



NORMAC[®] 900R-NPB Cold Cement

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PHYSICAL DATA

Description:	Normac [®] 900RNPB is a two component, room temperature curing chloroprene based liquid rubber adhesive that, when catalysed with the appropriate amount of Normac [®] RFE Hardener, yields high strength adhesion when bonding rubber to rubber, rubber to fabric, rubber to steel, rubber to: concrete, fiberglass, PVC and urethane.		
Color:	Black, Clear, Amber or FDA compliant White (900R/RC/RF).		
Consistency:	Brushable liquid		
Viscosity:	2500 – 3500 cps		
Specific Gravity:	1.330		
Hardener:	Normac [®] R Hardener. Ratio by weight is 3.0 grams Normac [®] RFE Hardener per 100 grams Normac [®] 900R.		
Coverage:	250 Square Feet per Gallon.		
Pot Life:	6 – 8 hours at 21° C (70° F)		
Thinner:	Chlorinated solvents – preferably Trichlorethylene		
Flammability:	Normac [®] 900R is a non-flammable product in shipping, storage and application.		
Toxicity:	See Normac [®] 900R and Normac [®] RFE Hardener MSDS for specific hazards.		
Chemical Resistance:	Refer to Normac [®] 900R Chemical Resistance Chart.		
Oil Resistance:	Excellent		
Working Temperature:	-40° C to 93° C (40° F to 200° F)		
Shelf Life:	2 years + in unopened containers		
Storage:	Store at ambient temperatures, out of sunlight, away from heat, sparks and flame.		
Packaging:	1 Gallon	÷	5 x 8 gm. R. Hardener
	55 Gallon Drum	÷	290 x 8 gm. R Hardener



Safety: Please see Normac[®] 900R and Normac[®] RFE Hardener MSDS for specific handling and safe work practices.

Application Procedure: Refer to Normac[®] 900R/RF Cold Cements 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[®] 900R will bond successfully without surface preparation which can only be determined through test trials.

Thoroughly mix the appropriate amount of Normac[®] RFE Hardener (3.0%) to the cement. This mixture will give the applicator 6-8 hours pot life before crosslinking begins. Apply a first coat to each surface to be bonded with a scrubbing-like motion. Allow to dry thoroughly, usually one hour. 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 330-666-9334

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.

APPLICATION PROCEDURES

Bonding Rubber Sheeting to Steel

When using the Normac[®] 900R Cold Bond System, the key to a good bond and a long lasting one is preparation. Since the Normac[®] 900R 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 preparation. The following procedure should provide you with the best possible bond between rubber sheet stock and steel.

THE STEEL SUBSTRATE

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 you are ready to apply the first coat of Normac[®] 900R . You should try to apply this first coat of 900R 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 liner. Better initial adhesion will result if you can let this first coat of Normac[®] 900R dry over night. You may store primed steel for up to 4 days before lining if stored in a cool, dry area out of sunlight. Cover with plastic to avoid any contamination by dirt or oils.

RUBBER SHEET PREPARATION

1. **The bonding side of the rubber sheet must be roughened to obtain good adhesion. This can be accomplished by two methods.**

You can use a rotating wire brush attached to an electric drill of about 1400-1700 RPM for roughening. This is probably the best method as you eliminate the risk of “burning” or “charring” such as might occur with a high speed sander. The wire brush recommended is a stiff bristled 4” diameter with a face width of 1”. You may also use tire rasps, as they will provide the same surface texture as the wire brush.

Bonding Rubber Sheeting to Steel Continued

When using the wire brush or rasp, allow it to cut into the rubber sheet so that a profile is created. Do not leave any “Shiny” or un-roughened spots.

The second preparation method is the use of 7” diameter sander of 2000 RPM or less utilizing a 7” aluminum oxide sanding disc of 24 grit. Using a sander of 2000 RPM or more will “burn” or “char” the rubber sheet, causing smearing of the rubber. You will not get adhesion to these areas.



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 leftover sanding dust.
3. Mix the necessary amount of Normac[®] 900R and apply to roughened rubber sheeting. Allow this to dry for a minimum of 1 hour at room temperature before the application begins. By allowing the primed rubber sheet to sit overnight before application will allow for better initial bonding results.

Bonding the Rubber Sheet to Steel

1. The bonding operation consists of applying one coat of mixed Normac[®] 900R to both the rubber sheet and steel, allowing each to become tacky or develop adhesion legs, then applying the rubber sheet to the steel. Normal tack times should be anywhere from 10-20 minutes, depending upon temperature. You may test this tackiness with the back of your finger.

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 these areas, 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 your rolling strokes overlap as you roll out towards the edge, as this will push any trapped air out.

For edge adhesion it is a good idea for your rubber sheet to be cut oversize so that you may bend the edges by hand over the steel edge after rolling. This usually gives excellent edge adhesion. The excess can be trimmed with a sharp knife.

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