in the presence of a strong acid catalyst, at ambient temperatures, to form a cured binder. Enviroset 128 is typically catalyzed by HA International's series of sulfonic acid catalysts. It is suitable for use in the production of cores or molds, and can be used with all types of metal. With the appropriate catalyst, exhibits cure rates that approach those of most furan no bake systems at a cost savings over the furan systems. It is formulated to perform well within a broad temperature range. Typically the amount of resin applied to the sand will range between 0.8-1.5% resin based on the weight of sand. The quantity of acid catalyst 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 Enviroset 128 resin utilized.

Enviroset 128 has excellent hot strength and can help eliminate many of the casting defects associated with inadequate binder hot strength. High hot strength helps maintain resistance to surface erosion, veining and early core collapse.

Recommended practice when using Enviroset 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

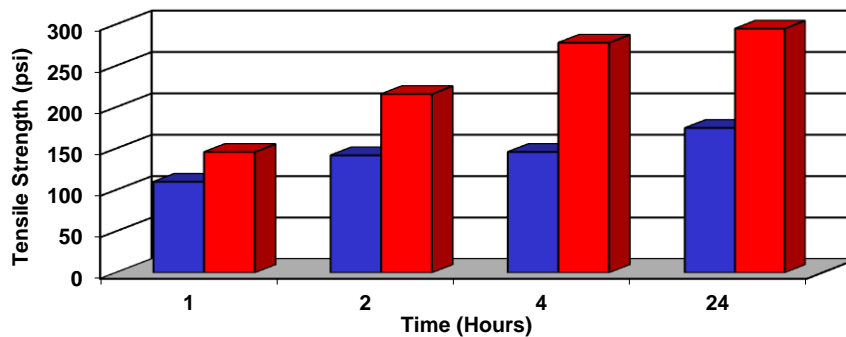
The typical properties of Enviroset 128 PNB Resin are defined in the table below.

Typical Properties - Enviroset 128 PNB Resin	
Viscosity, cps	70-200
Free Formaldehyde, %	<0.1%
Nitrogen, %	<1.0%
Specific Gravity	1.20
Pounds per gallon	9.92
Karl Fischer Water, %	12.5 – 16.0
Refractive Index	1.535 – 1.550

Performance Characteristics

The cure rate of Enviroset 128 provides quick strip times and rapid tensile strength development. Enviroset 128 is slightly more reactive than 127B, the product it was developed to replace, and develops core strengths superior to its predecessor as illustrated in the graph below. The cure speed of Enviroset 128 is also comparable to some furan systems presently being used, and foundries may be able to increase core and mold production without resorting to higher priced FNB binder systems.

TENSILE STRENGTH DEVELOPMENT



Base Sand:	Wedron 530 – New Sand, 53 GFN,
% Resin:	1.0% Based on Sand Weight
% Catalyst (BC81):	40% Based on Resin Weight
Sand Temperature:	77 °F
Strip Time (min.):	~40 Minutes

Storage Guidelines

Enviroset 128 is normally stable, but will polymerize with some evolution of heat in bulk storage tanks at temperatures exceeding 80 °F. This precaution is specific to bulk storage, and is a function of the mass of the material.

Bulk shipments should be stored between 60 - 80 °F (15.5 - 26.7 ° C). Violent polymerization may occur at elevated temperatures.

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. Phenolic resins can react in an exothermic reaction if combined with the acid catalyst or other acids. Do not mix phenolic resins with any acid except on sand during use. Refer to the Material Safety Data Sheet for additional information.

Technical Service

Let HA International be “The Best Total Solution” for your foundry by providing innovative products, in-depth technical assistance, and a diverse product line specially formulated for any foundry application. Both our in-house and field experts are available to assist you with your most challenging foundry applications. Contact your sales representative for additional technical information.

For Emergency Medical Assistance Please Call:
Health & Safety Information Services: 1-866-303-6949

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION BY SELLER, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States patent. The information provided herein was believed by Seller to be accurate at the time of preparation or prepared from sources believed to be reliable but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of product and to determine the suitability of the product for its intended use. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether to product delivered or for non-delivery of product and whether based on contract, breach of warranty, negligence or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.