



## Neoprene GRT M1 and GRT M2

### TECHNICAL INFORMATION – November 2015

Denka Neoprene GRT is a sulfur modified, crystallization-resistant chloroprene copolymer stabilized with a thiuram disulfide and a nonstaining antioxidant. It is slower in crystallizing than other G types.

Physical Form	Chips
Color	Amber light yellow to tan
Specific Gravity at 25/4°C, ASTM D7920-66 (1979)	1.23
Mooney Viscosity, ML 1+4 at 212 °F [100 °C]	
GRT M1	36 – 42
GRT M2	40 - 52
Crystallization Rate	Slow
Storage Stability	Good. Storage stability is slightly less than that of Neoprene GNA. May undergo some viscosity change during storage.

\* These data are presented to describe Neoprene GRT and are not intended to serve as specifications.

#### Processing and Performance Features

- Slow Crystallization Rate**  
 Neoprene GRT has the greatest resistance to crystallization of any of the G types. Thus, the raw polymer, and stocks and vulcanizates prepared from it, remain soft and flexible longer, particularly at low temperatures.
- Excellent Frictioning Characteristics**  
 Neoprene GRT rapidly breaks down, or softens, and becomes tacky under the mechanical shear imposed during mixing. In addition, it is slow to crystallize, so it remains tacky much longer than Neoprene GNA. Because of its excellent tack retention, Neoprene GRT is the preferred type of Neoprene for friction compounds and other applications requiring good building tack.
- Fast Cure Rate Without Accelerators**  
 Compounds of Neopren GRT cured with metal oxides alone have excellent processing safety, yet cure rapidly. Although not required, cure accelerators can be used and are advantageous for some applications.
- Vulcanizates Resistant to Flexing and Other Dynamic Stress**  
 Properly compounded vulcanizates of Neoprene GRT have high resilience, tear strength, and flex cracking resistance. These properties, combined with its good building tack, have led to wide use of Neoprene GRT in composite structures that are subjected to severe dynamic stresses, such as power transmission belts.

#### Handling Precautions

Neoprene GRT has no known health hazards. However, it should be handled in accordance with good industrial hygiene practices. For additional information, read Denka Performance Elastomer LLC reference “ Guide for Safety and Handling and FDA Status of Neoprene Solid Polymers”, and observed the precautions noted therein.

The compounding ingredients used with Neoprene GRT to prepare finished products may present health hazards in handling and use. Before proceeding with any compounding work, consult and follow label directions and handling precautions from supplies of all ingredients. Read and heed the product labels.

Neoprene can accumulate a static charge during shipping, unloading, conveying, or pouring from the bag. To avoid hazards associated with a static electric discharge, provide adequate grounding of equipment and personnel while handling Neoprene GRT in the vicinity of flammable vapors or dusts. See National Fire Protection Association (NFPA) RP77 "Recommended Practice on Static Electric."

#### **Information on European Union Dangerous Preparations Directive 1999/45/EC related to Colophony Skin Sensitization**

Colophony is classified as a skin contact sensitizer under European Union Dangerous Preparations Directive 1999/45/EC effective July 30, 2002. This Directive requires labeling of products that contain colophony at levels equal to or greater than 0.1% (refer to the Directives for specific details). Solid (dry type) Neoprene adhesive grade products manufactured by Denka Performance Elastomer LLC contain about 4% colophony (CAS No. 8050-09-7). Toxicological tests have demonstrated that dry Neoprene is not a skin sensitizer. Because of this testing, dry Neoprene polymer is not subject to mandatory labeling under the above Directive despite the presence of the colophony. However, when these Neoprene adhesive grade products are dissolved in organic solvents, the colophony may still be present at concentrations up to 0.8% depending on the solids content of the solutions. In the absence of data showing the adhesive is not a skin sensitizer, the adhesive could be subject to the above EU regulation.

We recommend that manufacturers and marketers of adhesive solutions based on Denka Performance Elastomers' Neoprene (dry type) adhesive grade products determine whether the colophony level is above 0.1%. If the manufactured preparation has a colophony content of less than 0.1% it will not be subject to mandatory labeling (provided no other constituents necessitate mandatory labeling). Manufactured preparations that contain higher colophony contents will require the labeling and/or container notices described in the Directive.

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Contact Denka at the following location:

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Denka Performance Elastomer LLC,  
One Corporate Commons, 100 West Commons Boulevard, Suite 110 New Castle, DE 19720  
Telephone: +1-302-414-8565  
Fax: +1-302-328-2178  
E-mail:sales@denka-pe.com

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**Caution:** Do not use in medical applications involving permanent implantation in the human body. For other medical applications, discuss with your Denka Performance Elastomer customer service representative.

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The Denka logo consists of the word "Denka" in a bold, blue, sans-serif font.