

# EPA National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

40 CFR Part 63 Subpart HHHHHH

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## Outline -

- Applicability
- Rule requirements
- Compliance dates
- Notifications & Reporting
- Exemptions
- Records

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## Applicability

- Paint stripping
  - Contains methylene chloride (dichloromethane)
  - Remove dried paint from plastic, wood, metal etc.
- Motor vehicles & mobile equipment
  - Spray apply coating
  - Stationary shops **AND** mobile units
- Miscellaneous surface coating
  - Spray apply coatings to plastic or metal parts
  - Coatings contain chromium, lead, nickel, manganese, cadmium (hazardous air pollutants – HAPs)

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## Activities NOT subject

- A hand-held spray device with a paint cup capacity that is 3.0 fluid ounces or less;
- Powder coating
- Brushing, rolling or hand wiping
- Flow or dip coating
- Electro deposition
- Thermal spray (a.k.a. flame spray, plasma arc spray)

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## Activities NOT subject

- Hand-held non-refillable aerosol containers
- Touch-up markers
- Facility maintenance operations
  - This DOES NOT include fleet vehicles
- Research and laboratory activities & Quality control activities

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## Sources NOT subject

- Military installations, NASA or National Nuclear Security Administration
- Military munitions, or munitions transport equipment for use by the Military
- Individuals on their personal vehicles or for others without compensation\*
- Receive an exemption from USEPA

\* Less than 2 motor vehicles or pieces of mobile equipment per year

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# REQUIREMENTS

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## Requirements – Paint Stripping

- Management practices:
  - Evaluate need for stripping
  - Alternative stripping method
- Minimize methylene chloride evaporation
  - Proper storage & disposal practices
  - Air tight containers
- Optimize application conditions to reduce evaporation
  - if the stripper must be heated, keep the temperature as low as possible

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## Requirements – Paint Stripping

- If more than one ton of methylene chloride is used per year
  - develop and implement a written minimization plan to minimize the use and emissions of MeCl<sub>2</sub>
  - post a placard or sign outlining the minimization plan in each area where paint stripping operations occur

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## Requirements – Paint Stripping

```

CREST INDUSTRIAL CHEMICALS INC -- PAINT STRIPPER NO 7 -- 8010-00-142-9273
----- Product Identification -----
Product ID: PAINT STRIPPER NO 7
MDCI Date: 03/25/1994
PCH: 8123
ECHA ID: 05-142-9273
MDCI Number: 02896
--- Responsible Party ---
Company Name: CREST INDUSTRIAL CHEMICALS INC
Address: 6943 BEVERLY HILL
Box: 42242
City: HOUSTON
State: TX
ZIP: 77062
Country: US
Info Phone Num: 713-780-8128/828
Emergency Phone Num: 713-785-1828/800-255-3924
Preparer's Name: J D SOMMERT
CAGR: 175113
--- Contractor Identification ---
Company Name: CREST INDUSTRIAL CHEMICALS INC
Address: 6943 BEVERLY HILL
Box: 42242
City: HOUSTON
State: TX
ZIP: 77060-6500
Country: US
Phone: 713-780-1828
CAGR: 175113

Methylene Chloride
[a.k.a. dichloromethane]

CAS #
75-09-2 ----- Composition Information on Ingredients -----
Ingrd Name: METHYLENE CHLORIDE (SARA 311) (CH2CL2)
CAS: 75-09-2
FRCE #: 04850005
Fraction by wt.: 36%
    
```

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## Requirements – Paint Stripping

```

----- Physical/Chemical Properties -----
MOC: 74
MDCI/State Lic Num: NONE
Boiling Pt: B.P. Text: 110F, 43C
Vapor Pres: 350 MM
Spec Gravity: 1.13
Viscosity: 4500 CPS
Evaporation Rate & Reference: 1 (BUTYL ACRYLATE=1)
Solubility in Water: SLIGHTLY SOLUBLE
Appearance and Odor: VISCIOUS YELLOW LIQUID WITH A PHEENOLIC ODOR, 18SS
THAN 5000 CPS VISCOSITY.
Percent Volatiles by Volume: 80
    
```

Spec Gravity to Density:  
 $SG \times 8.345 = \text{Density [lbs stripper/gallon stripper]}$

So:  $1.13 \times 8.345 = 9.43 \text{ lb/gal}$

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## Requirements – Paint Stripping

Methylene chloride [MeCl<sub>2</sub>] = 36%  
 Density = 9.43 lbs/gal

$$9.43 \text{ lb/gal} \times \frac{36\%}{100} = 3.36 \text{ lb MeCl}_2 / \text{gal stripper}$$

1 ton/yr = 2000 lb/yr

2000 lb/yr ÷ 3.36 lb/gal = 595 gal/yr

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## Requirements - Coating Operations

- Spray Method
  - HVLP spray gun
  - Airless gun
  - Air-assisted airless spray gun
  - Electrostatic spray gun
- Applied in a:
  - Spray booth
  - Preparation station
  - Mobile enclosure

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## Requirements – Painters

- Trained/certified painters
  - Proper spray application
  - Proper setup and maintenance of spray equipment
- Spray application of surface coatings is prohibited by uncertified persons
- Students of an accredited training program who's instructor is certified are exempt

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## Requirements – Painters

- Training course must include both classroom and hands-on
  - Spray gun equipment
    - Selection / Set-up / Operation
    - Measuring viscosity
    - Proper fluid tip or nozzle selection
    - Proper spray pattern
    - Proper air pressure / volume / fluid delivery rate

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## Requirements – Painters

- Proper spray techniques
  - Improved transfer efficiency
  - Minimize coating usage
  - Minimize overspray
    - Correct spray gun distance
    - Correct spray gun angle to the part
    - Proper banding and overlap
    - Reducing lead and lag spraying

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## Requirements – Painters

- Booth maintenance
- Filters
  - Selection
  - Installation & change-out frequency
  - Maintenance
- Environmental compliance with this EPA rule

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## Requirements – Painters

- Training good for 5 years
- Refresher once every 5 years
- Training deadlines
  - New shops - within 180 days of hire
  - Existing shops
    - Within 180 days for new hires
    - By January 10, 2011 for current employees

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## Requirements – Spray Gun Cleaning



- Enclosed washer
- Manual cleaning
- Solvent flushing
- Combination of the above

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## Requirements – Spray Booths

- Large enough to hold a complete vehicle
- 4 complete side walls or side curtains
- Complete roof
- Equipped with filters
- A ventilation system



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## Requirements – Prep Stations

- Full roof
- At least 3 walls or side curtains
- Equipped with filters
- A ventilation system



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## Requirements – Mobile Enclosures

- Enclose and seal the area being coated
- A ventilation system
- Equipped with a filter system

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## Requirements – Filters

At least 98% capture efficiency of paint overspray



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## Requirements – Summary

- Use spray guns and techniques that reduce over spray
- Trained/certified painters
- All spray coating done in a booth or an enclosure
- Filters remove at least 98% of overspray
- Spray gun cleaning can not create a mist of cleaning solvent into the air

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## Compliance Dates —

- **New shop/facility**
  - By January 9, 2008 or
  - At startup of operations
    - “commenced the construction of the source after September 17, 2007 by installing new paint stripping or surface coating equipment”
    - “new paint stripping or surface coating equipment is used at a source that was not actively engaged in paint stripping and/or miscellaneous surface coating prior to September 17, 2007”
- **Existing shop/facility**
  - By January 10, 2011

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## NOTIFICATIONS

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## Initial Notification

- **New shops**
  - 180 days after startup or by January 9, 2008
- **Existing shops**
  - By January 11, 2010

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## Initial Notification

**INFORMATION NEEDED FOR INITIAL NOTIFICATION**  
 Paint Stripping and Miscellaneous Surface Coating – Area Source Rule  
 (Subject to 40 CFR 63.11180 – 63.11180)

[This simple format may be used to meet the initial notification requirements of Subpart 63.11180, however, you are not required to use this format as long as you provide information required by 40 CFR Section 63.1175(a).]

- Company Name (if applicable):** \_\_\_\_\_
- Information about the owner and operator:**
  - Owner's Name and Title: \_\_\_\_\_
  - Owner's Street Address: Street \_\_\_\_\_ City/Town \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_
  - Owner's telephone number: \_\_\_\_\_
  - Owner's email (if available): \_\_\_\_\_
  - Is there any other certifying company official that will sign this form? If certifying Official information is different, please provide the following: Yes  No
- Operator's Name and Title: \_\_\_\_\_
  - Operator's Street Address: Street \_\_\_\_\_ City/Town \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_
  - Operator's telephone number: \_\_\_\_\_
  - Operator's email (if available): \_\_\_\_\_
  - Is there any other certifying company official that will sign this form? Yes  NO
- Certifying Official's Name and Title: \_\_\_\_\_
  - Certifying Official's Street Address: Street \_\_\_\_\_ City/Town \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_
  - Certifying Official's telephone number: \_\_\_\_\_
  - Certifying Official's email (if available): \_\_\_\_\_

- The source address (physical location) of the affected source**
- Street \_\_\_\_\_ City/Town \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_
- Are the compliance records located at the same location? Yes  No
- If the location of compliance records is different, please provide street address: \_\_\_\_\_
- Street \_\_\_\_\_ City/Town \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_
- Is the source a motor vehicle or mobile equipment surface coating operation that repairs vehicles at the customer's location, other than at a fixed location? Yes  No

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## Initial Notification

- Identification of Standard (you must check this box):**
  - Yes, I am subject to 40 CFR Part 63 subpart HHHHHH, National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, Final Rule
- 5. A brief description of the type of operation:**
  - I am:
    - Motor Vehicle or Mobile Equipment Surface Coating Operation
    - Miscellaneous Surface Coating Operation
  - Number of spray booths: \_\_\_\_\_
  - Number of preparation stations: \_\_\_\_\_
  - Number of painters usually employed: \_\_\_\_\_
- For Paint Stripping Operations**
  - Methods of paint stripping employed (check all that apply)
    - Chemical
    - Mechanical
    - Other (please describe): \_\_\_\_\_
  - Substrates stripped (check all that apply)
    - Wood
    - Plastic
    - Metal
    - Other (please describe): \_\_\_\_\_
- Calculations & MSDS information**
- Methylene chloride (MCC) used by paint stripping operations**

Do you plan to use more than 1 ton of MCC annually? Yes  No
- 7. Compliance Status – Please check one:**

For paint stripping operations, the relevant requirements that you must evaluate in making this determination are specified in 40 CFR 63.1173(a) through (d) of this subpart. For surface coating operations, the relevant requirements are specified in 40 CFR 63.1173(e) through (g) of this subpart.

  - I am already in compliance with each of the relevant requirements
  - I will be in compliance with each of the relevant requirements by the compliance date

New Source (after Jan. 9, 2008) compliance date is date of startup.  
 New Source (after Sept. 17, 2007 but before Jan. 9, 2008) compliance date is January 9, 2008  
 Existing Source (before Sept. 17, 2007) compliance date is January 10, 2011

Compliance Status

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## Notification of Compliance Status

- **Same information as the initial notification plus**
  - Date your shop came into compliance
- **New shops**
  - With initial notification
  - 180 days after startup or by January 9, 2008
- **Existing Shops**
  - Due on or before March 10, 2011

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# Notification of Compliance Status

8. Certification of compliance status

You must check one:

Note: Initial startup of the first time equipment is brought online in a paint stripping or surface coating operation, and paint stripping or surface coating is first performed.

I am a new source (initial startup on or after Jan 9, 2008) Date: \_\_\_\_\_

I am a new source (initial startup was after Sept 17, 2007 but before Jan 9, 2008) Date: \_\_\_\_\_

I am a new source, a responsible official, whose information is provided above, may certify by signing below that the source is in compliance with each of the relevant requirements of this subpart.

I am an existing source (initial startup was before Sept 17, 2007) Date: \_\_\_\_\_

If your source is an existing source, a responsible official, whose information is provided above, may certify by signing below that the source is in compliance with each of the relevant requirements of this subpart or certification may be done by March 11, 2011 in the Notification of Compliance Status as specified in 40 CFR Section 63.1175(b).

For existing sources:  I am certifying below  I will certify by March 11, 2011  
(There is no need to sign below; you must sign a statement by March 11, 2011.)

**I certify the truth, accuracy, and completeness of this notification. The source has complied with all the relevant standards of this subpart. This initial notification also serves as the notification of compliance status.**

Signature of responsible official; owner/operator: (Circle one) \_\_\_\_\_

Please Print Name Also: \_\_\_\_\_

Note:  
Responsible official is defined under §63.2 as any of the following: the president, vice president, secretary, or treasurer of the company that owns the plant; the owner of the plant; the plant engineer or supervisor; a government official if the plant is owned by the Federal, State, city, or county government; or a ranking military officer if the plant is located on a military installation.

Date of initial startup

# How to petition for an exemption

- The petition to US EPA must include:
  - Description of all the coatings you spray apply
  - Product line
  - Manufacturer
  - Type of coating
- Certification that your spray applied coatings do not contain any of the five target metal HAPs
  - Material Safety Data Sheets (MSDS)
  - Vendor

INDUSTRIAL HAPs

MATERIAL SAFETY DATA SHEET

IMVRON® POLYURETHANE ENAMEL

January 1, 1989

Section 1 - Manufacturer	Section 2 - Hazardous Ingredients (IHS Section X for ingredients listed by product code)
1. Acrylic resin	13. Methoxy ethyl acetate
2. Aluminum	14. Methyl methacrylate
3. Chromium	15. Methyl methacrylate
4. Nickel	16. Methyl methacrylate
5. Manganese	17. Methyl methacrylate
6. Lead	18. Methyl methacrylate
7. Cadmium	19. Methyl methacrylate
8. Chromium	20. Methyl methacrylate
9. Nickel	21. Methyl methacrylate
10. Manganese	22. Methyl methacrylate
11. Lead	23. Methyl methacrylate
12. Cadmium	24. Methyl methacrylate
13. Chromium	25. Methyl methacrylate
14. Nickel	26. Methyl methacrylate
15. Manganese	27. Methyl methacrylate
16. Lead	28. Methyl methacrylate
17. Cadmium	29. Methyl methacrylate
18. Chromium	30. Methyl methacrylate
19. Nickel	31. Methyl methacrylate
20. Manganese	32. Methyl methacrylate
21. Lead	33. Methyl methacrylate
22. Cadmium	34. Methyl methacrylate
23. Chromium	35. Methyl methacrylate
24. Nickel	36. Methyl methacrylate
25. Manganese	37. Methyl methacrylate
26. Lead	38. Methyl methacrylate
27. Cadmium	39. Methyl methacrylate
28. Chromium	40. Methyl methacrylate
29. Nickel	41. Methyl methacrylate
30. Manganese	42. Methyl methacrylate
31. Lead	43. Methyl methacrylate
32. Cadmium	44. Methyl methacrylate
33. Chromium	45. Methyl methacrylate
34. Nickel	46. Methyl methacrylate
35. Manganese	47. Methyl methacrylate
36. Lead	48. Methyl methacrylate
37. Cadmium	49. Methyl methacrylate
38. Chromium	50. Methyl methacrylate
39. Nickel	51. Methyl methacrylate
40. Manganese	52. Methyl methacrylate
41. Lead	53. Methyl methacrylate
42. Cadmium	54. Methyl methacrylate
43. Chromium	55. Methyl methacrylate
44. Nickel	56. Methyl methacrylate
45. Manganese	57. Methyl methacrylate
46. Lead	58. Methyl methacrylate
47. Cadmium	59. Methyl methacrylate
48. Chromium	60. Methyl methacrylate
49. Nickel	61. Methyl methacrylate
50. Manganese	62. Methyl methacrylate
51. Lead	63. Methyl methacrylate
52. Cadmium	64. Methyl methacrylate
53. Chromium	65. Methyl methacrylate
54. Nickel	66. Methyl methacrylate
55. Manganese	67. Methyl methacrylate
56. Lead	68. Methyl methacrylate
57. Cadmium	69. Methyl methacrylate
58. Chromium	70. Methyl methacrylate
59. Nickel	71. Methyl methacrylate
60. Manganese	72. Methyl methacrylate
61. Lead	73. Methyl methacrylate
62. Cadmium	74. Methyl methacrylate
63. Chromium	75. Methyl methacrylate
64. Nickel	76. Methyl methacrylate
65. Manganese	77. Methyl methacrylate
66. Lead	78. Methyl methacrylate
67. Cadmium	79. Methyl methacrylate
68. Chromium	80. Methyl methacrylate
69. Nickel	81. Methyl methacrylate
70. Manganese	82. Methyl methacrylate
71. Lead	83. Methyl methacrylate
72. Cadmium	84. Methyl methacrylate
73. Chromium	85. Methyl methacrylate
74. Nickel	86. Methyl methacrylate
75. Manganese	87. Methyl methacrylate
76. Lead	88. Methyl methacrylate
77. Cadmium	89. Methyl methacrylate
78. Chromium	90. Methyl methacrylate
79. Nickel	91. Methyl methacrylate
80. Manganese	92. Methyl methacrylate
81. Lead	93. Methyl methacrylate
82. Cadmium	94. Methyl methacrylate
83. Chromium	95. Methyl methacrylate
84. Nickel	96. Methyl methacrylate
85. Manganese	97. Methyl methacrylate
86. Lead	98. Methyl methacrylate
87. Cadmium	99. Methyl methacrylate
88. Chromium	100. Methyl methacrylate

Cadmium  
Chromium  
Nickel  
Manganese  
Lead

# Send petitions for exemptions to:

US EPA – New England  
Air Programs Branch  
5 Post Office Square  
Suite 100 (CAP)  
Boston, MA 02109-3912

# Annual Notification of Changes

- Prior to March 1 each year
- Only for changes
  - Amount of methylene chloride containing stripper
  - Number of spray booths, prep stations or enclosures
  - Number of painters

# US EPA Address - Notifications



US EPA – New England  
Attn: Air Compliance Clerk  
5 Post Office Square  
Suite 100 (OES04-2)  
Boston, MA 02109-3912

## RECORDKEEPING

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### Records –

- Amount of methylene chloride [dichloromethane] containing stripper used per month and per year
- Amount of each coating used per month
- Material Safety Data Sheets
- Copies of all notifications sent to US EPA
- Keep for 5 years

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### Records –

- Booth filters
  - Overspray collection efficiency
  - Change-out records
- Spray guns
  - Vendor information (i.e. cup size, transfer efficiency)
- Spray booth
  - Vendor information (i.e. date installed, fan exhaust rates)

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### Records –



- List of painters
  - Name
  - Job description
- Painter training certifications
  - Date of initial training
  - Date of most recent refresher training
  - Training course content

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### Records -

- Deviations (failure to meet a rule requirement)
  - Date and time period
  - Description and nature of deviation
  - Corrective actions
- Assessments of compliance

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### Web Resources –

- US EPA – Collision Repair Campaign
  - <http://www.epa.gov/collisionrepair/>
- US EPA – Auto Refinish Project Best Practices Kit
  - <http://www.epa.gov/opptintr/dfc/pubs/auto/trainers/index.htm>
- US EPA – Design for the Environment
  - <http://www.epa.gov/dfc>
- Boston Public Health Commission – Safe Shops
  - <http://www.bphc.org/programs/cib/environmentalhealth/environmentalhazards/safeshops/Pages/Home.aspx>

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## More Information & Questions

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