



The Right Connection™

December 17, 2007

Dixon Bayco Products Bottom Loading, Gasket & Seal recommendations for alternative fuels.

Dixon has completed several years of testing and engineering evaluation to ensure our products are compatible with all modern motor fuels in use today.

Dixon uses a proprietary seal compound that we refer to by the trade name BAYLAST™. BAYLAST™ has been tested both in the lab and field with excellent results. BAYLAST™ was developed so we could offer a single seal material compatible with the wide range of alternative fuels used today. For the past year, many Dixon Bayco products have used BAYLAST™ seals to ensure compatibility with alternate fuels including E100 Ethanol, E85 Ethanol, B2 Biodiesel, B20 Biodiesel, Ultra Low Sulfur Diesel, and standard refined gasoline and diesel products with excellent results. Our tests indicate that BAYLAST™ performs well down to -40° C/F.

There are mechanical and temperature considerations that must be understood to determine which seal material is suitable for a specific application. A good example is Teflon, it has a very wide chemical compatibility range but is a poor seal material for mechanical reasons.

Using Viton B, or Viton GF is one solution to ensure compatibility, but Viton has limitations regarding the mechanical suitability for seal applications with moving joints. One critical and well known limitation to Viton is cold temperature. Viton will become hard at low temperatures and seals with moving parts tend to weep liquid.

Attached is our fuel compatibility chart which outlines our recommendation for each Dixon Bayco product and type of fuel.

Should you need additional technical support, or if we can help answer any of your tanker issues, please Dixon at 877-963-4966.

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Bayco Products Fuel Compatibility Chart

Dixon Bayco Product	Description	Fuel Product*										
		Gasoline	Diesel	ULSD	Crude Oil	E10	E20	E85	E100	B2	B20	B100
4500 Series	Two Piece API Drop Adapter With Sight Glass, Baylast Seals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4500V Series	Two Piece API Drop Adapter With Sight Glass, Viton Seals	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓
4530 & 4540	API Drop Adapter Without Sight Glass, Baylast Seals	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓
4530V & 4540V	API Drop Adapter Without Sight Glass, Viton Seals	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓
4530SG & 4540SG	One Piece API Drop Adapter With Sight Glass, Baylast Seals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4530SGV & 4540SGV	One Piece API Drop Adapter With Sight Glass, Viton Seals	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓
5200SFI & 5200SFI-3	TTMA Flanged Sight Glass With Baylast Seals	✓	✓	✓	NR2	✓	✓	✓	✓	✓	✓	✓
5200SFIV & 5200SFIV-3	TTMA Flanged Sight Glass With Viton Seals	✓	✓	✓	NR2	NR	NR	NR	NR	✓	✓	✓
5204	API Valve With Sight Glass, Baylast Seals	✓	✓	✓	NR2	✓	✓	NR	NR	✓	✓	✓
5204C	API Valve With Sight Glass & Removable Handle, Baylast Seals	✓	✓	✓	NR2	✓	✓	NR	NR	✓	✓	✓
5204L	API Load Only Valve With Sight Glass, Baylast Seals	✓	✓	✓	NR2	✓	✓	NR	NR	✓	✓	✓
5204LNG	API Load Only Valve Without Sight Glass, Baylast Seals	✓	✓	✓	NR2	✓	✓	✓	✓	✓	✓	✓
5204NG	API Valve Without Sight Glass, Baylast Seals	✓	✓	✓	NR2	✓	✓	✓	✓	✓	✓	✓
5204NGC	API Valve Without Sight Glass, With Removable Handle, Baylast Seals	✓	✓	✓	NR2	✓	✓	✓	✓	✓	✓	✓
5204NGV	API Valve Without Sight Glass, Viton Seals	✓	✓	✓	NR2	NR	NR	NR	NR	✓	✓	✓
5204SFI	API Valve With Inline Tube Sight Glass, Baylast Seals	✓	✓	✓	NR2	✓	✓	✓	✓	✓	✓	✓
5204SNG	API Valve Without Sight Glass, Baylast Seals, Stainless Spring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5204TNG	API Valve Without Sight Glass, Teflon Seals	NR1	NR1	NR1	NR1	NR1	NR1	NR1	NR1	NR1	NR1	✓
5300 & 5400	API Rack Coupling Buna Seals	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	NR
5300B & 5400B	API Rack Coupling Viton-B Seals	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓
5300G & 5400G	API Rack Coupling Viton GFLT Seals	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓
6000, 6200 & 6500 Series Drop Elbows	Petroleum Drop Elbows & Inlets, Buna Seals	✓	✓	✓	NA	✓	✓	✓	✓	✓	✓	NR
Vapor or Product Hose Couplings	Petroleum Vapor Hose Couplings, Buna Seals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR
Vapor or Product Hose Couplings	Petroleum Vapor Hose Couplings, Viton Seals	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓
VR4000 & VR4100 Series Vapor Valves	Petroleum Vapor Valves	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VR6100, VR6200 & VR6500 Vapor Elbows	Petroleum Vapor Elbows & Inlets	✓	✓	✓	NA	✓	✓	✓	NA	✓	✓	NA
VR6030SQ & VR6035SQ	Sequential Vapor Vent Valves, Baylast Seals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
300GTTFCB & 400GTTFCB	Cork Buna TTMA gasket	✓	✓	✓	✓	✓	NR	NR	NR	✓	NR	NR
400GTTFK	Klinger Style TTMA gasket	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40321TF, 40322TF & 40323TF	Teflon Soft Core TTMA Gaskets	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FT151, FT202, FT101	FloTech Sensors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FT151S, FT201S, FT101S	FloTech Stainless Steel Sensors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes:

NA • Not Applicable (This product is not used in this application)

NR • Not Recommended

NR₁ • Not Recommended cost and tendency for Teflon to become damaged from particulate material is not justified for this application.

NR₂ • Not Recommended Crude oil contains acids that are corrosive to steel parts.

ULSD • Ultra low sulfur diesel (ULSD) is a term used to describe a standard for defining diesel fuel with substantially lowered sulfur contents. As of 2006, almost all of the

Crude Oil • Oil in its natural state, as it comes from the ground. Crude oil can contain various other chemicals and gases, many of which can be corrosive.

E10 • 10% Ethanol, 90% Gasoline.

E20 • 20% Ethanol, 80% Gasoline.

E85 • 85% Ethanol, 15% Gasoline.

E100 • 100% Ethanol.

B2 • 2% Bio diesel, 98% diesel (normally ULSD as above).

B20 • 20% Bio diesel, 80% diesel (normally ULSD as above).

B100 • 100% Bio diesel.

*** Petroleum companies often put additives in fuels, additives can affect compatibility with fittings and seals, Please contact Dixon for more information.**

Viton GFLT is compatible with all liquids listed above and available from Dixon by special quotation.

BAYLAST™ is a proprietary seal compound from Dixon.