

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

March 3, 2011

**PERMIT TO INSTALL  
183-10**

**ISSUED TO**  
International Automotive Components – Port Huron Plant

**LOCATED AT**  
1905 Beard Street  
Port Huron, Michigan

**IN THE COUNTY OF**  
St. Clair

**STATE REGISTRATION NUMBER**  
B6625

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. 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: <b>October 18, 2010</b>	
DATE PERMIT TO INSTALL APPROVED: <b>March 3, 2011</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant/Measurement Abbreviations</b>	
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
FRP	Fiberglass Reinforced Plastic	H <sub>2</sub> S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MMA	Methyl Methacrylate	NO <sub>x</sub>	Oxides of Nitrogen
MAP	Malfunction Abatement Plan	PM	Particulate Matter
MDNRE	Michigan Department of Natural Resources and Environment (Department)	PM10	PM less than 10 microns diameter
MSDS	Material Safety Data Sheet	PM2.5	PM less than 2.5 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pound per hour
NSPS	New Source Performance Standards	ppm	Parts per million
NSR	New Source Review	ppmv	Parts per million by volume
PS	Performance Specification	ppmw	Parts per million by weight
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonably Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO <sub>2</sub>	Sulfur Dioxide
RTM	Resin Transfer Molding	THC	Total Hydrocarbons
SC	Special Condition	tpy	Tons per year
SCR	Selective Catalytic Reduction	µg	Microgram
SRN	State Registration Number	VOC	Volatile Organic Compounds
TAC	Toxic Air Contaminant	yr	Year
TEQ	Toxicity Equivalence Quotient	pph	Pound per hour
VE	Visible Emissions		

\* 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 Environmental Quality, 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 Environmental Quality. **(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.

<b>Emission Unit ID</b>	<b>Emission Unit Description (Process Equipment &amp; Control Devices)</b>	<b>Flexible Group ID</b>
EU-LN0UROCORE	Process Sequence: Roll coater adhesive application on polyurethane foam; application of chopped fiberglass and fabric; compacting/adhesive activation in a heated press; and cutting by water jets.	FG-HEADLINER
EU-LN1UROCORE	Process Sequence: Roll coater adhesive application on polyurethane foam; application of chopped fiberglass and fabric; compacting/adhesive activation in a heated press; and cutting by water jets.	FG-HEADLINER
EU-LN2AZDEL	Azdel Thermo-forming Operation: A pre-fabricated polypropylene/fiberglass board is heated in an oven; transferred into a mold with fabric; shaped, cooled, and cut. Includes assembly of pre-manufactured parts with hot melt adhesive usage.	FG-HEADLINER
EU-LN3UROCORE	Process Sequence: Roll coater adhesive application on polyurethane foam; application of chopped fiberglass and fabric; compacting/adhesive activation in a heated press; and cutting by water jets.	FG-HEADLINER
EU-LN4UROCORE	Assembly Process: Manual/robotic assembly of pre-manufactured parts. Includes hot melt adhesive usage.	FG-HEADLINER
EU-LN5UROCORE	Assembly Process: Manual/robotic assembly of pre-manufactured parts. Includes hot melt adhesive usage.	FG-HEADLINER
EU-LN6UROCORE	Process Sequence: Roll coater adhesive application on polyurethane foam; application of chopped fiberglass and fabric; compacting/adhesive activation in a heated press; and cutting by water jets.	FG-HEADLINER
EU-LN7UROCORE	Process Sequence: Roll coater adhesive application on polyurethane foam; application of chopped fiberglass and fabric; compacting/adhesive activation in a heated press; and cutting by water jets.	FG-HEADLINER
EU-LN8TRULAM	TRU Lamination: Process uses heat and pressure to laminate TRU board, polyolefin film, and chopped glass with fabric.	FG-HEADLINER
EU-LN9BOXSKIVER	Mechanical process to slice foam buns.	FG-HEADLINER
EU-LN10BOXPOUR	Foam Buns formed by reactive foam process: polyol and isocyanate dispensed into roll-off box; roll-off box moved to curing location.	FG-HEADLINER
EU-LN12AZDELTRU	Process uses heat and pressure to laminate foam slice, polyolefin film, and chopped glass with fabric.	FG-HEADLINER
EU-LN14AZDELTRU	Assembly Process: Manual assembly of pre-manufactured parts. Includes hot melt adhesive usage.	FG-HEADLINER

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-LN15AZDEL	Process uses heat and pressure to laminate foam slice, polyolefin film, and chopped glass with fabric.	FG-HEADLINER
EU-LN18AZDEL	Assembly Process: Manual assembly of pre-manufactured parts. Includes hot melt adhesive usage.	FG-HEADLINER

**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
FG-HEADLINER	Production emission units associated with interior automotive headliner trim manufacturing.	EU-LN0UROCORE EU-LN1UROCORE EU-LN2AZDEL EU-LN3UROCORE EU-LN4UROCORE EU-LN5UROCORE EU-LN6UROCORE EU-LN7UROCORE EU-LN8TRULAM EU-LN9BOXSKIVER EU-LN10BOXPOUR EU-LN12AZDELTRU EU-LN14AZDELTRU EU-LN15AZDEL EU-LN18AZDEL
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grandfathered equipment and exempt equipment.	

**The following conditions apply to: FG-HEADLINER**

**DESCRIPTION:** Production emission units associated with interior automotive headliner trim manufacturing.

**Emission Units:** EU-LN0UROCORE, EU-LN1UROCORE, EU-LN2AZDEL, EU-LN3UROCORE, EU-LN4UROCORE, EU-LN5UROCORE, EU-LN6UROCORE, EU-LN7UROCORE, EU-LN8TRULAM, EU-LN9BOXSKIVER, EU-LN10BOXPOUR, EU-LN12AZDELTRU, EU-LN14AZDELTRU, EU-LN15AZDEL, EU-LN18AZDEL.

**POLLUTION CONTROL EQUIPMENT:** N/A

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs	46.4 tpy	12-month rolling time period as determined at the end of each calendar month	FG-HEADLINER	SC VI.3	R 336.1702(a)
2. methylene diphenyl diisocyanate (CAS # 101-68-8)	0.0084 lb/hour	Test Protocol	UROCORE Heated Presses*	SC V.1	R 336.1225
3. methylene diphenyl diisocyanate (CAS # 101-68-8)	0.0064 lb/hour	Test Protocol	Foam Box Pour	SC V.1	R 336.1225
*Limit applies to the five (5) UROCORE Heated Presses combined.					

**II. MATERIAL LIMITS**

N/A

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall capture all waste adhesives, catalysts, other raw materials, and cleaning solvents, and shall store them in a manner to minimize the generation of fugitive emissions which may include the use of closed containers. The permittee shall reclaim or dispose of all waste adhesives, catalysts, other raw materials, and cleaning solvents in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1225, R 336.1702(a))**
2. The permittee shall handle all VOC and/or HAP containing materials, including adhesives, catalysts, other raw materials, and cleaning solvents, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers of VOC and/or HAP containing raw materials covered at all times except when in process or operator access is necessary. **(R 336.1225, R 336.1702(a), R 336.1901)**

#### **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. Within 180 days after permit approval, the permittee shall verify the methylene diphenyl diisocyanate (CAS # 101-68-8), toluene (CAS # 108-88-3), and 1,2-dichloroethane (CAS # 107-06-2) emission rates for the UROCORE heated press operations; and the MDI emission rate for the foam pour box operation by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. The test plan may propose testing of representative process equipment. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)**

#### **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 336.1225, R 336.1702)**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each raw material used, 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 336.1225, R 336.1702)**
3. The permittee shall keep the following information on a calendar month basis for FG-HEADLINER:
  - a) The identity and amount (in pounds) of each non-hot melt adhesive, catalyst, and/or other raw material used listed by each emission unit.
  - b) The MDI content in percent weight of each MDI containing material used. Manufacturer's formulation data for the material can be used to document this information.
  - c) VOC mass emission calculations determining the monthly emission rate for FG-HEADLINER in pounds per calendar month. The methylene diphenyl diisocyanate contribution of VOC for the UROCORE lines shall be determined as specified in Appendix A
  - d) VOC mass emission calculations determining the annual emission rate by emission unit and for FG-HEADLINER in tons per 12-month rolling time period as determined at the end of each calendar month.
  - e) Hours of operation for each emission unit.

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 336.1225, R 336.1702)**

#### **VII. REPORTING**

N/A

**VIII. STACK/VENT RESTRICTIONS**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/ Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
a. SV-Line0/1	24	40	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
b. SV-Line2	24	30	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
c. SV-Line3	24	30	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
d. SV-Line6/7	24	40	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
e. SV-Line10	30	30	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENTS**

N/A

**Footnotes:**

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

**The following conditions apply Source-Wide to: FGFACILITY**

**POLLUTION CONTROL EQUIPMENT:**

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/ Operating Scenario</b>	<b>Equipment</b>	<b>Testing/ Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
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.3	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.3	R 336.1205(3)
3. VOCs	Less than 50.0 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.4	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 adhesives, catalysts, other raw materials, and cleaning solvents 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 maintain a current listing from the manufacturer of the chemical composition of each raw material used, 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 336.1205(3))**
3. 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 pounds per calendar month. The methylene diphenyl diisocyanate contribution of HAP emissions for the UROCORE lines shall be determined as specified in FG-HEADLINER Special Condition VI.3 and Appendix A.
  - 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. For the first month following permit issuance, the calculations shall include the summation of emissions from the 11-month period immediately preceding the issuance date. For each month thereafter, calculations shall include the summation of emissions for the appropriate number of months prior to permit issuance plus the months following permit issuance for a total of 12 consecutive months.

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))**

4. The permittee shall keep the following information on a calendar month basis for FGFACILITY:
  - a) Gallons or pounds of each VOC containing material used.
  - b) Where applicable, gallons or pounds of each VOC containing material reclaimed.
  - c) VOC content, in pounds per gallon or pounds per pound, of each VOC containing material used.
  - d) VOC emission calculations determining the monthly emission rate in pounds per calendar month. VOC emissions for FG-HEADLINER shall be determined as specified in FG-HEADLINER Special Condition VI.3.
  - e) VOC emission calculations determining the annual emission rate 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**

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart OOOOOO for Flexible Polyurethane Foam Production and Fabrication Area Sources by the initial compliance date. **(40 CFR Part 63, Subpart A and Subpart OOOOOO)**

**Footnotes:** <sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

## Appendix A

### MDI\* Process Emissions Calculations

#### API Adhesives/Coatings Stack Emissions Methodology

$$W = 25.4 * VP_{MDI} * (M_w/T_{proc}) * u^{0.78} * S_A * t_{TF}$$

where: **W** = evaporation losses from the open process in grams per time period

**VP<sub>MDI</sub>** = the vapor pressure of MDI in atmospheres at the process temperature  
(@ 100% MDI) = Log (MDI VP, mm Hg) = 11.15 - 4809.8/Temp, deg K

**M<sub>w</sub>** = the molecular weight of MDI = 250.26

**T<sub>proc</sub>** = the process temperature in degrees Kelvin = deg F - 32 \*(5/9) + 273

**u** = the airflow speed in meters per second

**S<sub>A</sub>** = the exposed surface area in square meters per time period (this value determines the timeframe for W)

**t<sub>TF</sub>** = the "tack-free" time in seconds

\*Note: methylene diphenyl diisocyanate (CAS # 101-68-8) is referred to as MDI in this appendix.