



CV4000 CEMENT PLUS HARDENER



Chemical Vulcanising Systems Cold Vulcanising Cement CV4000 is multi-application adhesive cement for many industrial rubber bonding requirements. It is a more environmentally friendly adhesive system than CV2002. CV4000 cement plus hardener is the adhesive for bonding natural rubber, neoprene rubber, SBR rubber and other rubbers to each other, fabric and to steel without the aid of heat, pressure or special equipment. Note that CV4000 is flammable, ensure that if a non-flammable application is required, then use CV2002.

Description

CV4000 is a two component, chloroprene based adhesive when catalysed with the correct amount of Hardener, will vulcanise at room temperature. CV4000 has a wide scope of applications in bonding rubber to rubber, rubber to fabric, rubber to metal as well as rubber to concrete, fiberglass and urethane. It is also used in the splicing and repair of fabric conveyor belting. Repair to existing rubber lined vessels and rubber components are also recommended uses for CV4000.

Mixing instructions

The CV4000 cement and hardener are mixed in the ratio of 800g of cement to 50ml of hardener. Smaller quantities are available, in 250g and 500g sets, however smaller mixing quantities can be measured using the mixing tables below:

Mixing ratio by weight		Mixing ratio by Volume	
CV4000	Hardener	CV4000	Hardener
100 g	4.5 grams	72 ml	10ml
200 g	11.25 grams	180 ml	12.5ml
400g	22.5 grams	360 ml	25ml
600 g	27 grams	535 ml	32.5ml
800 g	45 grams	720 ml	50ml

Mix well CHEMVULC CV4000 with hardener supplied by stirring well.

Note: The CV4000/hardener mixture must be used within 2hours.

Recommended ambient conditions for application

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 +14° degrees Celsius with a maximum temperature of +40° to +45° Celsius.

The Relative Humidity should not exceed 80% during the entire lining procedure otherwise condensation could occur when the adhesives are applied.

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

Surface Preparation & Application Methods

Rubber to Rubber

The rubber surface should be first cleaned of any oil, dirt or surface contamination, using Chembuff Cleaning Solvent. Rubber that does not have a bonding layer for cold vulcanising should be cleaned and then buffed using a cup rasp or rubber hog rasp to give a textured finished. Once the rubber surface is buffed, clean again with solvent.

Mix the Hardener well into the CV4000, following the mixing ratios above for smaller quantities. Stir well. Apply the first coat to both rubber surfaces and allow to dry 30 mins to 1 hour.

Note that the CV4000 and hardener should be applied in a circular motion using a brush, ensuring that all voids are filled. Apply an even coat to ensure uniform drying. Avoid puddling or heavy build-ups when applying.

Once both Surfaces are completely dry apply the second coat of CV4000 with Hardener and allow to dry until just tacky to the touch, 15 to 20 mins depending on conditions. Note that the surface must not feel wet. Test for tack by touching the surface with the back of the knuckle. Ideally the tack coat should be applied to both surfaces at the same time.

Rubber to Steel

Ensure all surfaces are clean, dry and free of oil, paint and other contamination. Steel and other metallic surfaces should be sandblasted to a blast profile: "Near White Metal Blast Cleaning" to obtain maximum adhesion.

Metal surfaces should be cleaned with Chembuff Cleaning Solvent before and after sandblasting. Once solvent is completely dry, apply Chemvulc Metal Primer using a brush and allow to dry for at least 1 to 2 hours.

Mix the Hardener well into the CV4000, following the mixing ratios above for smaller quantities. Stir well. Apply the first coat to the metal surface and allow to dry for 30 mins to an hour.

Ensure rubber surface is prepared correctly (see rubber to rubber bonding) and cleaned using Chembuff Cleaning Solvent, apply one coat of the CV4000 with hardener and allow drying for 30 mins to an hour.

Once both Surfaces are completely dry apply the second coat of CV4000 with Hardener and allow to dry until just tacky to the touch. Note that the surface must not feel wet. Test for tack by touching the surface with the back of the knuckle. Ideally the tack coat should be applied to both surfaces at the same time.

Note that the CV4000 and hardener should be applied in a circular motion using a brush, ensuring that all voids are filled. Apply an even coat to ensure uniform drying. Avoid puddling or heavy build-ups when applying.

Rubber to Fiberglass

Clean the fiberglass surface with Chembuff Cleaning Solvent and ensure that it is free of oil paint and other contamination. Sand the fiberglass surface and re-clean surface with Chembuff Cleaning Solvent.

Mix the Hardener well into the CV4000, following the mixing ratios above for smaller quantities. Stir well. Apply the first coat to the fiberglass surface and allow to dry for 30 mins to an hour.

Ensure rubber surface is prepared correctly (see rubber to rubber bonding) and cleaned using Chembuff Cleaning Solvent, apply one coat of the CV4000 with hardener and also allow drying for 1 to 2 hours or overnight if possible.

Once both Surfaces are completely dry, apply the second coat of CV4000 with Hardener and allow to dry until just tacky to the touch. Note that the surface must not feel wet. Test for tack by touching the surface with the back of the knuckle. Ideally the tack coat should be applied to both surfaces at the same time.

Note that the CV4000 and hardener should be applied in a circular motion using a brush, ensuring that all voids are filled. Apply an even coat to ensure uniform drying. Avoid puddling or heavy build-ups of the adhesive when applying.

Fabric to Fabric

Fabric must be RFL treated and must be clean and dry. The weave of the fabric will determine the number of coats required of the CV4000 cement. Apply coats to ensure that indentations are filled. Allow coats to dry between applications, except when applying tack coat. Refer to specific guidelines for cold vulcanising of conveyor belts.

Pot Life

The pot life or working life of CV4000 when mixed with hardener is approximately 2 to 2.5 hours at 20 to 25 deg C.

Coverage

Approximately 2.0 to 2.5 sq. metres per 1 kg/per coat by brush coating.

Physical Properties

Colour:	Black
Specific Gravity:	800g/litre.
Consistency:	Brushable liquid
Solvent Base:	Ethyl Acetate
Oil Resistance:	Excellent
Application Temp.:	+15° to +45° C

Maximum Constant Operating Temp.:	95°C Rubber to Metal
	80°C Rubber to Rubber
	80°C Rubber to Fabric

Storage

Shelf life of unopened tin of CV4000 is 4 years. Hardener is sealed from air, exposure to moisture may cause the hardener to crystallise. CV4000 cement and hardener should be stored in a cool dark place away from heat, sparks and flame under 20° C.

Safety

Refer to MSDS for Safety information. CV4000 contains Ethyl Acetate, although not harmful, please ensure adequate ventilation and proper respiratory equipment is used. Wear correct PPE when using CV4000. Ethyl Acetate is flammable, please take necessary precautions.

Packaging Sizes and Hardener Amounts

- 250ml CV4000 with 10ml Hardener
- 500ml CV4000 with 25ml Hardener
- 800g CV4000 with 50ml Hardener
- 4kg CV4000 with 250ml Hardener
- 20kg CV4000 with 1.25l Hardener

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

