

# PEPSET RESIN

## CERAPEP

(Phenolic Urethane No Bake Process)

### Product Data Sheet

**CERAPEP** is a highly reactive process for making sand cores and moulds in foundry by no bake process.

**CERAPEP** is a Phenolic Urethane No Bake binder process which provides excellent work time, uniform curing, fast stripping and handling of moulds and cores. It offers a highest bench life to strip time ratio than any other no bake processes. The weight, geometry of core or mould does not affect the stripping time. Like other no bake processes ambient air or temperature does not have any effect on curing speed or mechanism. Being a polyurethane, the process is sensitive towards contamination of moisture, so as base silica sand should be dry.

**CERAPEP** is a three part system:

**CERAPEP R – 801** : Phenolic Resin dissolved in solvents.

**CERAPEP H – 810** : Isocyanate, acts as a hardener.

**CERAPEP C – 820** : Liquid catalyst.

Typical Properties of **CERAPEP**

PRODUCT	<b>CERAPEP R-801</b>	<b>CERAPEP H-810</b>	<b>CERAPEP C-820</b>
COLOUR	Reddish brown	Dark brown	Light brown or yellow
APPEARANCE	Clear Liquid	Clear Liquid	Clear Liquid
SPECIFIC GRAVITY @30°C	1.05 – 1.10	1.18 - 1.20	1.00 – 1.05
VISCOSITY BY B4 CUP @30°C	35 – 120 seconds	14 – 20 seconds	12 -16 seconds

Typical Sand Mix :

Dry silica sand (AFS No 50 – 60) : 100 parts

**CERAPEP R – 801** : 1.00 – 1.2 % BOS

**CERAPEP H – 810** : 1.00 – 1.2 % BOS mix for 1-1½ minutes.

**CERAPEP C – 820** : 3.00 – 10.00 % BO **CERAPEP R-801**

**THERMOCHEM PROCESSES PVT. LTD.**

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**THERMOCHEM**  
ISO 9001 Certified Company

#### **TYPICAL SAND MIXING CYCLE:**

Sand + Premixed **CERAPEP R-801** & **CERAPEP C-820**----→ mix for 1-1½ minutes.

+**CERAPEP H-810**-----→ mix for 1-1½ minutes.

Sand can be prepared by using both continuous & batch type mixer.

Bench life of prepared sand : 2-4 minutes.

Strip Time : 6 -10 minutes

Typical Tensile Strength and other properties:

Immediate : 8 –10 kg/cm<sup>2</sup>

4 hours : 11 – 12 kg/cm<sup>2</sup>

24 hours : 13 – 16 kg /cm<sup>2</sup>

Gas evolution : 12 -14 cc/gm max.

Silent features of **CERAPEP** process:

1. Fastest process among all nobake processes.
2. Excellent bench life to strip time ratio.
3. High strength and low gas evolution.
4. Excellent core and mould dimensional accuracy.
5. Excellent surface finish of castings.
6. Partial substitute for shell process.
7. Cores can be used after 4 hours of stripping.
8. Good resistance to casting defects like scab, veining or erosion.
9. Suitable for all types of metals.
10. Less effect of ambient on bench life, strip time and strength.

#### **Mould & Core Paints:**

We recommend water base refractory wash, but air dry type solvent base paints can be used.

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**SHELF LIFE:** Six month from the date of manufacture for all three resin components.

**STANDARD PACKING:**

CERAPEP R – 801 : 50 / 200 kg MS Barrel

CERAPEP H – 810 : 50 / 200 kg MS Barrel

CERAPEP C – 820 : 10/20 kg MS/HDPE Drum/ carboy

**STORAGE & HANDLING:**

Store under roof away from heat & moisture. Direct flame contact should be avoided.

While handling, prescribed safety measures should be used.

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