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**ELASTOMERS**  
**-NATURAL RUBBERS-**

**MEGAPOLY (MG)**  
**-DRY RUBBER GRADE-**

**DESCRIPTION:**

MG-30 and MG-49 are modified, high performance, specialty natural rubbers prepared by graft polymerization of poly methyl methacrylate (PMMA) into a natural rubber latex. The number in the name denotes the percent of PMMA graphed to the elastomer; thus MG-49 has 49% PMMA and 51% natural rubber. The PMMA imparts stiffening and hardening characteristics to rubber compounds.

**TYPICAL PROPERTIES:**

<i>MG- Grade:</i>	<b>30</b>	<b>49</b>
Specific Gravity	0.98	1.02
PMMA, %	30	49
Ash Content, %	0.25	0.10
Nitrogen Content, %	0.40	0.30
MS (1+4) 100°C*	80.00	100.00
100% Modulus, Mpa	3.5	8.5
Tensile Strength, MPa	27.0	17.0
Shore A Hardness, pts.	75	92

\* at time of production

**TEST COMPOUNDS:**

<i>Material</i>	<b>30</b>	<b>49</b>
Rubber	100.00	100.00
Sulfur	2.10	1.50
St. Acid	0.70	0.50
Zinc Oxide	3.50	2.50
Antioxidant DQ	0.50	0.50
CBTS	0.50	0.35
Cure Time - 140°C	20 min.	20 min.

**VULCANIZATE PROPERTIES:**

100% Modulus, Mpa	3.5	8.5
Tensile Strength, Mpa	27.0	17.0
Shore "A" Hardness, pts.	75	92

**APPLICATIONS:**

An important use of MG-30 and MG-49 are in solution adhesives especially pressure-sensitive adhesives for bonding dissimilar materials. Adhesive compounders utilize these specialty elastomers in various different tape compounds including: PVC electrical insulation, paper craft, masking, protective and surgical tapes. NR/NBR blends benefit from the compatibilizing nature of the dual polarity in MG products. The plastic-like nature of the methyl methacrylate lends itself to preparation of high hardness/modulus, good physical properties, impact resistant, easy-processing rubber compounds. MG-30 and MG-49 can be blended with natural rubbers for intermediate durometers. It is cured essentially like conventional natural rubber. The viscosity and scorch properties are excellent compared to a highly loaded black compound. MG-30 and MG-49 are stiff and non-tacky at room temperature. Their thermoplastic nature allows good processing (calendaring and extruding) high durometer stocks. Other applications include: chopping boards, roller skate wheels, rigid tubing, electrical plugs and molded article-trays, bowls, swimming fins, etc.

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