South Coast Air Quality Management District

Form 400-E-17a
Powder Coating Operation

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): _____

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): _____

Address where the equipment will be operated (for equipment which will be moved to various locations in AQMD's jurisdiction, please list the initial location site): _____

○ Fixed Location ○ Various Locations

Section B - Equipment Description

Powder Coating System

Manufacturer: _____ Model.: _____ Serial No.: _____

Outside Dimensions:

W: _____ ft. _____ in. L: _____ ft. _____ in. H: _____ ft. _____ in.

Cleaning System

Cleaning Solvents Used (attach Material Safety Data Sheets): _____

Solvent Usage: _____ gallons/day _____ Density (lb/gal)

_____ gallons/month _____ lbs VOC/gal Material including H_2O and exempt solvents

Collection/Recycling System

Is a cyclone present? ○ No ○ Yes

Control System

Select One:

○ Pocket filters ○ Baghouse ○ Cartridge type dust collector ○ Other: _____

Number of filters, bags or cartridges: _____

Size of each filter, bag or cartridge (inches):

Width _____ x Length _____ x Depth _____

OR Diameter _____ x Length _____

Manometers/Draft Gauges

Manometer or draft gauge installed? ○ No ○ Yes

No. of gauges: _____

Pressure drop across clean filters (inches of water): Gauge 1: _____ Gauge 2: _____

Section C - Process Description

Process Weight (pounds of powder used)

○ ≤ 37 pounds/day - bags filters or pocket filters are needed

○ > 37 pounds/day - cartridge-type dust collector or baghouse is needed

Indicate actual amount used:

Normal operation: _____ pounds/day Maximum operation: _____ pounds/day

_____ pounds/month _____ pounds/month

Gun Cleaning

Method used for cleaning gun: ☐ Compressed Air

☐ Other: _____

Solvent usage, if any:

_____ gallons/day _____ gallons/month _____ % by weight of VOC _____ Density (lbs/gal)

Type of Article/Material Sprayed

Description: _____

Operating Schedule

Normal: _____ hours/day _____ days/week _____ weeks/yr

Maximum: _____ hours/day _____ days/week _____ weeks/yr

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Section D - Ovens

Preheat/Dry Off and Curing Ovens

☐ Preheat/Dry off Oven: Manufacturer: _____ Model.: _____

BTU Rating: _____ Btu/hr (If greater than 2,000,000 Btu/hr or substrate cleaning has Volatile Organic Compounds, a separate permit is required for the oven.)

Fuel Type: ○ Natural Gas ○ Propane ○ Other _____

☐ Curing Oven: Manufacturer: _____ Model.: _____

BTU Rating: _____ Btu/hr (A separate permit is needed for the oven unless the oven cures less than 30 pounds per day or 660 pounds per month of powder coating and the oven is rated less than 2,000,000 Btu/hr.)

Fuel Type: ○ Natural Gas ○ Propane ○ Other _____

Section E - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info

Signature: _____ Date: _____

Title: _____ Company Name: _____

Name: _____

Phone #: _____ Fax #: _____

Email: _____

Contact Info

Name: _____

Title: _____ Company Name: _____

Phone #: _____ Fax #: _____

Email: _____

Validate/Print Reset

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

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Powder Coating Operation Worksheet

I. Calculation For Ovens

Emission Factor

BTU Rating (MMBTU/hr): _____

Conversion Factor: _____

BACT (ppm): 30

Fuel Usage (MMBTU/hr): _____

NOx (lbs/ppm-MMBTU): .00121

NOx (lbs/hr): _____

	Natural Gas				Propane				
	lb/mmcf	Emission (lb/hr)	30 Day Avg.	Yearly Avg.	lb/1000 gal	Emission (lb/hr)	30 Day Avg.	Yearly Avg.
ROG	7				0.26	NA		
CO	35				3.2	NA		
PM/PM10	7.5				0.28	NA		
SOx	0.83				4.6	NA		
NOx					12.8	NA		

Separate Application ○ Is Required ○ Is Not Required

II. Emission Calculations From Powder Coating

Particulate Emissions (PM10)

Daily Emissions = _____ pounds of powder sprayed per day x (1 - TE) x (1 - CE) = _____

where TE = transfer efficiency = 0.65 for electrostatic guns (default)
CE = Control Efficiency of control device
= 0.99 for dust collector - baghouse/cartridge
= 0.9 for standard spray booth with pocket type filters

30 day average emission = (_____ daily emissions x number of days of operation per month) / 30 = _____

Yearly emissions (tons/year) = monthly emissions x 12 / 2000

(_____ daily emissions x _____ number of days of operation per month) x 12 / 2000 = _____

III. VOC Emissions

Powder Coating

Daily Emissions = 0.01 x _____ pounds of powder sprayed per day = _____
Assume 1% by weight of powder sprayed is volatized

30 day average emission = (_____ daily emissions x number of days of operation per month) / 30 = _____

Yearly emissions (tons/year) = monthly emissions x 12 / 2000

(_____ daily emissions x _____ number of days of operation per month) x 12 / 2000 = _____

From Solvent Usage, Daily Emissions

Part Cleaning

Loss per day _____ % by weight of VOC x _____ gallons/day x _____ density = _____

30 day average emission = (_____ daily emissions x number of days of operation per month) / 30 = _____

Yearly emissions (tons/year) = monthly emissions x 12 / 2000

(_____ daily emissions x _____ number of days of operation per month) x 12 / 2000 = _____

Gun Cleaning

Loss per day _____ % by weight of VOC x _____ gallons/day x _____ density = _____

30 day average emission = (_____ daily emissions x number of days of operation per month) / 30 = _____

Yearly emissions (tons/year) = monthly emissions x 12 / 2000

(_____ daily emissions x _____ number of days of operation per month) x 12 / 2000 = _____

If a separate permit is required for an oven, calculate oven emissions.

SAMPLE Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2) HIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

3) THIS SPRAY BOOTH SHALL NOT BE OPERATED UNLESS ALL EXHAUST AIR PASSES THROUGH FILTER MEDIA AT LEAST 2 INCHES THICK.

4) A GAUGE SHALL BE INSTALLED AND MAINTAINED TO INDICATE, IN INCHES OF WATER, THE STATIC PRESSURE DIFFERENTIAL ACROSS THE EXHAUST FILTERS. IN OPERATION, THE PRESSURE DIFFERENTIAL SHALL NOT EXCEED 0.25 INCH OF WATER.

5) THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULES 1107 AND 1171.

6) MATERIAL SAFETY DATA SHEETS FOR ALL COATINGS AND SOLVENTS USED AT THIS FACILITY SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

7) WET COATING SHALL NOT BE APPLIED IN THIS EQUIPMENT.

8) THE OPERATOR SHALL COMPLY WITH RULE 109 (RECORDKEEPING FOR VOLATILE ORGANIC COMPOUND EMISSIONS).

9) IN ADDITION TO THE REQUIREMENTS OF RULE 109, THE OPERATOR SHALL KEEP ADEQUATE RECORDS FOR THIS FACILITY TO VERIFY CALENDAR MONTHLY VOLATILE ORGANIC COMPOUNDS (VOC) EMISSIONS IN POUNDS AND THE VOC CONTENT OF EACH MATERIAL AS APPLIED (INCLUDING WATER AND EXEMPT COMPOUNDS). ALL RECORDS SHALL BE PREPARED IN A FORMAT WHICH IS ACCEPTABLE TO THE DISTRICT.

10) THE VOC EMISSIONS FROM THE USE OF ANY POWDER COATINGS SHALL BE CALCULATED USING THE EMISSION FACTOR DETERMINED PURSUANT TO SCAQMD METHOD 316C. IN CASE NO LABORATORY TESTED EMISSION FACTOR IS AVAILABLE, THEN A FACTOR OF 0.01 POUND OF VOC PER POUND OF POWDER COATING SPRAYED SHALL BE USED.

11) THE TOTAL OUANTITY OF POWDER COATINGS USED IN THIS EQUIPMENT SHALL NOT EXCEED _____ POUNDS IN ANY ONE DAY.

12) THE TOTAL QUANTITY OF VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FROM ALL PERMITTED EQUIPMENT AND ASSOCIATED OPERATIONS AT THIS FACILITY SHALL NOT EXCEED 667 POUNDS IN ANY ONE CALENDAR MONTH. ASSOCIATED OPERATIONS INCLUDE, BUT ARE NOT LIMITED TO SURFACE PREPARATION, EQUIPMENT CLEANUP, AND THE APPLICATION OF ANY OTHER MATERIALS TO PARTS THAT ARE SUBSEQUENTLY PROCESSED IN THE PERMITTED EQUIPMENT.

13) WITHIN 14 CALENDAR DAYS AFTER THE END OF EACH MONTH, THE OPERATOR SHALL TOTAL AND RECORD VOC EMISSIONS FOR THE MONTH FROM ALL EQUIPMENT COVERED BY THE MONTHLY LIMIT. THE RECORD SHALL INCLUDE ANY PROCEDURES USED TO ACCOUNT FOR CONTROL DEVICE EFFICIENCIES AND/OR WASTE DISPOSAL. IT SHALL BE SIGNED AND CERTIFIED FOR ACCURACY BY THE HIGHEST RANKING INDIVIDUAL RESPONSIBLE FOR COMPLIANCE WITH DISTRICT RULES.

14) THE OPERATOR SHALL RETAIN FOR 36 MONTHS ALL PURCHASE INVOICES FOR ALL VOC-CONTAINING MATERIAL USED OR STORED AT THE FACILITY, AND ALL WASTE MANIFESTS FOR ALL WASTE VOC-CONTAINING MATERIAL REMOVED FROM THE FACILITY.

15) THE OPERATOR SHALL MAINTAIN A SINGLE LIST THAT INCLUDES ONLY THE NAME AND ADDRESS OF EACH PERSON FROM WHOM THE FACILITY ACQUIRED VOC-CONTAINING MATERIAL REGULATED BY THE DISTRICT THAT WAS USED OR STORED AT THE FACILITY DURING THE PRECEDING 12 MONTHS.

16) MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY TOXIC AIR CONTAMINANTS IDENTIFIED IN RULE 1401, TABLE 1

17) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR 36 MONTHS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.