

## SC4000 CEMENT BONDING PROCEDURES



The REMA TIP TOP SC4000 Bonding System is free of chlorinated hydrocarbons (CFC), and consists of the following products:

### ***REMA TIP TOP Cement SC4000 + E40 Hardener***

SC4000 is the alternative to our well known and proven SC2000 bonding system. SC4000 is environmentally safe, yet extremely effective, with no compromise to bonding strength or performance, the kind of innovative product you have come to expect from REMA TIP TOP.

SC4000 is the result of on-going efforts to develop environmentally-friendly bonding and repair products. All components contain solvents which are friendly to the environment and less hazardous to health. This also has very advantageous effects with regard to the compulsory product identification and the maximum concentration at the work place.

During research and development special emphasis was given to the bonding characteristics of the SC4000 cement. High initial and final bonding strength to natural rubber, neoprene rubber, SBR rubber and other compounds can be bonded to each other, fabric and to steel without the aid of heat, pressure or special equipment.

### **Description**

REMA SC4000 is a two component, room temperature curing chloroprene based liquid rubber adhesive that, when catalyzed with the appropriate amount of E40 Hardener, yields high strength adhesions. REMA SC4000 is ideal for use in lining installations, when bonding rubber to rubber, rubber to fabric, rubber to steel, rubber to concrete, fiberglass, and urethane, as well as the splicing and repair of fabric conveyor belting. Repair to existing rubber lined vessels and rubber components are also recommended using this system.

### **Mixing instructions**

The REMA SC4000 cement system is comprised of cement and hardener in the ratio of 660 grams of SC4000 cement to 30 grams of E40 hardener. These two components must be thoroughly mixed (stirred). The mixed portion should be used within 2 hours.



### **General Rubber Lining Environmental Conditions**

Before any sandblasting, application of metal primer, adhesives or application of lining material the ambient temperature and that of the substrate must be at least + 50° Fahrenheit with a maximum temperature of + 104° to +113° Fahrenheit.

The Relative Humidity should not exceed 80% during the entire lining procedure.

The substrate temperature must be a minimum of 5 degrees higher than that of the dew point. Relative humidity, ambient temperature, substrate temperature and dew point must be recorded prior to start of project and at three hour intervals thereafter.

### **Surface Preparation & Application Methods**

#### **Rubber to Steel**

All surfaces must be clean, dry and free of oil, paint and other contamination. Steel and other metallic surfaces should be sandblasted to a 2-mil blast profile (SSPC –SP10 "Near White Metal Blast Cleaning") to obtain maximum adhesion. Metal surfaces should first be cleaned with REMA #50 Solvent and then sandblasted and cleaned again with REMA #50 Solvent. After the surface is prepared it should be primed with REMA PR200 Metal Primer. The primer should be allowed to dry completely, approximately 1 hour depending upon atmospheric conditions. After allowing the prime coat to cure or dry for at least 1 hour, proceed with bonding procedures.

#### **Fiberglass**

The surface should be prepared by first cleaning with REMA #50 Solvent, then sanded, and re-cleaned with REMA #50 Solvent to help remove abraded particles. Allow the solvent to evaporate. Then the prepared surface must then be primed with REMA SC4000 cement. The prime coat of cement should be allowed to completely cure for at least 1 hour (overnight is ideal). After allowing the prime coat to cure, proceed with bonding procedures.

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### **Rubber to Rubber**

The surface should be prepared by first cleaning with REMA #50 Solvent to remove all mould releases. Rubber that does not have the special REMA CN bonding layer requires cleaning with REMA #50 Solvent and when dry, buffing to a RMA #4 textured finish. The rubber dust should be removed with a dry brush and then wipe the surface with REMA #50 Solvent again before the prime coat of REMA SC4000 cement is applied to the prepared surface. The applicator should use a scrubbing-like motion when applying the REMA SC4000 cement. A scrubbing motion is preferred so that all voids on the buffed surface to be bonded are filled in. After allowing the prime coat to cure or dry for at least 1 hour (overnight is ideal) proceed with bonding procedures.

### **Concrete**

The best surface preparation for concrete is sandblasting to provide a clean, dry and sound substrate. When sandblasting is not practical, the surface may be acid etched following the manufacturer's recommendations. After sandblasting or etching, the surface must be primed with REMA SC4000 cement. For ease of application the prime coat could be roller applied by diluting the REMA SC4000 cement with REMA #50 Solvent, about 25%. This dilution will assure better absorption. The second coat of REMA SC4000 cement must not be diluted for optimum adhesion.

### **Wood**

The best surface preparation for wood is sandblasting. Wood must be dry. After sandblasting, the surface must be primed with REMA SC4000 cement. For ease of application the prime coat could be roller applied by diluting the REMA SC4000 cement with REMA #50 Solvent, about 25%. This dilution will assure better absorption. The second coat of REMA SC4000 cement must not be diluted for optimum adhesion.

### **Fabric to Fabric**

Fabric that is R.F.L. treated should be clean and dry and the number of coats of REMA SC4000 cement will depend on the weight and weave of the fabric. Take special care to insure all indentations are filled (such as heavy conveyor belt fabric).

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## **Bonding**

When applying the REMA SC4000 cement a scrubbing motion with a cement brush is preferred so that all voids on the surface to be bonded are filled in. The first coat of cement on substrate and rubber should be allowed to completely cure for at least 1 hour (overnight is ideal) before the second coat, or "tack coat" is applied.

To the properly prepared surfaces apply a tack coat of REMA SC4000 cement to each surface at the same time so they dry at the same rate. As rapidly as possible, apply a uniform coat with a brush. Avoid heavy builds, puddles, uneven coating. Surfaces must dry uniformly.

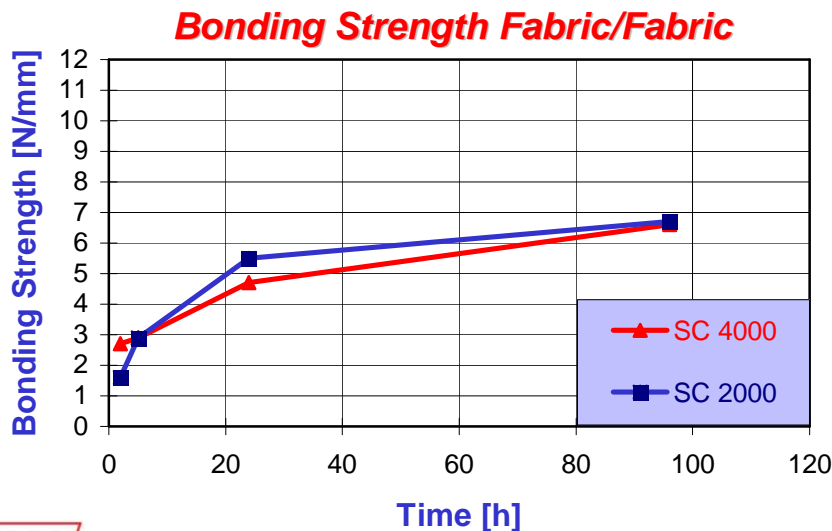
When surfaces dry to a tack, about 6-8 minutes, they are ready to bond (if the surfaces become too dry, apply another tack coat to each). Test the cement with the back of a dry finger, it should feel tacky (somewhat dry) and not leave any cement on the finger. Join surfaces and roll from the center to the edges with a 2" wide roller (stitcher) with appropriate pressure to bond surfaces together and eliminate air entrapment between substrate and rubber. Use overlapping roller strokes making sure both surfaces fully contact each other and all air is expelled.

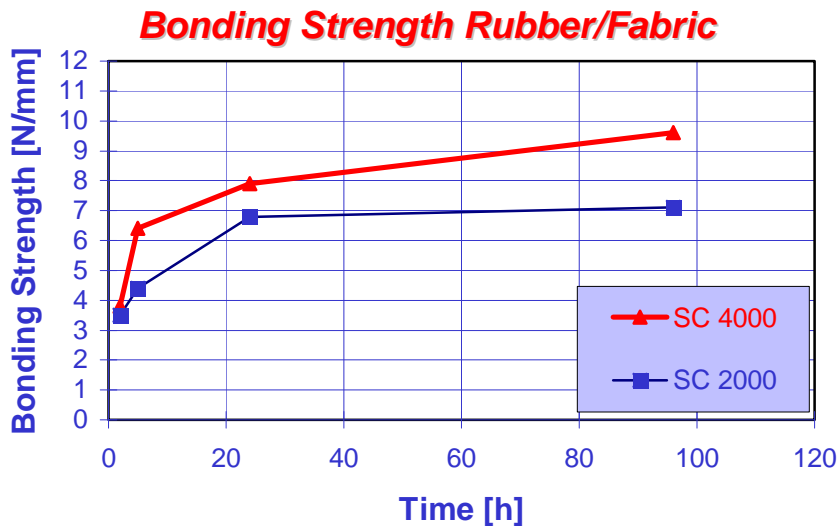
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## **Technical Data**

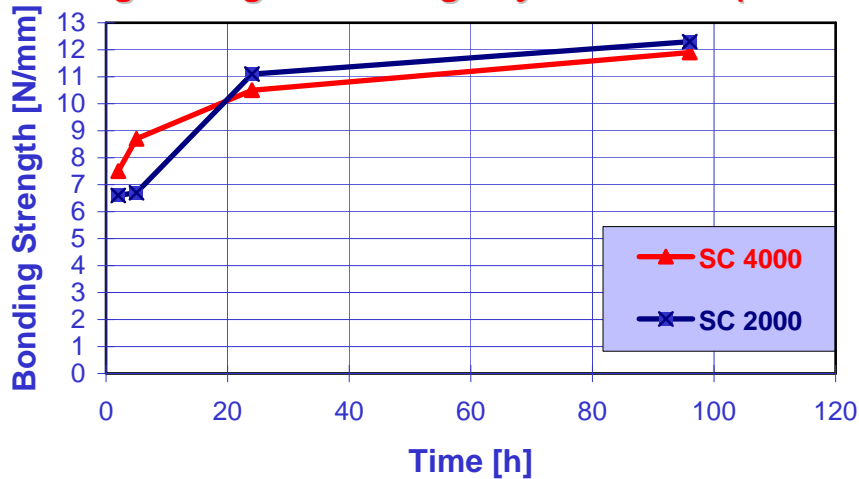
### **Bond Evaluation**

REMA SC4000 is capable of bonding REMA CN/Rubber to steel in the range of 70-80 lbs peel per inch width. Bond strengths of fabric to fabric, such as fabric conveyor belting develop over to 500 lbs in shear.





**Bonding Strength Bonding Layer to Metal (blasted)**



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**Pot Life**

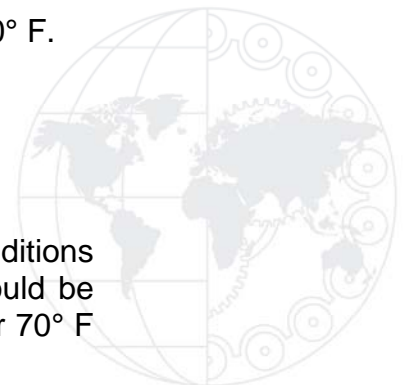
The gel time or working life of mixture is approximately 2 hours at 70° F.

**Coverage**

Approximately 43 sq. ft. per 1 kg./ per coat by brush coating.

**Storage**

Shelf life of unopened containers is 2 years when stored under conditions according to DIN 7716. REMA SC4000 cement and hardener should be stored in a cool dark place away from heat, sparks and flame under 70° F (20° C).



## **Physical Properties**

Color:	Black
Basis:	Polychloroprene rubber
Consistency:	Brushable liquid
Diluents:	Ethyl Acetate
Oil Resistance:	Excellent
Application Temp.:	+41° to 113° F. (+5° to +45° C.)
Maximum Constant	
Operating Temp.:	212° F. (100° C.) Rubber to Metal 176° F. (80° C.) Rubber to Rubber 176° F. (80° C.) Rubber to Fabric

## **Safety**

REMA SC4000 contains solvents, the inhalation of excessive amounts of vapor may induce an allergic respiratory reaction to sensitized individuals. Proper respiratory protection must be used. Avoid skin contact. Wear protective clothing, impervious rubber gloves, and safety glasses. In case of skin contact, wash well with soap and water. Spills should be absorbed with absorbent material and water added to destroy isocyanates. When applying REMA SC4000 cement in confined areas, suction ventilation equipment should be in operation. The equipment should be arranged so that vapors are drawn down and away from the applicator. REMA SC4000 cement is flammable. The E40 Hardener is flammable. As always the usual fire safety measures should be observed. Keep away from heat, sparks and open flame. Do not use until the MATERIAL SAFETY DATA SHEET and INSTRUCTIONS have been read and understood.

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## **Packaging Sizes and Hardener Amounts**

- 660 gram REMA SC4000 cement with one 30 gram E40 Hardener
- 3.3 kg. REMA SC4000 cement with five 30 gram E40 Hardeners
- 190kg. REMA SC4000 with (288) 30 gram E40 Hardeners

The recommendations for the use of our products are based upon tests believed to be reliable but no warranty is given. Since conditions of use are beyond our control all risks of use are assumed by the user.

**For Technical Assistance and Professional Advice  
Please Contact your Local REMA Agent or Call (800) 334-REMA**



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