



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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April 5, 2004

John A. Owsley
Fate Marble Specialities, Inc.
0704 South 500 West
LaPorte, Indiana 46350

Re: Registered Construction and Operation Status,
091-18298-00129

Dear Mr. Owsley:

The application from Fate Marble Specialities, Inc. received on December 8, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following cultured marble sinks manufacturing operation, located at 0704 South 500 West, LaPorte, Indiana 46350, is classified as registered:

- (a) One (1) cultured marble sinks manufacturing line, identified as JB1, constructed in 2004, with a maximum production rate of 0.75 unit per hour, using HVLP spray applicators for resin and gel coats, controlled by dry filters, and exhausting at stack JB1.
- (b) One (1) degreasing operation, constructed in 2004, using non-halogenated solvents, with a maximum solvent usage of 0.5 gallons per day.
- (c) One (1) grinding operation, constructed in 2004, with a maximum throughput rate less than 100 lbs/hr, controlled by dry filters, and exhausting at stack JB1.
- (d) One (1) natural gas fired space heater, with a maximum heat input rate of 0.03 MMBtu/hr.
- (e) Two (2) resin storage drums, each with a maximum capacity of 55 gallons.
- (f) One (1) resin mixer, with a maximum capacity of 150 pounds.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
2. Pursuant to 326 IAC 6-3(d) (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the reinforced plastics composites fabricating manufacturing process

(JB1) shall be controlled by dry particulate filters, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

3. Pursuant to 326 IAC 8-3-2(Cold Cleaning Operations), for the degreasing operation constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

4. Pursuant to 326 IAC 8-3-5(Cold Cleaner Degreaser Operation and Control), the degreasing operation at this source, which was constructed after July 1, 1990 and does not have remote solvent reservoirs, has the following requirements:

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) the solvent is agitated; or
 - (C) the solvent is heated.

- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kilo Pascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5 (b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.
5. Pursuant to 326 IAC 6-3-2 (e)(2) (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the grinding operation, which has a maximum process rate less than 100 lbs/hr, shall not exceed 0.551 lbs/hr.

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Ms. Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/YC

cc: File – LaPorte County
LaPorte County Health Department
Air Compliance – Rick Massoels
Northwest Regional Office
Permit Tracking – Sara Cloe
Compliance Data Section

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	Fate Marble Specialities, Inc.
Address:	0704 South 500 West
City:	LaPorte, Indiana 46350
Authorized individual:	John A. Owsley
Phone #:	(219) 362-5921
Registration #:	091-18298-00129

I hereby certify that Fate Marble Specialities, Inc. is still in operation and is in compliance with the requirements of Registration 091-18298-00129.

Name (typed):
Title:
Signature:
Date:

Issued April 5, 2004

Indiana Department of Environmental Management
Office of Air Quality

**Technical Support Document (TSD) for a
New Source Construction and Registration**

Source Background and Description

Source Name:	Fate Marble Specialities, Inc.
Source Location:	0704 South 500 West, LaPorte, Indiana 46350
County:	LaPorte
SIC Code:	3089
Registration No.:	091-18298-00129
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed an application from Fate Marble Specialities, Inc. relating to the construction and operation of a cultured marble sinks manufacturing plant.

Permitted Emission Units and Pollution Control Equipment

There are no permitted facilities operating at this source.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction and operation of the following equipment:

- (a) One (1) cultured marble sinks manufacturing line, identified as JB1, constructed in 2004, with a maximum production rate of 0.75 unit per hour, using HVLP spray applicators for resin and gel coats, controlled by dry filters, and exhausting at stack JB1.
- (b) One (1) degreasing operation, constructed in 2004, using non-halogenated solvents, with a maximum solvent usage of 0.5 gallons per day.
- (c) One (1) grinding operation, constructed in 2004, with a maximum throughput rate less than 100 lbs/hr, controlled by dry filters, and exhausting at stack JB1.
- (d) One (1) natural gas fired space heater, with a maximum heat input rate of 0.03 MMBtu/hr.
- (e) Two (2) resin storage drums, each with a maximum capacity of 55 gallons.
- (f) One (1) resin mixer, with a maximum capacity of 150 pounds.

Existing Approvals

There were no air approvals issued to this source.

Enforcement Issue

There are no enforcement actions pending.

Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
JB1	Spray booth	15	2.0	Unknown	Unknown

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 8, 2003. Additional information was received on January 7, 2004, January 21, 2004, March 5, 2004, March 8, 2004, and March 10, 2004.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 4).

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential to Emit (tons/year)
PM	3.09
PM10	3.09
SO ₂	Negligible
VOC	6.67
CO	0.01
NO _x	0.01

HAPs	Potential to Emit (tons/yr)
Styrene	4.88
MMA	0.76
MEK	0.22
Total	5.86

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of criteria pollutants is less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

- (c) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of criteria pollutants is less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1(MSOP).
- (d) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is greater than 1.0 ton/yr and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination of HAPs is greater than 2.5 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-1.1-3 (Exemptions).
- (e) Fugitive Emissions
 Since this type of operation is not in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD.

County Attainment Status

The source is located in LaPorte County.

Pollutant	Status
PM-10	Attainment
SO ₂	Maintenance Attainment
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. LaPorte County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (b) LaPorte County has been classified as attainment for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (b) Fugitive Emissions
 Since this type of operation is not in one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

New Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	3.09
PM10	3.09
SO ₂	Negligible
VOC	6.67

Pollutant	Emissions (tons/year)
CO	0.01
NO _x	0.01
Single HAP	4.88
Combination HAPs	5.86

- (a) This new source is not a major stationary source because no nonattainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) These emissions are based on the total potential to emit of the entire source (see Appendix A).

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) This reinforced plastic composites product manufacturing plant does not have a potential to emit greater than 10 tons/yr for a single HAP or greater than 25 tons/yr for total HAPs. Therefore, this source is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Reinforced Plastic Composites Production Facilities (40 CFR Part 63.5780 - 63.5935, Subpart WWWW).
- (c) The source does not apply coatings to plastic surfaces and is a minor source for HAPs. Therefore, this source is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Plastic Parts and Products (40 CFR 63.4480 - 63.4581, Subpart PPPP).
- (d) The solvents used in the degreasing operation do not contain any halogenated hydrocarbons as defined in 40 CFR 63.460. Therefore, the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Halogenated Solvent Cleaning (40 CFR Part 63.460 - 63.470, Subpart T) are not applicable to this source.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The source will be constructed in 2004. The source is not in 1 of 28 source categories defined in 326 IAC 2-2-1(p)(1) and the potential to emit of any regulated pollutant before controls will be less than 250 tons per year. Therefore, the construction of this source does not trigger PSD review 326 IAC 2-2 (PSD) and the source will be a minor source under 326 IAC 2-2.

326 IAC 2-4.1 (New Sources of Hazardous Air Pollutants)

The source will be constructed in 2004. Although this source will be constructed after the applicability date for this rule, the potential to emit HAPs from the entire source will be less than the major source thresholds. Therefore, the requirements of 326 IAC 2-4.1 are not applicable.

326 IAC 2-6 (Emission Reporting)

This source will be located in LaPorte County and the potential to emit of all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Cultured Marble Sinks Manufacturing Line (JB1)

326 IAC 8-1-6 (General Reduction Requirements for VOC Emissions)

The surface coating operation at this source will be constructed after January 1, 1980 and will have potential VOC emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 20-25 (Reinforced Plastics Composites Fabricating Emission Units)

This new source will have a potential to emit HAP less than 10 tons/yr for a single HAP and less than 25 tons/yr for any combination HAPs. Therefore, this reinforced plastics sinks manufacturing line is not subject to the requirements of 326 IAC 20-25.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

The maximum resin and gelcoat usage for this new sinks manufacturing line will be greater than 5 gallons/day. Pursuant to 326 IAC 6-3-2(d), particulate emissions from this reinforced plastics composites fabricating manufacturing process shall be controlled by dry particulate filters, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

State Rule Applicability – Degreasing Operation

326 IAC 8-3-2 (Cold Cleaning Operations)

Any degreaser using VOC containing solvents is considered a cold cleaning operation. The degreasing operation at this source will be constructed after January 1, 1980 and is subject to 326 IAC 8-3-2. Pursuant to 326 IAC 8-3-2, for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The degreasing operation at this source will be constructed after July 1, 1990 and will not have remote solvent reservoirs. Therefore, this degreasing operation is subject to the following requirements of 326 IAC 8-3-5:

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kilo Pascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5 (b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

State Rule Applicability – Grinding Operation

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The grinding operation at this source has a maximum process rate less than 100 lbs/hr. Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from this grinding operation shall not exceed 0.551 lbs/hr.

State Rule Applicability – Other Air Emission Units

There are no specifically applicable state requirements for other air emission units at this source.

Conclusion

The construction and operation of this cultured marble sinks manufacturing plant shall be subject to the conditions of the New Source Construction and Registration No.: 091-18298-00129.

Appendix A: Emission Calculations
Reinforced Plastics and Composites Open Molding Operations
HAPs Emissions
From the Cultured Marble Sinks Manufacturing Line

Company Name: Fate Marble Specialties, Inc.
Address: 0704 South 500 West, LaPorte, IN 46350
Registration: 091-18298-00129
Reviewer: ERG/YC
Date: March 10, 2004

Application Method	Coatings	Density (lbs/gal)	Max. Production Rate (unit/hr)	Max. Coating Usage (gal/unit)	Maximum Usage (lbs/hr)	Weight % Styrene	*Emission Factor for Styrene (lbs/ton)	PTE of Styrene (tons/yr)	Weight % MMA	*Emission Factor for MMA (lbs/ton)	PTE of MMA (tons/yr)	Weight % MEK	**Emission Factor for MEK (lbs/ton)	PTE of MEK (tons/yr)
Manual	Gel Coat	8.34	0.75	0.40	2.50	43.5%	512	2.80	9.23%	138	0.76	0.0%	0	0.00
Manual	Resin	10.01	0.75	1.52	11.4	33.0%	83.0	2.07	0.0%	0	0.00	0.0%	0	0.00
	Catalyst	9.04	0.75	0.25	1.70	0.0%	0	0.00	0.0%	0	0.00	3.0%	60.0	0.22
Total								4.88			0.76			0.22

* The emission factors for resin and gel coat are based on "Unified Emission Factors for Opening Molding of Composites" (July 23, 2001) and the unit is pounds of HAP per ton resin/gel coat processed.

**The emission factor for MEK = 2000 lb/ton x Weight % MEK (Assume all the MEK contained in the catalyst evaporates).

Total Potential to Emit HAPs = 5.86 tons/yr

METHODOLOGY

Potential to Emit HAPs (tons/yr) = Max. Usage (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs x Emission Factor (lb/ton) x 1 tons/2000 lbs

**Appendix A: Emission Calculations
VOC Emissions
From the Degreasing Operation**

Company Name: Fate Marble Specialties, Inc.

Address: 0704 South 500 West, LaPorte, IN 46350

Registration: 091-18298-00129

Reviewer: ERG/YC

Date: March 10, 2004

*Solvent Used	Density (lbs/gal)	Weight % VOC	Maximum Usage (gal/day)	PTE of VOC (lbs/day)	PTE of VOC (tons/yr)
S-0280 Super Flush	8.86	100%	0.50	4.43	0.81
Total					0.81

* This solvent does not contain any regulated HAPs.

METHODOLOGY

PTE of VOC (lbs/day) = Density (lbs/gal) x Weight % VOC x Max. Usage (gal/day)

PTE of VOC (tons/yr) = Density (lbs/gal) x Weight % VOC x Max. Usage (gal/day) x 365 days/yr x 1 ton/2000 lbs

**Appendix A: Emission Calculations
Natural Gas Combustion
(MMBtu/hr < 100)
From 0.03 MMBtu/hr Space Heater**

**Company Name: Fate Marble Specialties, Inc.
Address: 0704 South 500 West, LaPorte, IN 46350
Registration: 091-18298-00129
Reviewer: ERG/YC
Date: March 10, 2004**

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

0.03

0.26

	Pollutant					
	PM*	PM10*	SO ₂	**NO _x	VOC	CO
Emission Factor in lbs/MMCF	7.6	7.6	0.6	100	5.5	84.0
Potential to Emit in tons/yr	9.99E-04	9.99E-04	7.9E-05	0.01	7.23E-04	0.01

*PM and PM10 emission factors are condensable and filterable PM10 combined.

**Emission Factors for NO_x: Uncontrolled = 100 lbs/MMCF.

Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)

Methodology

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1 ton/2000 lbs

Appendix A: Emission Calculations
Reinforced Plastics and Composites Open Molding Operations
VOC and PM/PM10 Emissions
From Cultured Marble Sinks Manufacturing Line

Company Name: Fate Marble Specialties, Inc.
Address: 0704 South 500 West, LaPorte, IN 46350
Registration: 091-18298-00129
Reviewer: ERG/YC
Date: March 10, 2004

Application Method	Coatings	Density (lbs/gal)	Weight % VOC	Max. Production Rate (unit/hr)	Max. Coating Usage (gal/unit)	Maximum Usage (lbs/hr)	*VOC Emission Factor (lbs/ton)	PTE of VOC (lbs/hr)	PTE of VOC (lbs/day)	PTE of VOC (tons/yr)	**PTE of PM/PM10 before Control (lbs/hr)	**PTE of PM/PM10 before Control (tons/yr)	***Transfer Efficiency
Manual	Gel Coat	8.34	52.7%	0.75	0.40	2.50	650	0.81	19.5	3.56	0.09	0.41	92%
Manual	Resin	10.01	33.0%	0.75	1.52	11.4	83.0	0.47	11.4	2.07	0.61	2.68	92%
	Catalyst	9.04	3.00%	0.75	0.25	1.70	60.0	0.05	1.22	0.22	0.00	0.00	100%
Total	Total									5.86		3.09	

* The emission factors for gel coat and resin are sum of the emission factors for styrene and MMA in page 1 of TSD Appendix A.

The VOC emission factor for catalyst = 2000 lb/ton x Weight % VOC (assume that all the VOCs contained in the catalyst evaporate).

** Assume all the PM emissions equal PM10 emissions.

*** The transfer efficiency and control efficiency are from the "Draft Guide to the Estimation and Permitting of PM from the Manufacture of Reinforced Plastic Composites" by CFA in August, 2001.

METHODOLOGY

Max. Usage (lbs/hr) = Max. Production Rate (unit/hr) x Max. Coating Usage (gal/unit) x Density (lbs/gal)

PTE of VOC (lbs/hr) = Max. Usage (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton)

PTE of VOC (lbs/day) = Max. Usage (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton) x 24 hr/day

PTE of VOC (tons/yr) = Max. Usage (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton) x 8760 hr/yr x 1 ton/2000 lbs

PTE of PM/PM10 before Control (lbs/hr) = Max. Usage (lbs/hr) x (1- Weight % VOC) x (1-Transfer Efficiency)

PTE of PM/PM10 before Control (tons/yr) = Max. Usage (lbs/hr) x (1- Weight % VOC) x (1-Transfer Efficiency) x 8760 hr/yr x 1 ton/2000 lbs