



IDEM's Compliance & Technical Assistance Program (CTAP)

Automobile Refinishing

326 IAC 8-10

(Volatile Organic Compounds – VOCs)

40 CFR 63, Subpart HHHHHH (6H)

(Hazardous Air Pollutants – HAPs)

Mark Stoddard

Environmental Engineer



Regulatory Process

- Air quality standards
- U.S. Environmental Protection Agency (U.S. EPA) guidance
 - Reduction of VOC Emissions
 - Alternative Control Techniques for Automobile Refinishing



Regulatory Process

- U.S. EPA and states develop regulations
- Measure impacts
- Revise



8-10 Exemptions

- Aerosol-coating products
- Graphic design
- Touch-up coating
- 3 or fewer vehicles annually



6H Exemptions

- 2 or 1 vehicles annually without compensation
- Armed Forces & military munitions operations
- Students & instructors at a paint training center, only training requirements
- Research and laboratory
- Quality control



Important 8-10 Definitions

- Touch-up: brush or non-refillable aerosol cans
- Weighted average of the 2, 3 or 4 stage
 - Base and clear coats
 - Three or four stage – Base, mid and clear coats
- Surface preparation products: VOC content greater than zero used to remove wax, tar, grease & other undesirable contaminants



Important 6H Definitions

Coating does not include:

- Protective oils
- Adhesive
- Sealants, maskants or caulking
- Temporary protective coatings



6H Definitions

- Spray-applied coating operations exclude:
 - Paint cup capacity less than 3.0 fluid ounces or less (89 cubic centimeters)
 - Non-refillable aerosol cans
 - Thermal spray operations
- Quality control activities include parts that are surface coated or stripped that are not sold or moved off-site



8-10 Limitations

- Know the coating category of the products
- The regulation does not limit mass or volume, but mass divided by volume
- The product manufacturer is subject to limits too
- Additional solvent may exceed limit



6H HAP Reductions

- Cadmium, Chromium, Lead, Manganese, Nickel and Methylene Chloride
- Can petition for exemption from 6H if none of your coatings contain any of the five metals



Paint Manufacturer 8-10 Data

- Abbreviated listing
- Coating category and limitations
- Products segregated by coating category
- Identification of additives
- Identification of the mixing ratio
- Identification of the as applied VOC content



Paint Manufacturers Can Help

- Paint HAP
- Employee training



8-10 Surface Preparation Products

- Base surface is plastic, do not exceed 780 grams of VOC per liter or 6.5 pounds per gallon
- Base surface is metal, do not exceed 168 grams per liter or 1.4 pounds per gallon



6H Surface Preparation Products

- Do you use materials containing Methylene Chloride? If yes, a plan must be developed.
- The plan must:
 - Evaluate alternatives
 - Minimize evaporation
 - Minimize exposure
 - Ensure proper storage and disposal



8-10 difficulty with 168 or 1.4?

- Some products include an exempt VOC or water
- Blending will help
- Exempt VOC examples
 - Acetone
 - Methyl Acetate & t-Butyl Acetate (TBAC)
 - Parachlorobenzotrifluoride (PCBTF)



8-10 Permissible Spray Guns

- Electrostatic
- HVLP (High volume and low pressure)
- Any device capable of 65% transfer efficiency
 - Check with the manufacturer
 - Ohio EPA:
www.epa.ohio.gov/dapc/regs/3745_21/hvlp_electro.aspx



6H Permissible Spray Guns

- Electrostatic
- HVLP (High volume and low pressure)
- Airless
- Air assisted airless
- HVLP equivalent
 - www.epa.ohio.gov/dapc/regs/3745_21/hvlp_electro.aspx



Spray Gun Cleaning

- 8-10
 - Enclosed; optional ventilation of work space while adding or removing spray guns
 - Solvent recirculation
 - O&M manual
- 6H
 - Enclosed spray gun washer or
 - Cleaning without creating solvent mist



8-10 Housekeeping Practices

- Reduce or eliminate evaporation
- Keep idle containers closed
 - Solvent-laden materials
 - Raw and waste materials
 - Periodically check for leaks
- Keep the idle hazardous waste container closed
- Keep empty paint/solvent containers closed or place in closed container



8-10/6H Written Training Program

- Provided by supplier or technical college
- Must include hands-on demonstration



8-10 Written Training Topics

- Review product mixing and usage
- Evaluate how to further reduce VOC emissions
- Establish housekeeping practices
- Discuss the maintenance of records



6H Written Training Topics

- Spray gun selection and set up
 - Selection and set up
 - Usage
 - Maintenance
- Spray booth and filter maintenance
- Description of 6H requirements



8-10 Training

- May 1
- New employee or reassigned to this activity
 - Supervised by a trained employee
 - Training within 180 days
- Records
 - Date completed
 - List of persons, name & activity, and topics
 - Trainer certifies proficiency for each trainee



6H Training

- New employee or reassigned to this activity
 - Supervised by a trained employee
 - Training within 180 days
- Records for each technician
 - Date & location
 - Name and topics
 - Certificate of completion



6H Refresher Training

- Every 5 years
- For many, January 10, 2016, is the deadline



8-10 Declaratory Statement

“The owner or operator of a refinishing facility subject to this rule shall submit to the department a statement signed by a responsible official of the facility, certifying that the facility has acquired and will continuously employ coating or surface preparation products meeting the VOC limits of section 4(a) of this rule.”¹

¹ 326 IAC 8-10-6 (c) Compliance procedures



8-10 Declaratory Statement

Section 4 (a) The owner or operator of a refinishing facility subject to this rule shall limit emissions of VOCs from refinishing operations by using coatings or surface preparation products with VOC limits based on the VOC content as applied. The VOC content shall not exceed the following limits:

Coating Category	VOC Limit	
	Grams/liter	Lbs/gallon
Pretreatment wash primer	780	6.5
Precoat	660	5.5
Primer/primer surfacer	576	4.8
Primer sealer	552	4.6
Topcoat		
Single and two stage	600	5.0
Three and four stage	624	5.2
Multicolored topcoat	680	5.7
Specialty	840	7.0
For surface preparation products:		
Type of Substrate		
Plastic	780	6.5
Other	168	1.4



8-10 Reporting

- Inadvertent use of a non-compliant coating
- Reasons for its use
- Corrective actions taken



6H Reporting

- Initial notification
- Notification of compliance status
- Annual notification of changes report, if applicable, prior to March 1
- Petition for exemption, optional



8-10 Record Keeping

- Repair order identification
- Each coating category/batch
 - Date
 - VOC content
 - Quantity
 - Ingredients and mix ratio



8-10 Record Keeping

- Surface preparation
 - VOC content applied, plastic or metal
 - Monthly records
 - Container size
 - Quantity of each container size
- Training
- Declaratory statement & other reports



6H Record Keeping

- Initial notification
- Filter efficiency according to ASHRAE 52.1
- Spray guns – “HVLP” stamped on the gun
- Training certification for each employee
- Annual usage of paint strippers containing Methylene Chloride



Other Unique 6H Requirements

- Spray booth
- Preparatory station – miscellaneous parts & subassemblies
- Negative or positive pressure ventilation
- Dry filter system at least 98% efficient



CTAP

Our goals are to help you understand what you need to do and how to do it so that a visit by IDEM is less of a concern.



How We Can Help

- Contact us by phone
- Invite us to visit your business
- Online - idem.IN.gov/ctap/2360.htm
- All of our services are free, voluntary & confidential



Internet Resources

Alternative Control Techniques Document:
Automobile Refinishing -

www.epa.gov/airquality/ozonepollution/SIPToolkit/ctg_act/199404_voc_epa453_r-94-031_autobody_refinishing.pdf



Internet Resources

Reduction of Volatile Organic Compound
Emissions from Automobile Refinishing -

www.epa.gov/airquality/ozonepollution/SIPToolkit/ctg_act/198810_voc_epa450_3-88-009_automobile_refinishing.pdf



Internet Resources

- Rule and Implementation Information for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources - www.epa.gov/ttn/atw/6h/6hpg.html
- Collision Repair Campaign - www.epa.gov/collisionrepair/



Internet Resources

- Collision Repair/Auto Refinishing Shops -
idem.IN.gov/ctap/2360.htm
- Autobody shop environmental compliance assistance -
dnr.wi.gov/topic/compassist/sb/autobody.htm



Internet Resources

Self-certification Checklist for Autobody
Refinishing Shops -

[idem.IN.gov/ctap/files/ctap auto collision self-
cert checklist.doc](http://idem.IN.gov/ctap/files/ctap_auto_collision_self-cert_checklist.doc)



Office of Compliance Support

Contact Information

(317) 233-1039

mstoddar@idem.IN.gov