

NORMAC® 900E ULTRA COLD BOND CEMENT

FUNCTION

Normac® 900E Ultra is a two component, room temperature curing chloroprene based liquid rubber adhesive which when catalyzed with the appropriate amount of Normac® Hardener, yields high strength adhesion when bonding rubber to rubber, rubber to fabric, rubber to steel, rubber to: concrete, fiberglass, PVC and urethane.

FDA Compliant, Part 175.105 – Indirect Food Additives: Adhesives and Components of Coatings.

TYPICAL PHYSICAL PROPERTIES

Color	Black
Consistency	Brushable liquid
Viscosity	2000 – 4000 cps
Specific Gravity	.97
Coverage	250 square feet per gallon.
Pot Life	2 – 4 hours at 70°F (21°C)
Thinner	Toluene or Ethyl Acetate
Flammability	Normac® 900E Ultra is a flammable product in shipping, storage and application.
Toxicity	See Normac® 900E Ultra and Normac® E Hardener SDS for specific hazards.
Chemical Resistance	Refer to Normac® 900E Ultra Chemical Resistance Chart.
Oil Resistance	Excellent
Working Temperature	-40°F to 200°F (-40°C to 93°C)
Shelf Life	2 years + in unopened container
Storage	Store at ambient temperatures, out of sunlight, away from heat, sparks and flame.
Flash Point	25°F (-4°C)
Packaging	1 Gallon and 5 vials of hardener 5 Gallons and 25 vials of hardener

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DIRECTIONS FOR USE

Refer to Normac® 900E Ultra Cold Bond Cement Application Procedure(s).

For best adhesion, roughen up the substrate with a stiff bristled, rotating wire brush on an electric drill of 1400 RPM or less or slow speed disc sander with an aluminum oxide sanding disc of 24 grit or higher. In some cases Normac® 900E Ultra will bond successfully without surface preparation which can only be determined through test trials.

Thoroughly mix the appropriate amount of Normac® E Hardener to the cement (5 vials per gallon). This mixture will give the applicator 2-4 hours pot life before crosslinking begins. Normac® will cure faster at warmer temperatures. Maintain as close to room temperature as possible to maximize pot life. Mix cement well before use to thoroughly disperse solids and ensure a uniform material.

Apply a first coat to each surface to be bonded with a scrubbing-like motion. Allow to dry for at least 1 hour at 70°F (21°C). At lower ambient temperatures, add 50% to dry time for every 6°F (3°C) drop below 70°F. Apply a second coat to each surface to be bonded and let dry until tacky. Adhere both surfaces and stitch down or apply pressure. The maximum bond strength will develop to its optimum in 21 days, however, after 6 hours bond strength will be sufficient for most services.

Trials if possible, are recommended before production to determine the suitability of this compound with individual materials and to determine the preferred method of application.

For further assistance, please call our office at 800-321-5583 or Fax us at 330-769-9334.

The data is based on information believed to be reliable and is offered solely for evaluation. Normac products are sold with the understanding that clients make their own tests to determine the suitability of these products for their particular application. We assume no liability or responsibility resulting from its use of any kind.

TOXICITY

Prolonged breathing of vapors is harmful. Use only with adequate ventilation and an approved respirator. See SDS for further instructions.

SAFETY

Please see Normac® 900E Ultra and Normac® Hardener SDS for specific handling and safe work practices.

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APPLICATION PROCEDURES

BONDING RUBBER SHEETING TO STEEL

When using the Normac® 900E Ultra Cold Bond System, the key to a good and long lasting bond is preparation. Since the Normac® 900E Ultra relies primarily on mechanical bonding you will find that by increasing the surface roughness or anchor pattern you have increased the actual surface bonding area. This will result in much higher bond strengths and longer service life. Ninety-nine percent of all bonding failures are due to improper preparation. The following procedure should provide you with the best possible bond between rubber sheet stock and steel.

STEEL SUBSTRATE PREPARATION

1. Grit Blast the areas to be bonded to a white metal finish. (NACE #2 or SSPC 10-63). Minimum profile of the blasted metal or anchor pattern should be a minimum of 2 mils. This will ensure that the steel is free from all oil, paint, etc. Near-white or commercial blasting, acid pickling, brush blasting and surface grinding are all acceptable preparation methods, but the adhesion value will not be as great. With experience you will be able to determine what preparation method will secure the best possible bond for a given application, but until then, use white metal blast.
2. Clean the blasted metal by brushing and vacuuming. Vacuuming is really the best method of completely removing blast dust. Should the surface become contaminated with oil or grease, wash with R-587-T Cleaning Solvent using a clean shop rag.
3. Apply the Primer P-100 to the metal. One coat is sufficient. See the primer specifications for further details.
4. Now apply the first coat of Normac® 900E Ultra. Apply this first coat as soon as the preparation operation is complete. Allow this first coat to dry at least one hour before proceeding with the application of the rubber lining. Better initial adhesion of the first coat will be realized if allowed to dry overnight (approximately 16 hours). Primed steel may be stored for up to 7 days before lining if stored in a cool, dry area out of sunlight. Cover with plastic to avoid any contamination by dirt and oil.

RUBBER SHEET PREPARATION

1. The bonding side of the rubber sheet must be roughened to obtain good adhesion. Use a rotating wire brush attached to an electric drill of about 1400-1700 RPM for roughening. This is the best method to eliminate the risk of "burning" or "charring" When using the wire brush, allow it to cut into the rubber sheet so that a profile is created. Do not leave any "shiny" or smooth spots.
2. Once the rubber sheet has been roughened, clean by brushing. After brushing, use a clean rag soaked with R-587-T Cleaning Solvent and wipe down the rubber sheet to remove any remaining sanding dust.
3. Mix the necessary amount of Normac® 900E Ultra and apply to roughened rubber sheeting. Allow this to dry for a minimum of 1 hour at room temperature before the application begins. Allowing the primed rubber sheet to sit overnight before application will result in better initial bonding results.

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BONDING THE RUBBER SHEET TO STEEL

4. The bonding operation consists of applying one coat of mixed Normac 900E Ultra to both the rubber sheet and steel, prepared as described above. Normal tack times of the mixed Normac range from 10-20 minutes, depending on temperature. Allow each to become tacky.

If the rubber sheet is too large to apply all at once, do it in sections. For example, do the first four feet, fold the sheet back and do the next four feet, etc. Should the tack coat become too dry, simply re-cement, allow to become tacky, and re-apply.

If the sheet is improperly positioned you can still pull it off the steel, provided you have not pressed or rolled it down. Should this be required, you may see the adhesive pull from the steel or rubber sheet. You must re-prime the steel, allowing it to dry before the tack coat and application take place.

Once the rubber sheet is in its bonded position, use a 1" or 2" flat roller and roll out to the edges. Make sure the rolling strokes overlap while rolling out towards the edge. This will push out any trapped air out.

For optimum edge adhesion it is advisable for the rubber sheet to be cut oversized. Then the rubber may be bent by hand over the steel edge after rolling. The excess can be trimmed with a sharp knife.

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