

RS-2000/RS-2000E Cold Adhesive Cement Application Guide

1 Description

- 1.1. RS-2000 and RS-2000E are a two component, room temperature curing chloroprene based liquid rubber adhesive that, when catalyzed with the appropriate amount of hardener, yields high strength adhesions. The use of trichloroethylene as the solvent system results in the development of a non-flammable rubber based adhesive.

2 Specifications

- 2.1. **Product name:** RS-2000 and RS-2000E cold vulcanizing adhesive (to be used with activator solution).
- 2.2. **Chemical content:** A mixture of polymers, organic and inorganic compounds dispersed and dissolved in hydrocarbon solvent system containing trichloroethylene.
- 2.3. **Shelf life** At least 1 year.
- 2.4. **Re-Coat Window:** 16 Hours depending on atmospheric conditions.
- 2.5. **Open time** 15-20 minutes.
- 2.6. **Coverage:** 250ft² (23m²)/gallon (5kg) 1 coat
- 2.7. **Storage** 5-35°C (5-95°F). If kept at lower temperatures, solution will thicken. Simply warm gently to return to liquid.
- 2.8. **Pot life** Approximately 1 to 2 hours depending on atmospheric conditions.

3 Mixing Instructions

- 3.1. RS-2000 and RS-2000E cement systems are comprised of cement and hardener in the ratio of 1 Kg of cement to 50 ml of hardener. These two components must be thoroughly mixed (stirred). The mixed portion should be used within 2 hours.

4 Surface Preparation & Application Methods

- 4.1. **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 4 mil profile (NACE 1 / SSPC 5 "White Metal Blast Cleaning") to obtain maximum adhesion. A brushing application to all substrates is the preferred method to avoid possible bridging of a high profile surface. Metal surfaces should first be cleaned with solvent and then sandblasted and cleaned again with solvent. The metal surface should then have primer applied. Take special care to insure all directions on the container are followed. After allowing the primer coat to cure or dry for (30 min) before proceeding with bonding procedures.
- 4.2. **Rubber to Rubber:** The surface should be prepared by first cleaning with solvent to remove all mold releases. Rubber that does not have the CN bonding layer, requires cleaning with 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 solvent again before the prime coat of the cement is applied to the prepared surface. The applicator should use a scrubbing-like motion when applying the 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. Rubber with CN bonding layer requires a solvent wipe prior to adhesive being applied.

- 4.3. **Bonding:** When applying the cement a scrubbing motion is preferred so that all voids on the surface to be bonded are filled in. The first coat of cement should be allowed to partially cure at least 1 hour (overnight is ideal.) The second coat should not be scrubbed because the solvent in the cement would attack and lift the first coat. This is more evident when the first coat has a short cure time. To the properly prepared or primed surfaces apply a tack coat of 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 3-6 minutes, they are ready to bond (This tack or bonding time will be about 10-15 minutes, 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 and not leave any cement on the finger. SURFACES MUST BE TACKY WHEN BONDED. Join surfaces together when the cement is still tacky but not wet to the touch and roll with a 2" (5.08cm) wide roller with appropriate pressure to bond surfaces together. Use overlapping roller strokes making sure both surfaces fully contact each other and all air is expelled.
- 4.4. **Bond Evaluation:** Is capable of bonding rubber to steel in the range of 60-70 lbs (27.21-31.75kg) peel per inch width. Bond strengths of fabric to fabric, such as fabric conveyor belting develops over 500 lbs (226.8kg) in shear.
- 4.5. Bond strengths measured in *Lbs/Inch (kg/cm)* peel strength

Bonding	2 Hrs	5 Hrs	12 Hrs	24 Hrs	7 Days
Rubber to Steel	60 (10.71)	63 (11.25)	64 (11.42)	65 (11.60)	72 (12.85)
Rubber to Rubber	24 (4.28)	29 (5.17)	34 (6.07)	40 (7.14)	60 (10.71)
Fabric to Fabric	20 (3.57)	24 (4.28)	25 (4.46)	28 (5.0)	32 (5.71)
Rubber to Fabric	18 (3.21)	24 (4.28)	26 (4.64)	28 (5.0)	55 (9.82)

- 4.6. **Coverage:** Approximately 20ft² per 1lb (.45kg) at brush coating.

5 Physical Properties

PROPERTY	VALUE
Color	Black
Weight per Gallon (Kg)	11lbs (5kg)
Consistency	Brushable Liquid
Tensile Strength	2,000lbs (357.15kg/cm)
Diluent	Chlorinated or Ketones Solvents
Oil Resistance	Excellent

*All times given are dependent upon atmospheric conditions