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SC4000 CEMENT Bonding Procedures

REMA TIP TOP SC4000 Cement is the CFC free alternative to our well known and proven **SC2000 Cement** with no compromise to bonding strength or performance. By using **SC4000 Cement** with the **E40 Hardener**, natural rubber, neoprene rubber, SBR rubber and others can be bonded to each other, to fabric and to steel without the aid of heat, pressure or special equipment.

Description

REMA TIP TOP 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. **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 **SC4000** Cement system is comprised of cement and hardener in the ratio of 660 grams of **SC4000 Cement** to 30 grams of **E40 Hardener**. The non-catalyzed **SC 4000 Cement** should be stirred/ mixed thoroughly prior to the addition of any Hardener after which the two components must be thoroughly mixed (stirred) for at least 2 minutes. The mixed portion should be used within 2 hours.

Dispensing from bulk units or drum packaging should be measured/mixed by weight using a suitable weight scale in the above stated grams/kilograms ratio only after proper homogenization or mixing/rolling of the adhesive drum. See details under Storage.

General Rubber Lining Environmental Conditions

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

The Relative Humidity should not exceed 85% during the entire lining procedure OR the measured 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 abrasive blasted to a minimum 2-mil blast profile (SSPC –SP10 “Near White Metal Blast Cleaning”) to obtain maximum adhesion. Metal surfaces should first be cleaned with **REMA TIP TOP R-50 Cleaning Solvent** and then abrasive blasted and cleaned again with **REMA TIP TOP R-50 Cleaning Solvent**. All abrasive blasting residue and/or dust shall be completely removed by brushing and/or vacuuming. After the surface has been prepared it should be primed with **REMA TIP TOP PR 200 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 TIP TOP R-50 Cleaning Solvent**, then sanded, and re-cleaned with **REMA TIP TOP R-50 Cleaning Solvent** to help remove all abraded particles. Allow the solvent to evaporate. Then the prepared surface must then be primed with **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.



Surface Preparation & Application Methods (continued)

RUBBER TO RUBBER

The surface should be prepared by first cleaning with **REMA TIP TOP R-50 Cleaning Solvent** to remove all mould releases. Rubber that does not have the special REMA TIP TOP CN bonding layer requires cleaning with **REMA TIP TOP R-50 Cleaning Solvent** and when dry, buffing to a RMA #4 textured finish. The rubber dust should be completely removed with a dry brush and/or vacuumed and then wiping the surface with **REMA TIP TOP R-50 Cleaning Solvent** again before the prime OR FIRST DRY coat of **SC4000 Cement** is applied to the prepared surface. The applicator should use a scrubbing-like motion when applying the **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 OR FIRST DRY 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 abrasive blasting to provide a clean, dry and sound substrate. When abrasive blasting is not practical, the surface may be ground or acid etched following the manufacturer's recommendations. All abrasive blasting residue and/or dust shall be completely removed by brushing and/or vacuuming. After the surface has been prepared the surface must be primed OR FIRST DRY COAT with **SC4000 Cement**. **SC4000 Cement** must not be diluted for optimum adhesion.

WOOD

The best surface preparation for wood is abrasive blasting. Wood must be dry. All abrasive blasting residue and/or dust shall be completely removed by brushing and/or vacuuming. After the surface has been prepared the surface must be primed with **SC4000 Cement**. **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 **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).

BONDING

When applying the **SC4000 Cement**, a scrubbing motion with a suitable cement brush (e.g. RTT. # 8 or RTT #18) is preferred so that all voids on the surface to be bonded are filled. The first prime coat or dry 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 or wet coat" is applied.

To the properly prepared surfaces apply a tack coat of **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. Caution must be given as to not allow the coat to dry too much as this will create inadequate adhesion or be "too dry" between coats.

When surfaces are dry to a tack, about 4-8 minutes, they are ready to bond (if the surfaces become too dry, apply another tack coat to each). Timing is dependent on atmospheric conditions (e.g. colder ~ longer; warmer ~ shorter) A quick test is to test the second wet cement coat with the back of a dry finger, it should feel tacky (somewhat dry) and not leave any cement residue on the back of the finger. Join surfaces and roll from the center to the edges with suitable width rubber roller and /or stitcher with an appropriate amount of surface pressure exerted to bond surfaces together and eliminate air entrapment between substrate and rubber. Use 50% overlapping roller strokes making sure both surfaces fully contact each other and all air is expelled.

TECHNICAL DATA

Bond Evaluation

SC4000 is capable of bonding **REMA TIP TOP 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 dependent on the correct mixing, surface preparation, atmospheric conditions and applicator skill level.

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. **SC4000 Cement** and hardener should be stored in dry, cool, ventilated and dark place away sunlight and all heat, sparks and flame sources, between 60 F- 77 F / (15 C – 25 C).

NOTE: SC 4000 Cement packaged in 190 kg Drums.

The mixing /rolling or homogenization of the **SC 4000 Cement** packaged in drums is recommended prior to drawing or pouring and should utilize a motorized drum stand/ or roller (~4-10 RPM).

SC 4000 Cement removed from storage up to ambient conditions should be brought to temperature for a period of up to 48 hours in the original packaging to avoid precipitation of moisture on the product, after which rotate drum on drum stand/roller for 2 hours.

After each 24 hours or start of each day- rotate drum on drum stand/roller for 15 minutes; for weekly breaks greater than 24 hours up to 72 hours- rotate drum on drum stand/roller for 30 minutes; after longer breaks (one week to three weeks) rotate drum on drum stand/roller for 60 minutes.

Safety

SC4000 Cement 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 **SC4000 Cement** in confined areas, properly grounded explosion-proof suction type ventilation equipment should be in operation as solvent fumes are heavier than air. The equipment should be arranged so that vapors are drawn down and away from the applicator. **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 flames. **Do not use product until the SAFETY DATA SHEETS and these INSTRUCTIONS have been read and thoroughly understood.**

Packaging Sizes and Hardener Amounts

SC4000 Cement	E40 Hardener
660 g	1 x 30 g
3.3 kg	5 x 30 g
190 kg	288 x 30 g

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

Please Contact your Local REMA TIP TOP Agent or Call (800) 334-REMA