Dyneon™

Fluoroelastomer

MIP 8780

Features

- Composition: terpolymer of vinylidene fluoride, hexafluoro propylene and tetrafluoroethylene
- Process targets: transfer and compression molding, bonding and calendering
- Improved scorch resistance at high molding temperatures
- Proprietary incorporated cure technology
- Excellent mold release – can be used in automated injection molding equipment
- Improved cure technology resulting in more consistent part size from successive molding cycles
- Clean running

Typical Properties (Data not for specification purpose)

Fluorine Content [QCM 50.18.3C]	68.6 %
Specific Gravity [QCM 14.10]	1.86
Color	Opaque off-white
Solubility	Ketones and Esters
Mooney Viscosity ML1 + 10 @ 121°C (250°F) [QCM 2.14.4C]	Approx. 80

Recommended Processing Procedure

Dyneon™ MIP 8780 Fluoroelastomer can be compounded using standard water cooled internal mixers or two-roll mills with standard fillers and ingredients utilized in typical fluoroelastomer formulations. The ingredients should be dry-blended before adding to the masticated gum. For best results, MIP 8780 fluoroelastomer should be banded on the mill several minutes prior to adding the dry-blended ingredients. Once mixed, the compounded stocks display excellent processing characteristics and storage stability.

Product Form

Dyneon MIP 8780 fluoroelastomer is packaged in slab form and is available in 25 kg boxes.

SafetyToxicology

Follow recommended handling precautions for use of Dyneon™ Fluoroelastomers. General handling precautions include:
1) Store and use all Dyneon fluoroelastomers only in well ventilated areas. 2) Do not smoke in areas contaminated with dust from Dyneon fluoroelastomers. 3) Avoid eye contact. 4) After handling Dyneon fluoroelastomers wash any contacted skin with soap and water.
Potential hazards, including evolution of toxic vapors, do exist during compounding or processing under high temperature conditions. Before processing Dyneon fluoroelastomers, consult the product MSDS (Material Safety Data Sheet) and follow all label directions and handling precautions. Also read and follow all directions from other compound ingredient suppliers. Material Safety Data Sheets are available from your Dyneon Sales Representative or by dialing +49-2131-14-2265.

Dyneon™ MIP 8780 Fluoroelastomer

ISO 9001

Dyneon™ Fluoroelastomers are manufactured at ISO 9001 registered facilities.

Typical Properties of Vulcanizate
(Data not for specification purposes)

Compound	phr
MIP 8780	100
MT Black (N990)	30
MgO	3
$Ca(OH)_2$	6

Typical Rheological Properties
Alpha Technologies Moving Die Rheometer (MDR 2000®)
100 cpm, 0.5° Arc, 6 minutes (QCM 2.19.1.C)

Temperature °C	177°
ML, Minimum Torque, (dN m)	2.8
ts2, Time to 2 inch-lb rise from minimum - minutes	0.8
t'50, Time to 50 % cure - minutes	1.2
t'90, Time to 90 % cure - minutes	1.9
MH, Maximum Torque, (dN m)	17.0

Typical Physical Properties (3M 125.3C and 125.17C)
Press Cure 7 minutes @ 177 °C (350 °F)
Post Cure 16 hours @ 230 °C (450 °F)

Tensile, (Mpa)	14.4
100 % Modulus, (Mpa)	3.6
Elongation at break, (%)	285
Hardness, Shore A (ASTM D 2240)	71

Compression Set, %, [ASTM D 395 Method B (Buttons)]

Aged 70 hours @ 200 °C (392 °F)	38

TR10 (ASTM D 1329) °C **-13**

Technical Information and Test Data:
Technical information, test data, and advice provided by Dyneon personnel are based on information and tests we believe are reliable and are intended for persons with knowledge and technical skills sufficient to analyze test types and conditions, and to handle and use raw polymers and related compounding ingredients. No license under any Dyneon or third party intellectual rights is granted or implied by virtue of this information.

The present edition replaces all previous versions. Please make sure and inquire if in doubt whether you have the latest edition.

Product Information: +49-2131-14-2265

Important notice:
All information set forth herein is based on our present state of knowledge and is intended to provide general notes regarding products and their uses. It should not therefore be construed as a guarantee of specific properties of the products described or their suitability for a particular application. Because conditions of product use are outside Dyneon's control and vary widely, user must evaluate and determine whether a Dyneon product will be suitable for user's intended application before using it. The quality of our products is warranted under our General Terms and Conditions of Sale as now are or hereafter may be in force.

General recommendations on health and safety in processing, on work hygiene and on measures to be taken in the event of accident are detailed in our material safety data sheets.

You will find further notes on the safe handling of fluoropolymers in the brochure "Guide for the safe handling of Fluoropolymers Resins" by PlasticsEurope, Box 3, B-1160 Brussels, Tel. +32 (2) 676 17 32.

Issued 1/2008

Printed in Germany

3M Belgium N.V.
Canadastraat 11
Haven 1005
2070 Zwijndrecht / Belgium
Phone: +32-3-250-7851
Fax: +32-3-250-7904

Dyneon GmbH & Co. KG
Carl-Schurz-Str. 1
41453 Neuss
Germany
Phone: +49-2131-14-2265
Fax: +49-2131-14-3857

E-mail: dyneon.europe@mmm.com

www.dyneon.com

98-0504-2075-5