

Starting Formulation

SF 6009

General Purpose Topping and Patching Compound

EPON™ Resin 828 / HELOXY™ Modifier 8 / EPIKURE™ Curing Agent 3277 and 3271

Introduction This trowelable floor topping formulation was designed for general interior use. Resistance to a broad spectrum of chemicals permits use in areas subjected to moderate exposure to alkalines, dilute acids, salt solutions, sugar solutions, greases, animal fats, oils and acidic foods processed from milk, citrus fruits, tomatoes, vinegar, etc. Prolonged exposure to strong solvents or strong corrosives is not recommended. An additional feature of this formulation is its 2:1 (by volume) resin:converter combining ratio.

Formula	Material	Supplier	Pounds	Gallons
Resin Portion				
	EPON Resin 828	Hexion	90.00	9.28
	HELOXY Modifier 8	Hexion	<u>10.00</u>	<u>1.35</u>
	Total Resin Portion		100.00	10.63
Converter Portion				
	EPIKURE Curing Agent 3277	Hexion	40.85	5.11
	EPIKURE Curing Agent 3271	Hexion	<u>2.15</u>	<u>0.25</u>
	Total Converter Portion		43.00	5.36
Aggregate Portion				
	Silica Sand ¹		<u>858.00</u>	<u>38.88</u>
	Total Filler Portion		858.00	38.88

¹ Use dry sand specifically graded for good packing and troweling characteristics available in standard weight bags for convenience. This sieve analysis is one characteristic of sands that will trowel well:

U.S. Standard Sieve #	Percent Retained
6	0
8	0-10
16	10-20
30	25-35
50	35-45
100	5-15

A 27:40:33 blend of Grade 2/Grade 1/Grade 0 silica sands from New Jersey Pulverizing Company is one example of an aggregate conforming to this particle size gradation.

Generated: October 19, 2021
 Issue Date:
 Revision:

© and ™ Licensed trademarks of Hexion Inc.

DISCLAIMER

The information provided herein was believed by Hexion Inc. ("Hexion") to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Hexion are subject to Hexion's terms and conditions of sale. HEXION MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HEXION, except that the product shall conform to Hexion's specifications. Nothing contained herein constitutes an offer for the sale of any product.

Application Instructions Clean old concrete substrates by either sandblasting or scarifying (Tennant grinding machine) to remove surface contaminants such as oils, fats, greases, waxes, membrane coatings, paints, etc. The laitance of new concrete can be removed with an acid etch (muriatic acid) followed by flushing with water then scrubbing and drying.

To ensure maximum adhesion, a prime coat of the unfilled binder (resin and converter portions) should be applied to the concrete substrate by brush, roller, or squeegee. A coverage rate of 160 square feet/gallon (average film thickness of 10 mils) is suggested for highly porous substrates where heavier applications may be required. Then apply the topping system prior to gelation of the prime coat.

To prepare the topping system, blend the resin and converter portions in the designated ratio and mix until homogeneous. Power agitation is recommended, but manual stirring may be used if care is taken to accomplish thorough mixing. In either case, the sides and bottom of the mixing vessel should be scraped frequently to insure complete blending. Pour the blended binder over the sand and mix in a KOL Mixal, paddle- type mortar mixer or with a drill motor powered agitator.

Distribute the sand/binder mix to the desired thickness and finish with a trowel. This procedure provides additional working life by permitting the heat of reaction to dissipate from the thinner sections. This procedure may be modified for applying skid proof toppings by broadcasting sand or abrasive grains over the ungelled topping. The excess (unwetted) grains are swept off after the epoxy binder has hardened.

Typical Handling Properties Table 1 / Handling Properties

	<u>Units</u>	<u>Value</u>
Combining Ratio		
Resin/Converter	by weight	100 : 43
	by volume	2 : 1
Sand/binder	by weight	6 : 1
	by volume	2.45 : 1
Binder Viscosity at 25 °C	cP	900
Gel Time, 100 grams binder at 25 °C	min	47
Gel Time, one pint binder		
at 13 °C	min	50
at 25 °C	min	29
at 38 °C	min	14
Expected Working Life, one quart sand-filled topping		
at 13 °C	min	240
at 38 °C	min	50
Set Time, 1/4 inch topping		
at 13 °C	hrs	16
at 25 °C	hrs	7
at 38 °C	hrs	3.5

Typical Cured State Properties Table 2 / Cured State Properties ¹

Generated: October 19, 2021
 Issue Date:
 Revision:

© and ™ Licensed trademarks of Hexion Inc.

DISCLAIMER

The information provided herein was believed by Hexion Inc. ("Hexion") to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Hexion are subject to Hexion's terms and conditions of sale. HEXION MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HEXION, except that the product shall conform to Hexion's specifications. Nothing contained herein constitutes an offer for the sale of any product.

	<u>Units</u>	<u>Value</u>
Heat Deflection Temperature	°C	58
Tensile Strength	psi	7,700
Tensile Modulus 10 ⁶	psi	0.46
Tensile Elongation	%	7.2
Flexural Strength	psi	11,800
Flexural Modulus 10 ⁶	psi	0.35
Flexural Deflection	inch	>0.6
Izod Impact, notch	ft-lb/inch	0.48
Hardness	Shore D	85
Chemical Absorption, ²		
Water	%	0.13
5% Acetic Acid	%	0.36
Xylene	%	3.46
Chemical Resistance of Sand-Filled Topping ³		
Methanol	days	< 1
Methyl Ethyl Ketone	days	<1
Toluene	days	1
5% Detergent	days	>28
5% Bleach	days	>28
5% Acetic Acid	days	>28
25% Acetic Acid	days	3
25% Sulfuric Acid	days	>28
15% Hydrochloric Acid	days	>28
5% Citric Acid	days	>28
5% Lactic Acid	days	>28
5% Caustic	days	>28
Skydrol	days	>28
Oleic Acid	days	>28

¹ Determined using 1/8 inch unfilled castings cured two weeks at 23 °C.

² Weight gain after immersion for 24 hours at 23 °C.

³ Topping was cured 3 weeks at 23 °C; days without deterioration after continuous contact with fresh chemical.

Storage Recommendations regarding storage conditions can be obtained by visiting our web site at www.hexion.com

Generated: October 19, 2021
Issue Date:
Revision:

© and ™ Licensed trademarks of Hexion Inc.

DISCLAIMER

The information provided herein was believed by Hexion Inc. ("Hexion") to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Hexion are subject to Hexion's terms and conditions of sale. HEXION MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HEXION, except that the product shall conform to Hexion's specifications. Nothing contained herein constitutes an offer for the sale of any product.

General Information

These are starting formulations and are not proven in the user's particular application but are simply meant to demonstrate the efficacy of the products and to assist in the development of the user's own formulation. It is the user's responsibility to fully-test and qualify the formulation, along with the ingredients, methods, applications or equipment identified herein ("Information"), by the user's knowledgeable formulator or scientist, and to determine the appropriate use conditions and legal restrictions, prior to use of any Information.

Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheet (MSDS) for these and all other products being used are understood by all persons who will work with them. Questions and requests for information on Hexion Inc. ("Hexion") products should be directed to your Hexion sales representative, or the nearest Hexion sales office. Information and MSDSs on non-Hexion products should be obtained from the respective manufacturer.

Contact Information

For product prices, availability, or order placement, please contact customer service:

www.hexion.com/Contacts/

For literature and technical assistance, visit our website at www.hexion.com

Generated: October 19, 2021
Issue Date:
Revision:

® and ™ Licensed trademarks of Hexion Inc.

DISCLAIMER

The information provided herein was believed by Hexion Inc. ("Hexion") to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Hexion are subject to Hexion's terms and conditions of sale. HEXION MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HEXION, except that the product shall conform to Hexion's specifications. Nothing contained herein constitutes an offer for the sale of any product.