C.I.M. Industries Inc.
A Chase Corporation Company
23 Elm St., Peterborough, NH 03458
Tel: (800) 543-3458 (603) 924-9481
Fax: (603) 924-9482
Web site: www.cimindustries.com

Instruction Guide
APPLICATION OF CIM TO STEEL AND OTHER METALS

1.0 DESCRIPTION
This guide covers the installation of a CIM coatings and linings (CIM) over a sound, properly prepared steel base. The CIM shall consist of a minimum of 55 dry mils (see CIM Technical Data Sheet and appropriate coverage chart) applied by spray, squeegee, roller, or trowel. Actual coverage rates may differ from theoretical rates depending on surface profile and application method.

2.0 MATERIALS
2.1 CIM Premix & Activator
2.2 CIM Bonding Agent
2.3 Optional Materials
2.3a. CIM 61BG Epoxy Primer
2.3b. CIM Scrim
2.3c. CIM 1000 Trowel Grade Premix & Activator

3.0 SAFE PRACTICES
Use equipment and procedures designed to minimize danger to personnel and materials. Special attention should be made to provide adequate ventilation and respirators for personnel applying CIM in confined spaces or operating spray equipment. See C.I.M. Industries' Instruction Guide, "Applying CIM Within Confined Spaces" (IG–9) for more detailed information.

4.0 SURFACE PREPARATION
All areas adjacent to those being coated with CIM which are not intended to be coated should be protected with suitable temporary splash covers such as polyethylene, carpenters paper, or masking tape. CIM shall be applied on a clean, dry, structurally sound base.[1]

4.1 Steel
All carbon steel surfaces (including penetrations) shall be free of all dirt, oil, grease spots, rust, and rust residue. CIM shall not be applied over steel that is blistered or flaking. For primed steel or steel with existing coatings, scarify the surface before coating and apply a test patch of CIM to test for acceptable adhesion. Abrasive blasting is the preferred method for cleaning.

- Achieve minimum 3 mil surface profile.
  - Immersion service: Near White Metal Blast, SSPC-SP-10 or NACE No. 2 Blast.
  - Non-immersion service: Commercial Blast, SSPC-SP-6 or NACE No. 3 Blast.

To prevent flash rust from occurring, CIM 61BG Epoxy Primer may be used on freshly blasted steel prior to coating with CIM (see Figure 1). The maximum recoat window for CIM 61BG Epoxy Primer

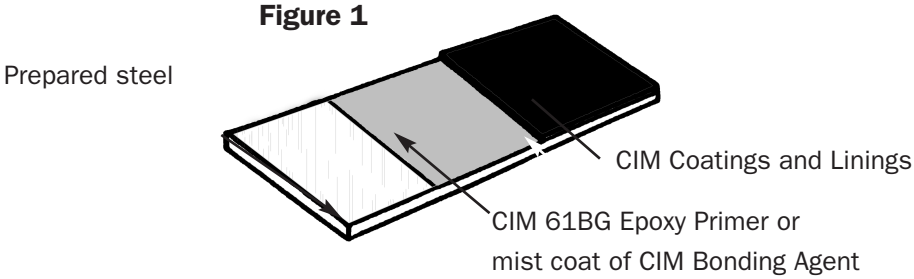
---

[1]**Note:** If surfaces are not completely clean, CIM will achieve poor adhesion to the metal base and may experience blistering and possible failure.

NOTES:

is 48 hours. See CIM 61BG Epoxy Primer Technical Data Sheet for specific guidelines.

Figure 1



4.2 Other Metals

Stainless Steel shall receive a 4+ mil profile prior to coating with CIM. Other metals (galvanized, aluminum, copper, brass, zinc, etc.) shall be scarified by abrasive blasting or grinding. Smooth, glossy metal surfaces will not provide good adhesion. Solvent wipe all metal surfaces (MEK or Xylene) to remove any dirt or oil residues. Abrasive blasting is the preferred method of profiling for all types of metals.

5.0 APPLICATION

5.1 Apply CIM Bonding Agent to All Metal Surfaces

CIM Bonding Agent must be applied to all non-porous surfaces except where CIM 61BG Epoxy Primer is applied. **Apply a fine mist only!** Application is to be performed with a Hudson-type sprayer or equivalent at a rate of 600 sq. ft./gal., no more than one (1) hour prior to the application of CIM. CIM Bonding Agent must completely dry prior to the application of CIM. If a properly mixed pail of CIM Premix and Activator is applied over CIM Bonding Agent which still appears wet, the result will be poor adhesion between the metal substrate and the cured CIM.

5.2 Penetrations

Penetrations must be coated with CIM 1000 Trowel Grade at all horizontal to vertical transitions. CIM 1000 Trowel Grade should be applied at least 60 wet mils thick, 2” onto and 2” beyond the penetration. Please see section 5.8 for application procedures for multiple coats. If work stoppage is unavoidable see sections 5.9 and 5.10.

NOTES:

CIM will adhere to most clean construction materials. When coating substrates other than steel or other metals, please see the C.I.M. Industries' specific substrate Instruction Guide for detailed information of application procedures.

5.3 Sharp Edges

CIM 1000 Trowel Grade may be used on sharp edges to prevent thin spots from occurring. The entire area should be coated with the specified thickness of CIM within four (4) hours after troweling sharp edges. Do not allow CIM 1000 Trowel Grade to cure more than four (4) hours at 70°F before coating with additional applications of CIM. If work stoppage is unavoidable see sections 5.9 and 5.10.

5.4 Using CIM Scrim

CIM Scrim may also be used on sharp edges to prevent thin spots from occurring. After the substrate is properly prepared apply a thin tack coat, 10–20 mils, of black CIM. Push scrim evenly into tack coat and allow to cure for 1–4 hours. Apply 60 wet mils of CIM directly over scrim. CIM Scrim acts as a coverage gauge to insure thickness.

5.5 Cant Strips

Cant strips should be made with CIM 1000 Trowel Grade Cartridges wherever horizontal surfaces meet vertical surfaces. This is crucial in applications such as tanks which experience wall movement when filled. Cant strips are generally ½" or more wide by ½" or more tall. Allow the cant to cure for a minimum of 12 hours at 70° F. Contact C.I.M. Industries for specific design details.

5.6 Horizontal Surfaces

CIM should be applied to steel at a film thickness of 60 wet mils or more mils, depending on application type. This can be achieved in a single coat on horizontal surfaces.

5.7 Vertical and Sloped Surfaces

CIM can be applied to a vertical or sloped surface with a roller, brush or spray equipment. Small walls are often coated with rollers or brushes. Large walls should be sprayed using an air assisted airless spray system or plural component spray system See C.I.M. Industries' Instruction Guide, "Spray Application of CIM" (IG–12) or contact C.I.M. Industries for suggested equipment configuration. When working with CIM, vertical or sloped surfaces require a minimum of two (2) applications of

NOTES:

approximately 30 wet mils each to obtain the required thickness. If a coating thickness of more than approximately 60–65 mils is specified on a vertical or sloped surface, additional passes will be required to achieve desired thickness.

5.8 Multiple Coats

Second/multiple coats can be applied as soon as the previous coat can be touched lightly without coming off on your finger. For CIM at 70°F, the tack free time is typically one (1) hour but no longer than four (4) hours after the previous coat has been applied. Higher temperatures speed up the curing time and tack free time, therefore significantly shortening the 1–4 hour recoat window. Colder temperatures have the opposite effect. As soon as the coating becomes tack free, the second coat should be applied. For immersion or traffic service, apply all coats within the recoat window, except at joint lines.

If it is necessary to walk on the first coat of CIM in order to apply multiple coats, such as when coating a parking or pedestrian deck, polyethylene boots may be worn to prevent sticking to the coating.

5.9 Recoating After the Recoat Window

If second/multiple coats cannot be applied within the recoat window (1–4 hours under standard conditions), the previous coat must be abraded. Abrading shall be performed by surface grinder or other mechanical means. The CIM must be solvent wiped (MEK or xylene) to clean up any loose debris. After the solvent flashes off, a light mist of CIM Bonding Agent must be applied. Allow the Bonding Agent to flash off and recoat within one (1) hour. For immersion or traffic service, minimize areas to be recoated outside the recoat window, severely abrade the areas to be recoated and test recoated areas for acceptable adhesion. Acceptable adhesion may only be achieved through aggressive abrading.

5.10 Overlap at Joints

Should rain or other conditions require work stoppage, prepare for joint lines. Joint lines shall be clean and straight. The overlap shall be a minimum of 6” to insure an impervious joint. All areas to be coated where more than a four (4) hour cure has taken place shall be treated per section 5.9, Recoating After the Recoat Window.

NOTES:

6.0 TOPPINGS

The CIM may include toppings of aggregate, decorative coatings, protective coatings, or combinations of the above. See C.I.M. Industries' Instruction Guide, "Topcoats" (IG–7) for more detailed information.

7.0 GENERAL LIMITATIONS

Applying CIM under any of the following conditions is likely to result in poor or unsatisfactory performance:

- Use of improper mixing equipment. See C.I.M. Industries' Instruction Guide "Mixing CIM Premix and Activator" (IG–8).
- Material temperature at the time of application is below 60°F.
- Use of standard application procedures when substrate temperature is below 50°F. See C.I.M. Industries' Instruction Guide "Applying CIM Coatings in Cold Weather" (IG–11).
- Substrate moisture is present or rain is imminent.
- Substrate temperature is less than 5°F above the dew point.
- Substrate is in a temperature-rising mode or exposed to direct sunlight.
- Other conditions which are obviously unsuitable.

Printed on PaperTyger Tear Resistant Paper