

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: **072013-002** Project Number: 2013-03-047
 Installation Number: 177-0037

Parent Company: Henkel Corporation

Parent Company Address: One Henkel Way, Rocky Hill, CT 06067

Installation Name: Henkel Corporation

Installation Address: 201 Highway 10 East, Richmond, MO 64085

Location Information: Ray County, SW 1/4 of SW 1/4 of S31, T52N, R27W

Application for Authority to Construct was made for:
 Installation of eight new injection molders which will mold the same Nylon 66 and Mastic materials as existing injection molders EP-5, EP-68 and EP-69. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

JUL - 1 2013

EFFECTIVE DATE

Kyra 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 Department's 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."

Henkel Corporation
Ray County, SW 1/4 of SW 1/4 of S31, T52N, R27W

1. **Superseding Condition**
The conditions of this permit supersede Special Condition 1 found in the previously issued construction permit 0996-012 issued by the Air Pollution Control Program.
2. **VOC Limitation**
 - A. Henkel Corporation shall emit less than 40.0 tons of VOCs in any consecutive 12-month period from the entire installation.
 - B. Worksheet A or an equivalent form, such as an electronic form, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 2.A.
3. **Record Keeping and Reporting Requirements**
 - A. Henkel Corporation shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include MSDS for all materials used.
 - B. Henkel Corporation shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 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: 2013-03-047
Installation ID Number: 177-0037
Permit Number:

Henkel Corporation
201 Highway 10 East
Richmond, MO 64085

Complete: March 21, 2013

Parent Company:
Henkel Corporation
One Henkel Way
Rocky Hill, CT 06067

Ray County, SW 1/4 of SW 1/4 of S31, T52N, R27W

REVIEW SUMMARY

- Henkel Corporation has applied for authority to Installation of eight new injection molders.
- HAP emissions are not expected from the proposed equipment.
- No NSPS, NESHAPs, or currently promulgated MACT regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the proposed equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of VOC from this equipment are below de minimis levels, and the equipment emits no other criteria air pollutants.
- This installation is located in Ray County, an attainment area for all criteria pollutants.
- This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation is classified as item number No. 20, Chemical process plants. The installation's major source level is 100 tons per year and fugitive emissions are 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 is not required for the proposed equipment.
- This installation has a Basic Operating Permit which was renewed October 2012.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Henkel Corporation is a global company headquartered in Dusseldorf, Germany. Its United States headquarters is in Connecticut. This installation is in Ray County, Missouri and was formerly known as Orbseal LLC. Henkel Corporation produces a number of different products. This installation produces automotive adhesives and sealants.

One of the products produced at this installation is baffle sealant. Part of the process for manufacturing this sealant uses injection molders to combine Nylon 66 with a proprietary material called mastic. Henkel Corporation already operates ten injection molders. All are currently grouped as EP-05 on the EIQ, but the two added in 2011 were referred to as EP-68 and EP-69 when APCP determined that no construction permit was required for them.

The following New Source Review permits have been issued to Henkel Corporation from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
0996-012	12/20/1995 Section 5 NSR permit (to Orbseal)
0997-023	9/16/1997 Section 5 NSR permit (to Orbseal)
1297-021	9/11/1997 Section 5 NSR permit (to Orbseal)

In addition to these NSR permits, the installation also received nine “No Permit Required” letters for various equipment additions and changes. The installation obtained a Basic State Operating Permit on February 5, 2002, which was renewed on August 31, 2003; on October 16, 2007; and on October 18, 2012. On May 23, 2006, the operating permit was amended for the name change from Orbseal LLC to Henkel Corporation.

No NOEE/NOV’s have been issued to this installation in the last five years.

PROJECT DESCRIPTION

This permit will add eight additional injection molders, EP-70, EP-71, EP-72, EP-73, EP-74, EP-75, EP-76, and EP-77. This is estimated to increase the actual total injection molder raw material throughput from 1,043.25 tpy to 7,689.81 tpy. The total MHDR for all eight new injection molders is 0.98 tph. The following table shows the new equipment being installed and includes the MHDR for each individual injection molder.

Table 2 New Equipment

Emission Point	Description (SCC Code)
EP-70	Wittmann Battenfeld 650-ton, two component injection molder, year 2013, Model MPC MC650/2250, MHDR 0.16 tph (30102401)
EP-71	Wittmann Battenfeld 650-ton, two component injection molder, year 2013, Model MPC MC650/2250, MHDR 0.16 tph (30102401)
EP-72	Wittmann Battenfeld 400-ton, two component injection molder, year 2013, Model MPC MC400/1330, MHDR 0.12 tph (30102401)
EP-73	Wittmann Battenfeld 400-ton, two component injection molder, year 2013, Model MPC MC400/1330, MHDR 0.12 tph (30102401)
EP-74	Wittmann Battenfeld 400-ton, two component injection molder, year 2013, Model MPC MC400/1330, MHDR 0.13 tph (30102401)
EP-75	Wittmann Battenfeld 500-ton, two component injection molder, year 2013, Model MPC MC500/1300, MHDR 0.11 tph (30102401)
EP-76	Wittmann Battenfeld 500-ton, two component injection molder, year 2013, Model MPC MC500/1300, MHDR 0.11 tph (30102401)
EP-77	Wittmann Battenfeld 180-ton, two component injection molder, year 2013, Model MPC MC180/5251, MHDR 0.07 tph (30102401)

All the injection molders combine Nylon 66 with a proprietary material called mastic to produce baffle sealant. There are no controls on the equipment.

This installation has already taken federally enforceable voluntary limitations of 40.0 tpy VOC and 10.0/25.0 tpy HAPs in order to remain a minor source and avoid dispersion modeling.

EMISSIONS/CONTROLS EVALUATION

The emission factor used in this analysis was obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 6.9 (March 1993). It is from Table 6.9-2 for Nylon 66, melt spun production, which was determined to be the most representative emission factor for the mold injection process. Since there are no controls on the equipment, the uncontrolled emission factor was used. To be conservative, the maximum of the range (0.5 to 4.9 lb/ton) was used.

The following table provides an emissions summary for this project, which consists of installing the eight injection molders listed in Table 2 above, with no controls. Existing potential emissions for VOC and HAPs are the federally enforceable limits which Henkel Corporation accepted in earlier NSR permits. VOC is the only emission from the

proposed equipment, so other existing potential emissions were not calculated for this project. Existing actual emissions were taken from the installation's 2012 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year).

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2012 EIQ)	Potential Emissions of the Application	Installation Conditioned Potential Emissions
PM	25.0	N/D	N/D	N/A	N/D
PM ₁₀	15.0	N/D	1.0201	N/A	N/D
PM _{2.5}	10.0	N/D	0.0091	N/A	N/D
SO _x	40.0	N/D	0.0007	N/A	N/D
NO _x	40.0	N/D	0.1200	N/A	N/D
VOC ^A	40.0	<40.0	4.6850	21.03	<40.0
CO	100.0	N/D	0.1008	N/A	N/D
GHG (CO ₂ e)	100,000	N/D	N/D	N/A	N/D
HAPs	10.0/25.0	<10.0/25.0	0.0000	N/A	<10.0/25.0

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

^A Potential emissions of VOC are below de minimus levels, but above the insignificant emission exemption level found in CSR 10-6.061(3)(A)3.A.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

APPLICABLE REQUIREMENTS

Henkel Corporation 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
- *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

- None for this application.

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 without special conditions.

Cheryl Steffan
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 4, 2013, received March 14, 2013, designating Henkel Corporation as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual cubic feet per minute	MW	megawatt
BACT	Best Available Control Technology	MHDR	maximum hourly design rate
BMPs	Best Management Practices	MMBtu	Million British thermal units
Btu	British thermal unit	MMCF	million cubic feet
CAM	Compliance Assurance Monitoring	MSDS	Material Safety Data Sheet
CAS	Chemical Abstracts Service	NAAQS ...	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs	
CFR	Code of Federal Regulations	National Emissions Standards for Hazardous Air Pollutants
CO	carbon monoxide	NO_x	nitrogen oxides
CO₂	carbon dioxide	NSPS	New Source Performance Standards
CO_{2e}	carbon dioxide equivalent	NSR	New Source Review
COMS	Continuous Opacity Monitoring System	PM	particulate matter
CSR	Code of State Regulations	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
dscf	dry standard cubic feet	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
EQ	Emission Inventory Questionnaire	ppm	parts per million
EP	Emission Point	PSD	Prevention of Significant Deterioration
EPA	Environmental Protection Agency	PTE	potential to emit
EU	Emission Unit	RACT	Reasonable Available Control Technology
fps	feet per second	RAL	Risk Assessment Level
ft	feet	SCC	Source Classification Code
GACT	Generally Available Control Technology	scfm	standard cubic feet per minute
GHG	Greenhouse Gas	SIC	Standard Industrial Classification
gpm	gallons per minute	SIP	State Implementation Plan
gr	grains	SMAL	Screening Model Action Levels
GWP	Global Warming Potential	SO_x	sulfur oxides
HAP	Hazardous Air Pollutant	SO₂	sulfur dioxide
hr	hour	tph	tons per hour
hp	horsepower	tpy	tons per year
lb	pound	VMT	vehicle miles traveled
lbs/hr	pounds per hour	VOC	Volatile Organic Compound
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Mr. Tim Davies
Safety, Health & Environmental Manager
Henkel Corporation
201 Highway 10 East
Richmond, MO 64085

RE: New Source Review Permit - Project Number: 2013-03-047

Dear Mr. Davies:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. 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 Cheryl Steffan, at the Department of Natural Resources' 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

Susan Heckenkamp
New Source Review Unit Chief

SH:csl

Enclosures

c: Kansas City Regional Office
PAMS File: 2013-03-047

Permit Number: