

a technical breakthrough in material identification...



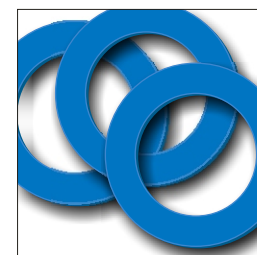
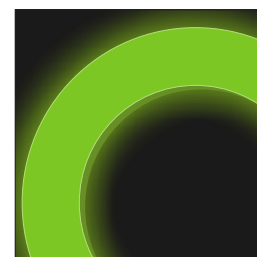
gasket

resources
incorporated



Identa-Seal™ Program

*Taking the guesswork out
of material identification.*



Superior Manufacturing • Quality Performance

DURLON® Identa-Seal™ Program

GRI-A



with
Viton® Tracer™
glow-in-the-dark
Fluorescence

The Challenge

Due to the overwhelming number of black elastomers and the many types of fluoroelastomer materials, confusion often occurs – leading to the wrong gasket or seal being used in critical services. This confusion can result in catastrophic gasket and seal failures. Color coding has long been considered ideal but technically out of reach...until now!

The Solution

Gasket Resources, Inc. announces a technical breakthrough in material identification...the first color coded sealing material family manufactured from 100% Genuine Viton® fluoroelastomer. These materials have been extensively tested by third party laboratories* and proven to be as chemical and temperature resistant when compared to carbon black-filled materials while maintaining excellent physical properties in service.

Overall Features and Benefits

- Only 100% Genuine Viton® fluoroelastomers from DuPont® Performance Elastomers used in the manufacture of Identa-Seal™
- Exclusive Identa-Seal™ Color Code
- Ideal for standardization programs and process safety enhancements
- Eliminates risky and costly material mix-ups
- Independently third party tested and proven*

Temperature and Chemical Performance

- Compared to other elastomer parts, Identa-Seal™ is able to better withstand high temperatures while retaining its good mechanical properties
- Continues to show excellent chemical resistance throughout the recommended temperature range
- Oil and chemical resistance at elevated temperatures
- Serviceable in dynamic applications to temperatures of:
 - 17° for GRI-A
 - 13° for GRI-B
 - 6° for GRI-GF-S

Availability

Sheet, fabricated gasket or o-ring/quadrings

*Please see third party testing data sheet.

FEATURES & BENEFITS

Durlon® Identa-Seal™ GRI-A made with Genuine Viton® uses Tracer™ technology. This compound is based on proprietary technology patented by DuPont Performance Elastomers that allows users to quickly verify their gasket or seal was made using 100% Genuine Viton® as the polymer constituent.

In normal lighting, Identa-Seal™ GRI-A gaskets and seals made from Viton® Tracer™ look no different from other fluoroelastomer parts. However, under ultraviolet light, this product appears vivid green – your guarantee of authenticity!

Chemical Resistance: Performs well in a wide range of aggressive chemical environments. By using GRI-A the user will have more versatility for broader application ranges than non-fluorinated elastomers.

Environmental: GRI-A is resistant to corrosive atmospheres such as oxidation, sunlight and ozone.

Compression Set: GRI-A has excellent recovery even at temperature extremes that embrittle other elastomers. Better thermal stability gives users increased operating temperature limits to improve productivity and reduce untimely failures.

Typical Physical Properties

Identa-Seal™ GRI-A contains 66% fluorine and Viton® Tracer™ Technology.

(D-412)	TENSILE STRENGTH, psi, (MPa)	2250
(D-412)	100% MODULUS, psi, (MPa)	1100
(D-412)	ULTIMATE ELONGATION, %	180
(D-2240)	SHORE A HARDNESS, Pts.	76
(D-297)	SPECIFIC GRAVITY, (H ₂ O=1)	1.88
(D-395)	COMPRESSION SET, 22 Hrs @ 392°F, %	8.30

SPECIFICATIONS:

ASTM D-2000 M6HK810 A1-10, B38, C12, EF31, E088, Z1
Z1 Hardness Shore A = 75+/-5
Contains only 100% virgin Viton® A-type polymer from DuPont Performance Elastomers

GRI-B



with excellent
compression set &
fluid resistance

FEATURES & BENEFITS

Durlon® Ident-a-Seal™ GRI-B made with 100% Genuine Viton® B has better resistance to attack by chemicals and heat than do compounds of Viton® A and similar dipolymers. GRI-B is recommended for those applications needing better chemical resistance, such as in situations requiring sealing against alcohols, aromatic hydrocarbons, chlorinated chemicals or steam. For these reasons Viton® B is used extensively in the chemical manufacturing and utilities industries and users should consider GRI-B for all chemical sealing applications requiring maximum retention of elastic properties and mechanical strength.

Chemical Resistance: GRI-B features increased fluid resistance compared to GRI-A compounds to such aggressive chemicals as benzene, ethanol, diesel, ethylene chloride, titanium dioxide, vinyl chloride, steam, and sulfuric acid. It is also resistant to aliphatic and aromatic hydrocarbons that will cause severe damage in other rubbers.

Compression Set: Third party laboratory testing verified that GRI-B exhibits excellent compression set characteristics even at temperature extremes.*

Typical Physical Properties

Ident-a-Seal™ GRI-B is a Blue 75 Duro made with Viton® B-600 and contains 68% fluorine for enhanced fluid resistance.

(D-412)	TENSILE STRENGTH, psi, (MPa)	2175 (15.0)
(D-412)	100% MODULUS, psi, (MPa)	1100 (7.6)
(D-412)	ULTIMATE ELONGATION, %	190
(D-2240)	SHORE A HARDNESS, Pts.	74
(D-297)	SPECIFIC GRAVITY, (H ₂ O=1)	2.24
(D-395)	COMPRESSION SET, 22 Hrs @ 73°F, %	5.6
(D-395)	COMPRESSION SET, 22 Hrs @ 392°F, %	13.8

SPECIFICATIONS:

ASTM D-2000 M2HK710 A1-10, B38, EF31, E078, Z1, Z2
Z1 = 75+/-5 Shore "A" Durometer
Z2 = Color is Blue
Contains only 100% virgin Viton® B-600 polymer from DuPont Performance Elastomers

GRI-GF-S



with the newest
Viton® GF-S

FEATURES & BENEFITS

Durlon® Ident-a-Seal™ GRI-GF-S made with 100% Genuine Viton® GF-S was designed for today's modern lubricants, oxygenated fuels and bleached chemicals. As new fuels and chemicals are developed, new technology in Viton® polymers has led to the evolution of Viton® GF-S. GRI uses Viton® GF-S in the creation of Ident-a-Seal™ GRI-GF-S.

Chemical Resistance: GRI-GF-S features superior fluid resistance and very low permeation in very aggressive environments. It is useful in environments where GRI-A and GRI-B products cannot adequately resist certain fluids. GRI-GF-S products are highly resistant to oxygenated fuels containing MeOH, EtOH and MTBE; engine lubricants SE-SF and SG-SH grades; aromatic hydrocarbon fluids; steam; chemicals; and concentrated mineral acids.

Compression Set: Third party laboratory testing verified that GRI-GF-S exhibits excellent compression set characteristics even at temperature extremes.*

Typical Physical Properties

Ident-a-Seal™ GRI-GF-S is a Gold 75 Duro compound made with Viton® GF-S and contains 70% fluorine for superior fluid resistance.

(D-412)	TENSILE STRENGTH, psi, (MPa)	2500 (17.2)
(D-412)	100% MODULUS, psi, (MPa)	460 (3.0)
(D-412)	ULTIMATE ELONGATION, %	365
(D-2240)	SHORE A HARDNESS, Pts.	74
(D-297)	SPECIFIC GRAVITY, (H ₂ O=1)	2.24
(D-395)	COMPRESSION SET, 22 Hrs @ 73°F, %	4.7
(D-395)	COMPRESSION SET, 22 Hrs @ 392°F, %	16.9

SPECIFICATIONS:

ASTM D-2000 M2HK714 A1-10, B38, EF31, E078, Z1, Z2
Z1 = 75+/-5 Shore "A" Durometer
Z2 = Color is Gold
Contains only 100% virgin Viton® GF-S polymer from DuPont Performance Elastomers

Pulp & Paper
 Utilities/Power Plant
 Digesters
 Chemical Recovery
 Blow Tanks
 Pump Discharge
 Washing
 Bleaching
 Refiners
 Wet End
 Head Box
 Dryers
 Coating Piping/Storage
 General Service

Chemical Processing
 Process Piping
 a. Acids
 b. Alkalies
 c. Chlorine
 d. Stainless Steel
 e. General & Utility Service
 Chemical Pumps
 Centrifuges
 Heat Exchangers
 Towers and Reactors
 Tower Trays
 Storage Tanks
 Manways
 General Service

Rail-Tank Car
 Multi Housing Arrangements
 Nozzle and Outlet Arrangements
 Cover Flanges
 Liquid Connections
 Air Connections
 Gauging Devices
 Manway Covers
 Safety Valves
 Bottom Outlet Valves
 Steam Pipes
 Power Generation
 Boiler
 Ash Handling
 Chemical Piping
 Steam Turbine and Generator
 Circulating Water
 Condensate
 Diesel Backup
 Screen House Pumps and Piping
 General Service

FDA & Pharmaceutical
 Agitators
 Dryers
 Mixers
 Pumps
 Autoclaves
 Cookers
 Filter Screens
 Stainless Piping
 Storage Tanks
 Blenders
 Cooling Vessels
 Homogenizer
 Loading/Unloading Systems



Choose the DURLON Ident-a-Seal™ GRI product that is right for your application.

Viton® Family	Ident-a-Seal™ Name/Color	Principal End Users	Polymer Composition	Weight % Fluorine
A	GRI-A/Black & UV Fluorescence	General Purpose Sealing: Automotive, Aerospace Fuels & Lubricants	Dipolymers of VF2/HFP	~64-67%
B	GRI-B/Blue	Chemical Process Plants, Railroad Tank Cars & Tank Trucks, Power Utility Seals & Gaskets	Terpolymers of VF2/HFP/TFE	~68%
F	GRI-GF-S/Gold	GRI-GF-S is used for any specification requiring the advantages of a high fluorine content in a fluoroelastomer. The polymer used for these products has shown improved strength, compression set resistance and fluid resistance to the older technology GF polymer. Other properties, including low-temperature performance are equivalent.	Terpolymer of VF2/HFP/TFE manufactured using DuPont's proprietary Advanced Polymer Architecture technology.	~69-70%

Chemical Resistance	A-Black	B-Blue	GF-Gold
n-Alkyl Alcohols $C_nH_{2n+1}OH$			
N=1 Methanol	NR	NR	+
N=2 Ethanol	NR	+	+
N>2 Others	+	+	+
Inorganic Acids			
70% Nitric Acid	NR	NR	+
Conc. Sulfuric Acid	NR	+	+
Most Others	+	+	+
Organic Acids			
30% Acetic Acid	NR	NR	+
Propionic Acid	NR	NR	+
Fuels			
Hydrocarbon Automotive	+	+	+
Oxygenated Fuels	NR	NR	+

NR = Not Recommended + = Recommended

IMPORTANT: Elastomers such as Viton® are formulated by compounders with the addition of fillers, curing agents, etc., to afford specific engineering properties. Fabricators convert the compound by vulcanization into the desired shape. It is important for part specifiers to consult with Gasket Resources Inc. to determine the appropriate compound for a specific application.



Gasket Resources Incorporated has implemented and maintains a Quality Management System which fulfills the requirements of ISO 9001:2000.



Viton® is a registered trademark of DuPont Performance Elastomers. DuPont™ is a trademark of DuPont and its affiliates.



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