

Advanced Materials**RP 6418-1 System****POLYURETHANE GELCOAT SYSTEM****DESCRIPTION :**

RP 6418-1 polyurethane gel coat system has been formulated for application as a resilient mask for foundry cores. It works well in the HMP process.

MIXING INTRUSCTIONS :

Reaction Ratio 32R to 100H by weight

Mixing: Stir each component thoroughly before use. Weigh each component accurately ($\pm 5\%$) into clean containers. Thoroughly mix resin and hardener together (minimum 3 minutes) scraping container sidewalls, bottom and mixing stick several times to assure a uniform mix.

TYPICAL PROPERTIES :

Property		ASTM Test Method	Test Values ⁽¹⁾
Viscosity	Resin	D-2393	900 cP
	Hardener		19,300 cP
Specific gravity	Resin	D-792	1.16
	Hardener		1.11
Mixed Properties			
Gel time (4 fl. oz.)		D-2471	14 – 18 minutes
Color	Resin	Visual	Amber liquid
	Hardener		Red paste
Hardness, Shore A		D-2240	30 – 35
Viscosity, mixed		D-2393	8,500 cP

⁽¹⁾ Tested @ 77 °F (25 °C)

NOTE : Typical Properties – These physical properties are reported as typical test values obtained by our test laboratory. If assistance is needed in establishing product specifications, please consult with our Quality Control Department.

CURING INSTRUCTIONS :

Although room temperature epoxies will normally set up to a rigid, demoldable state within 24 hours at room temperature (75 °F ± 5 °F), these systems reach their full cure after seven days at room temperature. A full cure can be accelerated by applying heat after the part has set rigid. We recommend a post cure of 176 °F for a minimum of 16 hours. (Add to this adequate time to bring the part to the post cure temperature.) After cure, the part should be cooled at a slow rate so as not to shock the part thermally.

Uniform heat distribution is also required during post cure ; concentrated heat, such as that directed from a lamp, can cause warp. An elevated temperature cure will slightly increase the shrinkage compared to a room temperature cure.

STORAGE/HANDLING INFORMATION :**RP 6418-1 Resin and Hardener**

Store at 70 - 90 °F. This product is moisture-sensitive and packaged under a blanket of dry nitrogen. Maintain factory seal, after use reblanket with dry nitrogen and tightly reseal.

Work in a well ventilated area and use clean, dry tools for mixing and applying. For two component system, combine the resin and hardener according to mix ration. Mix together thoroughly and use immediately after mixing. Material temperature should not be below 65 °F (18 °C) when mixing.

RP 6418-1 Hardener

Stir well before use. This material will separate.

SHELF LIFE :

Provided materials are stored under the recommended storage conditions in their original containers, they will remain in useable condition for six months from date of shipping.

PACKAGING :

This product is available in the following package size(s):

- Kits of resin and appropriate amount of hardener (total weight 9.5#)

Please call Customer Service (800-367-8793) for price and availability.

SAFETY/HANDLING PRECAUTIONS :

Do not use or handle this product until the Material Safety Data Sheet has been read and understood.

RP 6418-1 Resin

WARNING. Harmful if inhaled. Causes skin and eye irritations. Causes allergic skin and respiratory reactions. Do not get in eyes. Avoid prolonged or repeated contact with skin. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

RP 6418-1 Hardener

CAUTION In accord with good industrial practice, handle with due care. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

Nuisance dust may be generated when sanding or sawing cured material.

FIRST AID :

In case of contact with :

Skin : Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

Eyes : Immediately flush with water for at least 15 minutes. Call a physician.

Ingestion : If conscious, give plenty of water to drink. Do not induce vomiting. Call a physician.

Inhalation : Remove to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Other : Referral to physician is recommended if there is any question about the seriousness of any injury.

PRECAUTION NOTE :

Thermosetting systems generate heat when curing. The amount of heat and the period of time in which heat is released vary significantly between systems. Additionally, ambient or compound temperature, amount of material mixed, and construction and shape of the mold or container can also be factors in the temperature profile of a mixed system. In some cases, the thermosetting reaction can be vigorous, generation heat sufficient to cause decomposition of the system with subsequent liberation of large volumes of acrid smoke.

A good rule of thumb is never mix more material than can be applied during the stated pot life or gel time. Also take care when using materials in applications other than stated on the product Data Sheet, i.e., a laminating resin for casting.

Please feel welcome to call our Product Information Department or your local Ren representative for instructions before you start your job.

Caution To protect against any potential health risks presented by our products, the use of proper personal protective equipment (PPE) is recommended. Eye and skin protection is normally advised.

Respiratory protection may be needed if mechanical ventilation is not available or is insufficient to remove vapors. For detailed PPE recommendations and exposure control options consult the product MSDS or a Huntsman EHS representative.

IMPORTANT LEGAL NOTICE

Huntsman Advanced Materials warrants only that its products meet the specifications agreed with the user. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications.

The manufacture of materials is the subject of granted patents and patent applications; freedom to operate patented processes is not implied by this publication.

WHILE ALL THE INFORMATION AND RECOMMENDATIONS IN THIS PUBLICATION ARE, TO THE BEST OF HUNTSMAN ADVANCED MATERIAL'S KNOWLEDGE, INFORMATION AND BELIEF, ACCURATE AT THE DATE OF PUBLICATION, nothing herein is to be construed as a warranty, whether express or implied, including but without limitation, as to merchantability or fitness for a particular purpose. In all cases, it is the responsibility of the user to determine the applicability of such information and recommendations and the suitability of any product for its own particular purpose.

The behavior of the products referred to in this publication in manufacturing processes and their suitability in any given end-use environment are dependent upon various conditions such as chemical compatibility, temperature, and other variables, which are not known to Huntsman Advanced Materials. It is the responsibility of the user to evaluate the manufacturing circumstances and the final product under actual end-use requirements and to adequately advise and warn purchasers and users thereof.

Products may be toxic and require special precautions in handling. The user should obtain Safety Data Sheets from Huntsman Advanced Materials containing detailed information on toxicity, together with proper shipping, handling and storage procedures, and should comply with all applicable safety and environmental standards.

Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent on manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.

Except where explicitly agreed otherwise, the sale of products referred to in this publication is subject to the general terms and conditions of sale of Huntsman Advanced Materials LLC or of its affiliated companies including without limitation, Huntsman Advanced Materials (Europe) BVBA, Huntsman Advanced Materials Americas Inc., and Huntsman Advanced Materials (Hong Kong) Ltd.

Huntsman Advanced Materials is an international business unit of Huntsman Corporation. Huntsman Advanced Materials trades through Huntsman affiliated companies in different countries including but not limited to Huntsman Advanced Materials LLC in the USA and Huntsman Advanced Materials (Europe) BVBA in Europe.

Copyright © 2007 Huntsman Corporation or an affiliate thereof. All rights reserved.

Main Offices :

Huntsman Corporation
10003 Woodloch Forest Dr.
The Woodlands
Texas 77380
(281) 719-6000

**Huntsman Advanced Technology
Center**

8600 Gosling Rd.
The Woodlands
Texas 77381
(281) 719-7400

Website :

www.huntsman.com/advanced_materials