# Plating Samples with
# Cadmium LHE® 5070 or Cadmium No Bake® 2023
# on Steel when Hydrogen Embrittlement is a Concern.

**First, mark each panel as #1, #2, & #3 and the trainee's name with a black permanent marker**

**Sample Coupon 1:**

a. Solvent clean entire panel provided to you by SIFCO.
b. Dry blast using aluminium oxide or silicon carbide or roughen surface with 120 grit paper on one entire side of the panel. Avoid using sandpaper containing anti-loading agents like zinc stearate.
c. Mask off a 2" x 2" area on the side of the panel blasted or roughed. Use vinyl tape to mask off the area.
d. Process the sample per the procedures listed under "Notes Prior to Plating" of the Technical Data Sheet for SIFCO Process Cadmium (LHE) 5070 Plating Solution or SIFCO Process Cadmium (No Bake) 2023 Plating Solution or per BAC 5854, whichever applies.
e. Plate sample as ***Class 1, Type I***, in accordance with **QQ-P-416E.**
(required thickness – 0.0005" minimum) (as plated, no conversion coating)
f. After plating sample, rinse, dry and remove the masking.
g. Inspect per processing standard.
h. Place completed sample in bag provided and return with the written test.

**Sample Coupon 2:**

a. Solvent clean entire panel provided to you by SIFCO.
b. Dry blast using aluminium oxide or silicon carbide or roughen surface with 120 grit paper on one entire side of the panel. Avoid using sandpaper containing anti-loading agents like zinc stearate.
c. Mask off a 2" x 2" area on the side of the panel blasted or roughed. Use vinyl tape to mask off the area.
d. Process the sample per the procedures listed under "Notes Prior to Plating" of the Technical Data Sheet for SIFCO Process Cadmium (LHE) 5070 Plating Solution or SIFCO Process Cadmium (No Bake)2023 Plating Solution or per BAC 5854, whichever applies.
e. Plate sample as ***Class 1, Type I***, in accordance with **QQ-P-416E.**
(required thickness – 0.0005" minimum) (as plated, no conversion coating)
f. After plating, rinse and dry the panel. DO NOT REMOVE MASKING
g. By using a flat head screwdriver, make a scratch (defect) in the middle of the freshly plated area through the cadmium to the base metal. Scratch should be no less than 1" long and no more than 1.5" long.
h. Once the area has been scratched, take 120 grit paper and lightly and quickly roughen the surface of the defect area to be repaired.
i. Without masking defect area, repair the defect by following the steps listed in ***Procedure A*** on the Technical Data Sheet for SIFCO Process Cadmium (LHE) 5070 Plating Solution or SIFCO Process Cadmium (No Bake) 2023 Plating Solution. You will be applying cadmium to both the existing cadmium deposit and the newly exposed base material.
j. After plating sample, rinse, dry and remove the masking.
k. Inspect per processing standard.
l. Place completed sample in bag provided and return with the written test.



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4/1/2021

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❖ ***If you are required to use a Chromate Conversion Coating (Type II) to meet certain specifications, a third sample is required. Proceed as follows:***

**Sample Coupon 3:**

a. Duplicate procedures for **Sample 1.**
b. When completed with steps "a" through "f", apply Chromate Treatment 3002 or 5005 Solution. Follow the instructions listed on the Technical Data Sheet for SIFCO Process Chromic Conversion Coating 3002 or SIFCO Process Chromate Conversion Coating 5005 Post-Treatment Solution.
c. After applying conversion coating on sample, rinse and dry.
d. Inspect per processing standard.
e. Place completed sample in bag and return with the written test.

**Required Documentation**

Return the following to SIFCO ASC for testing and evaluation:

- Plated and properly labelled sample panels
- Properly filled out Cadmium Program/Lab Report
- Completed Cadmium Test
- Testing and evaluation of the panels and paperwork is done on a monthly basis

Return to:
Michell Trivelli/SIFCO
5708 E. Schaaf Rd.
Independence, Ohio 44131



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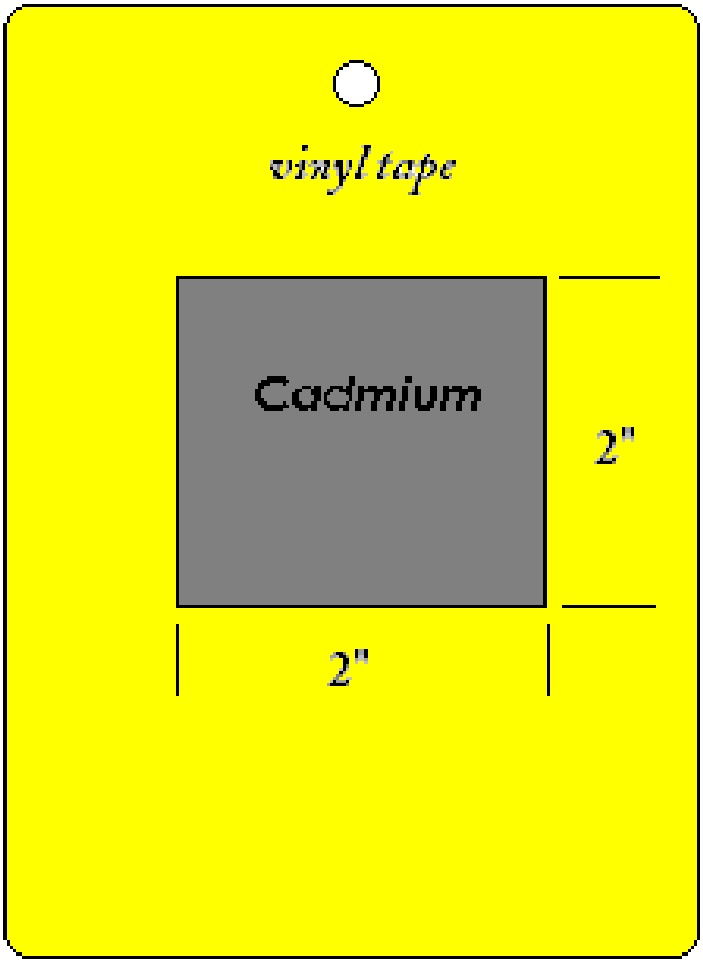


**Samples 1, 2 and 3 (if applicable) should all be masked the same way.**



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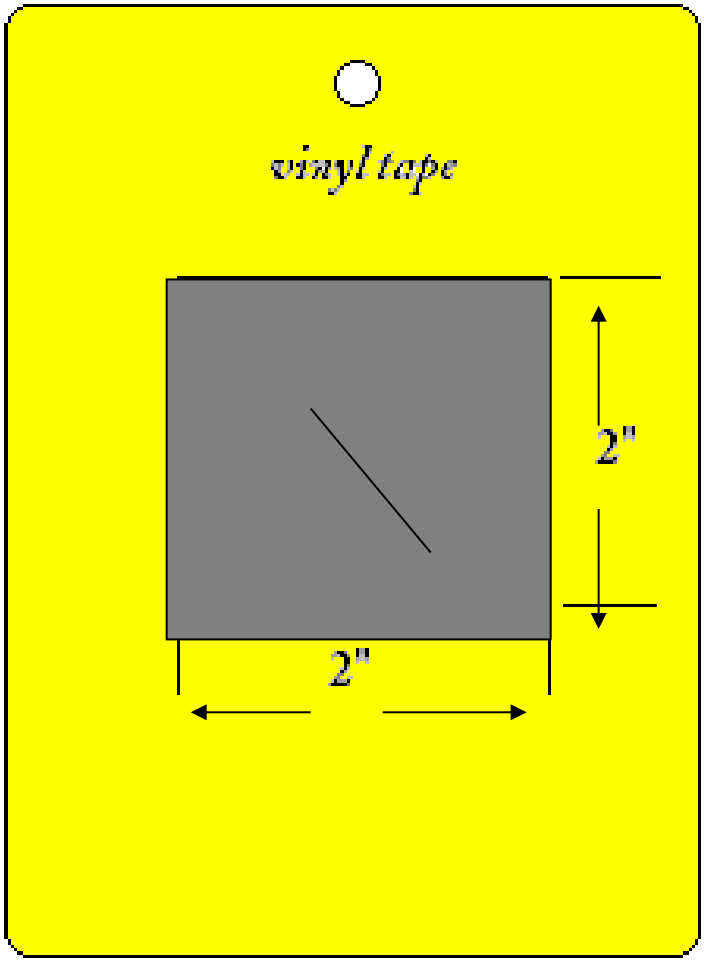


**Sample 2**

Defect should be made with a flat head screwdriver scratching through the cadmium to the base metal. Defect (Scratch) should be between 1” and 1.5” long.



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