

**STATE OF MISSOURI**



**DEPARTMENT OF NATURAL RESOURCES**

**MISSOURI AIR CONSERVATION COMMISSION**

**PERMIT TO CONSTRUCT**

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **092011-005** Project Number: 2011-06-063  
Installation Number: 071-0173

Parent Company: Henniges Automotive

Parent Company Address: 36600 Corporate Drive, Farmington Hills, MI 48331

Installation Name: Henniges Automotive Sealing Systems NA

Installation Address: 101 Danny Scott Drive, New Haven, MO 63068

Location Information: Franklin County, S2, T44N, R3W

Application for Authority to Construct was made for:  
Installation of an inline spray coating booth for an extrusion line. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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- Standard Conditions (on reverse) are applicable to this permit.
  - Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

SEP 23 2011

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EFFECTIVE DATE

A handwritten signature in black ink, appearing to read "Kyril L. Moore".  
\_\_\_\_\_  
DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

## STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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### SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

*The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."*

Henniges Automotive Sealing Systems NA  
Franklin County, S2, T44N, R3W

1. **Superseding Condition**  
The conditions of this permit supersede Special Condition 2 found in the previously issued construction permit number 012008-013 issued by the Air Pollution Control Program.
2. **Emission Limitation**
  - A. Henniges Automotive Sealing Systems NA shall emit less than one hundred (100.0) tons of Volatile Organic Compounds (VOCs) in any consecutive 12-month period from the entire installation.
  - B. Henniges Automotive Sealing Systems NA shall emit less than ten (10.0) tons individually and twenty-five (25.0) tons combined of Hazardous Air Pollutants (HAPs) in any consecutive 12-month period from the entire installation.
  - C. The entire installation includes all equipment/processes installed or permitted at Henniges Automotive Sealing Systems NA as of the effective date of this permit, including the new spray booth (E1-CB2).
  - D. Attachment A, Attachment B, and Attachment C or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 2.A and 2.B.
3. **Capture Device Requirement –Inline Spray Booths**
  - A. Henniges Automotive Sealing Systems NA shall use a total enclosure to capture emissions from the spray coating activities (E1-CB2).
  - B. Henniges Automotive Sealing Systems NA shall design and construct a spray booth (E1-CB2) having four complete walls or side curtains, and must be ventilated so that air is drawn into the booth. The walls and roof of

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#### SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

the booth may have openings to allow for conveyors and parts to pass through the booth during the coating process.

- C. Henniges Automotive Sealing Systems NA shall verify the proper operation of the enclosure one time upon the start of operation by performing a visual check using streamers, flags, smoke tubes, anemometers, or static pressure gauges.
4. Control Device Requirement – Overspray Collection System (Spray Booth Filter)
- A. Henniges Automotive Sealing Systems NA shall control particulate emissions from the spray booth (E1-CB2) using an overspray collection system as specified in the permit application.
  - B. The overspray collection system shall be operated and maintained in accordance with the manufacturer's specifications. The overspray collection system shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources employees may easily observe them.
  - C. Replacement filters for the overspray collection system shall be kept on hand at all times. The filters shall have a control efficiency for total particulate of at least 25% per manufacturer's guarantee.
  - D. Henniges Automotive Sealing Systems NA shall monitor and record the operating pressure drop across the overspray collection system at least once every 7 days. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
  - E. Henniges Automotive Sealing Systems NA shall maintain an operating and maintenance log for the overspray collection system which shall include the following:
    - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
    - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
5. Record Keeping and Reporting Requirements
- A. Henniges Automotive Sealing Systems NA shall maintain all records

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**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all materials used at the installation.

- B. Henniges Automotive Sealing Systems NA shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2011-06-063  
Installation ID Number: 071-0173  
Permit Number:

Henniges Automotive Sealing Systems NA  
101 Danny Scott Drive  
New Haven, MO 63068

Complete: June 23, 2011

Parent Company:  
Henniges Automotive  
36600 Corporate Drive  
Farmington Hills, MI 48331

Franklin County, S2, T44N, R3W

REVIEW SUMMARY

- Henniges Automotive Sealing Systems NA (Henniges) has applied for the authority to modify an existing extrusion line with the addition of an inline spray coating booth.
- HAP emissions are expected from the proposed equipment but the potential emissions are less than the Screening Model Action Levels (SMALs). HAPs of concern from this process are xylenes, ethylbenzene, and triethylamine.
- None of the New Source Performance Standards (NSPS) apply to the equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- A spray booth equipped with panel filters is being used to control the particulate emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of particulate matter less than 10 microns in diameter and less than 2.5 microns in diameter (PM<sub>10</sub> and PM<sub>2.5</sub> respectively) are conditioned below de minimis levels.
- This installation is located in Franklin County, a nonattainment area for the 8-hour ozone standard and the PM<sub>2.5</sub> standard and an attainment area for all other criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 100 tons per year for nonattainment pollutants and 250 tons per year for attainment pollutants. Fugitive

emissions are not counted toward major source applicability.

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing are not required for the equipment.
- An application for an amendment to your Intermediate Operating Permit is required within 90 days of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Henniges, formerly known as GDX Automotive, manufactures automotive sealing products. The installation is a synthetic minor source of HAP and VOC. Process operations include rubber and polyvinyl chloride (PVC) extrusion, curing ovens, adhesive application, surface coating and presses. The following permits have been issued to Henniges from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
1298-007	Installation of presses and flockers (Superseded by Permit #122000-002)
0899-005	Installation of two (2) new extrusion lines
0899-006	Addition of sixteen (16) new mold presses and a hand wipe station (Superseded by Permit #122000-002)
122000-002	Installation of sixty-three (63) corner plug presses, two (2) corner flockers, sixteen (16) mold presses, two (2) extrusion lines, two (2) molding coating booths, and one (1) 3.5" extruder
032001-013	Installation of coating booth and electric curing oven. (Modification to Permit #0899-005)
072001-015	Installation of new extrusion line, eight (8) coating booths, and twelve(12) injection processes
052002-005	Installation of extrusion line 4 and thirty-one (31) presses
122000-002A	Amendment to Permit number 122000-002
092002-008	Installation of extrusion line and presses
032003-018	Installation of a spray coating booth (CB-11)
022004-017	Installation of a GMX-001 platform and a PVC bonding process.
052004-007	Installation of an extrusion line, sixteen (16) rubber presses, a coating booth, and a wipe-coating operation.
052004-007A	Elimination all HAPs emission limits
012008-013	One (1) spray coating booth, one (1) spray primer booth, two (2) brush adhesive booths, two (2) IR ovens, three (3) offline flockers, one (1) PVC extrusion line

## PROJECT DESCRIPTION

Henniges has proposed to modify extrusion line 1 by adding a fully enclosed spray booth for the coating of extruded rubber automotive window channels. Although extrusion line 1 is currently equipped with a single spray booth, the addition of a second spray booth and two inline infrared dryers will allow the facility to increase the coating thickness on extrusion line 1. Henniges indicated that the maximum coating application rate is limited to 1 gallon coating solution per hour. This design rate is constrained by the speed of the extrusion equipment and the desired coating thickness.

Emissions associated with the spray coating process are particulate matter, VOCs and HAPs. Henniges has indicated that only two different formulations of coating may be applied in the spray booth. Both coatings are very similar in content. They are both water-based, containing 60-65% water, 31-33% solids, and less than 6% VOC and HAPs. Cleaning the spray guns is accomplished with water, so no emissions are expected from cleaning activities. No emissions are expected from the infrared dryers because they are electric.

## EMISSIONS/CONTROLS EVALUATION

The inline spray booth will be equipped with 4 high volume low pressure (HVLP) air atomized spray guns operated inside of a total enclosure. The total enclosure is enclosed on all sides with small inlet and outlet openings to allow the product to pass through the enclosure. Total enclosures completely surround the emissions from an emission unit and are assumed to capture 100%. The spray booth is exhausted to a 3-ply polyester filter panel with an expected control efficiency of 25% according to the filter manufacturer's specifications.

Potential emissions of VOC and HAPs were calculated using a mass balance approach and assuming 100% emitted. Particulate emissions from the painting activities were calculated using a mass balance approach and assuming an 85% overspray. This overspray was based on the EPA document entitled, *Sources and Control of Volatile Organic Air Pollutants*, APTI Course 482, Third Edition (November 2002), which indicates that HVLP spray coating of small diameter, cylindrical surfaces would typically achieve a 15% transfer efficiency. As there is not a particle size distribution available for this type of coating, all particulate matter was assumed to be PM<sub>2.5</sub>.

The assumptions regarding the transfer efficiency and the particle size distribution are considered very conservative. As the control efficiency is also regarded as rather low, verification of the proper operation of the capture and control systems are limited to the start of operation for the capture device and one time per week for the control device.

Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8,760 hours per year.) Since there are two different coatings that may be applied in the spray booth, the potential emissions for all pollutants were evaluated based on the worst case potential emissions for each type of coating.

The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions <sup>[1]</sup>	Existing Actual Emissions (2010 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>2.5</sub>	10.0	N/D	0.00	7.60	N/A
PM <sub>10</sub>	15.0	N/D	0.00	7.60	N/A
SOx	40.0	N/D	0.01	N/A	N/A
NOx	40.0	N/D	1.31	N/A	N/A
VOC	40.0	<100	12.48	1.99	<100.0
CO	100.0	N/D	0.00	N/A	N/A
Combined HAPs	25.0	<25	0.04	0.26	<25.0
xylene	10.0	<10	N/D	0.033	<10.0
ethyl benzene	10.0	<10	N/D	0.0037	<10.0
triethylamine	10.0	<10	N/D	0.22	<10.0

N/A = Not Applicable; N/D = Not Determined

<sup>1</sup>Existing potential emissions obtained from permit number 012008-013. Since Franklin County is part of an ozone non-attainment area, the potential emissions of VOCs are limited to less than the major source levels for non-attainment new source review (NSR).

### PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub> and PM<sub>2.5</sub> are conditioned below de minimis levels.

### APPLICABLE REQUIREMENTS

Henniges Automotive Sealing Systems NA shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

### GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110  
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of a hardcopy EIQ is required by April 1 for the previous year's emissions. Otherwise, submission of an electronic EIQ via MOEIS is required by May 1.
- *Operating Permits*, 10 CSR 10-6.065

- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

#### SPECIFIC REQUIREMENTS

- *Control of Emissions From Industrial Surface Coating Operations*, 10 CSR 10-5.330

#### STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

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Kathi Jantz  
Environmental Engineer

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Date

#### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated June 13, 2011, received June 23, 2011, designating Henniges Automotive as the owner and operator of the installation.
- Material Safety Data Sheets



## Attachment B – Monthly Individual HAP Compliance Worksheet

Henniges Automotive Sealing Systems NA  
 Franklin County, S2, T44N, R3W  
 Project Number: 2011-06-063  
 Installation ID Number: 071-0173  
 Permit Number: \_\_\_\_\_

HAP Name: \_\_\_\_\_ CAS No.: \_\_\_\_\_

This sheet covers the month of \_\_\_\_\_ in the year \_\_\_\_\_.

Column 1	Column 2	Column 3	Column 4 (a)	Column 5 (b)
Material Used (Name)	Amount of Material Used (Include Units)	Density (Pounds per Gallon)	HAP Content (Weight %)	HAP Emissions (Tons)
(c) Total Individual HAP Emissions Calculated for this Month in Tons:				
(d) Last Month's 12-Month Individual HAP Emissions Total, in Tons:				
(e) Previous Year's Monthly Individual HAP Emissions Total, in Tons:				
(f) Current 12-month Total of Individual HAP Emissions in Tons: [(c) + (d) - (e)]				

**Instructions: This worksheet must include HAP emissions from all emission units installed or permitted at the time of permit issuance. Complete a new worksheet for each individual HAP.**

- (a) HAP content should be obtained from the Material Safety Data Sheet (MSDS) and should represent the total mass of the HAP compound by weight. If the content is given as a range, then the maximum value should be used.
- (b) 1) If usage is in tons - [Column 2] x [Column 4] = [Column 5];  
 2) If usage is in pounds - [Column 2] x [Column 4] x [0.0005] = [Column 5];  
 3) If usage is in gallons - [Column 2] x [Column 3] x [Column 4] x [0.0005] = [Column 5];
- (c) Summation of [Column 5] in Tons;
- (d) 12-Month Individual HAP emissions (f) from last month's Attachment B in Tons;
- (e) Monthly Individual HAP emissions total (c) from the previous year's Attachment B in Tons; and
- (f) Calculate the new 12-month Individual HAP emissions total. **A 12-Month Individual HAP emissions total (f) of less than 10.0 tons for each individual HAP indicates compliance.**



Ms. Judy Schnaath  
Sr. EH&S Specialist  
Henniges Automotive Sealing Systems  
101 Danny Scott Drive  
New Haven, MO 63068

RE: New Source Review Permit - Project Number: 2011-06-063

Dear Ms. Schnaath:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Kathi Jantz, at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief

KBH:kjl

Enclosures

c: St. Louis Regional Office  
PAMS File: 2011-06-063

Permit Number: