

**MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT
AIR QUALITY DIVISION**

March 1, 2010

PERMIT TO INSTALL
49-05A

ISSUED TO
Recycled Polymeric Materials, Inc.

LOCATED AT
6031 Joy Road
Detroit, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
N7416

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Natural Resources and Environment. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

February 23, 2010

DATE PERMIT TO INSTALL APPROVED:

March 1, 2010

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
EPA	Environmental Protection Agency	gr	Grains
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallon of Applied Coating Solids	H ₂ S	Hydrogen Sulfide
GC	General Condition	hp	Horsepower
HAP	Hazardous Air Pollutant	lb	Pound
HVLP	High Volume Low Pressure *	m	Meter
ID	Identification	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	ng	Nanogram
MDNRE	Michigan Department of Natural Resources and Environment (Department)	NO _x	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	PM less than 10 microns diameter
NSPS	New Source Performance Standards	PM2.5	PM less than 2.5 microns diameter
NSR	New Source Review	pph	Pound per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonably Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SRN	State Registration Number	THC	Total Hydrocarbons
TAC	Toxic Air Contaminant	tpy	Tons per year
TEQ	Toxicity Equivalence Quotient	µg	Microgram
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Natural Resources and Environment, P.O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Natural Resources and Environment. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EURRPE	4 Recycled Rubber Polyurethane Elastomer (RRPE) molding lines.	October, 2001 – July, 2003/	FGFACILITY
EUPREMIX	Pre-mixing of powdered materials and catalyst with polyols with control by fabric filter collector with exhaust of the collector to the indoor plant air.	October, 2001/	FGFACILITY
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

The following conditions apply to: EURRPE

DESCRIPTION: 4 Recycled Rubber Polyurethane Elastomer (RRPE) molding lines.

Flexible Group ID: FGFACILITY

POLLUTION CONTROL EQUIPMENT: N/A - None

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs and Exempt Solvents Combined*	59.9 tpy	12-month rolling time period as determined at the end of each calendar month	EURRPE	SC VI.3	R 336.1205(3), R 336.1702(a)
*Combined VOC and exempt solvent emissions shall be computed for purposes of determining compliance with the emission limit.					

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Foam Production	2,820,000 lbs/yr	12-month rolling time period as determined at the end of each calendar month	EURRPE	SC VI.3	R336.1205(1)(a), R336.1702(a)
2. Flush Solvent Usage, minus water	33,500 lbs/yr	12-month rolling time period as determined at the end of each calendar month	EURRPE	SC VI.3	R336.1205(1)(a), R336.1702(a)
3. Mold Release Agent Usage	80,000 lbs/yr	12-month rolling time period as determined at the end of each calendar month	EURRPE	SC VI.3	R336.1205(1)(a), R336.1702(a)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall capture all waste materials and shall store them in closed containers. The permittee shall dispose of all waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall dispose of spent filters in a manner which minimizes the introduction of air contaminants to the outer air. **(R 336.1224, R 336.1370)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not apply mold release agent unless all respective exhaust filters are installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910)**
2. The permittee shall equip and maintain EURRPE with high volume low pressure (HVLP) applicators or comparable technology with equivalent transfer efficiency. For HVLP applicators, the permittee shall keep test caps available for pressure testing. **(R 336.1702(a))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901)**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702, R 336.1901)**

3. The permittee shall keep the following information on a calendar month basis for EURRPE:

- a) Pounds of each material used and pounds of foam produced on a calendar month basis.
- b) Pounds of foam produced and pounds of flush solvent, minus water and mold release agent usage on a 12-month rolling time period basis.
- c) Where applicable, pounds of flush solvent reclaimed. The amount of any flush solvent that is collected and shipped off-site for reclaim or recycle in a manner that does not result in emissions from the facility may be subtracted from the total flush solvent used.
- d) VOCs and Exempt Solvents Combined mass emission calculations determining the monthly emission rate in tons per calendar month using the emission factors and calculation methods provided in Appendix A. If any raw materials are substituted, consistent with the provisions of Rule 285 (b) and (c), for those described in the permit application, an updated emission factor shall be calculated using the methodology in the permit application.
- e) VOCs and Exempt Solvents Combined mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month using the emission factors and calculation methods provided in Appendix A.

The records shall be kept in the format specified in Appendix A or an alternate format that has been approved by the AQD District Supervisor. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205, R 336.1702)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVRRPE1	25.0	29.6	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. SVRRPE2	20.0	38.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
3. SVRRPE3	21.0	37.25	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
4. SVRRPE4	21.0	39.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

N/A

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: EUPREMIX

DESCRIPTION: Pre-mixing of powdered materials and catalyst with polyols with control by fabric filter collector with exhaust of the collector to the indoor plant air.

Flexible Group ID: FGFACILITY

POLLUTION CONTROL EQUIPMENT: Fabric filter collector which exhausts to the indoor plant air.

I. EMISSION LIMITS

N/A

II. MATERIAL LIMITS

N/A

III. PROCESS/OPERATIONAL RESTRICTIONS

N/A

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUPREMIX unless the fabric filter collector is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1331, 40 CFR 52.21(c) and (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

N/A

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

N/A

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	

The following conditions apply Source-Wide to: FGFACILITY

POLLUTION CONTROL EQUIPMENT:

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Each Individual HAP	Less than 9.0 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
2. Aggregate HAPs	Less than 22.5 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)

II. MATERIAL LIMITS

N/A

III. PROCESS/OPERATIONAL RESTRICTIONS

N/A

IV. DESIGN/EQUIPMENT PARAMETERS

N/A

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall determine the HAP content of any material as received and as applied, using manufacturer's formulation data. Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's HAP formulation data using EPA Test Method 311. **(R 336.1205(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(3))**
2. The permittee shall keep the following information on a calendar month basis for FGFACILITY:
 - a) Gallons or pounds of each HAP containing material used.
 - b) Where applicable, gallons or pounds of each HAP containing material reclaimed.
 - c) HAP content, in pounds per gallon or pounds per pound, of each HAP containing material used.
 - d) Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
 - e) Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**

VII. REPORTING

N/A

VIII. STACK/VENT RESTRICTIONS

N/A

IX. OTHER REQUIREMENTS

N/A

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

APPENDIX A

Permit to Install 49-05A
 Recycled Polymeric Materials, Inc.
 Monthly VOCs and Exempt Solvents Combined Emission Calculation

	A	B	C	D = (A X C)/2000 or D = (B X C)/2000	
Material	VOCs and Exempt Solvents Combined Emission Factor (lb/lb product)	VOCs and Exempt Solvents Combined Emission Factor (lb/lb material used)	Monthly Foam Prod. Or Material Usage (lbs/mo)	Monthly VOCs and Exempt Solvents Combined Emission Rate (tons/mo)	
Foam	6.5E-03				
NMP		1			
Release Coating 7128A		0.85			
Total Monthly VOCs and Exempt Solvents Combined Emissions (tons/mo) E = Sum of Col. D				E	
12-mo Rolling VOCs and Exempt Solvents Combined Emissions (tons/year) F = E + Total of 11 Previous Months				F	