INTEGRITY
Fusion Products, Inc.

2026

Poly Ball-Valve Submittal Package

Integrity Fusion Products

Peachtree City, Georgia

11/2025

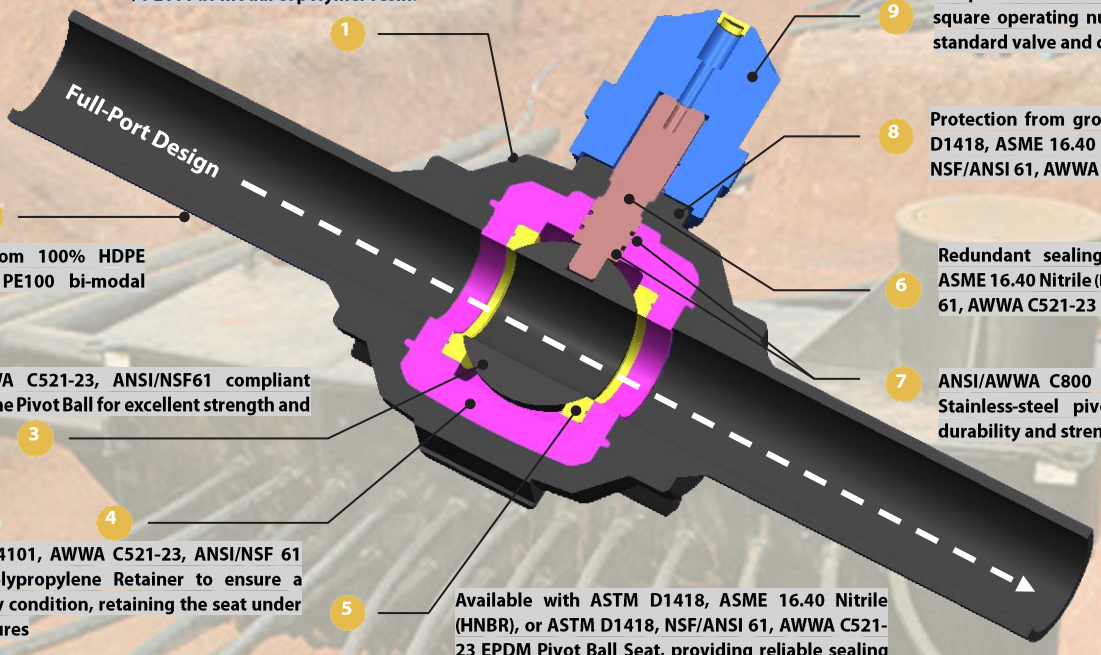
Integrity Fusion Products, Inc.

Molded Polyethylene Ball Valves

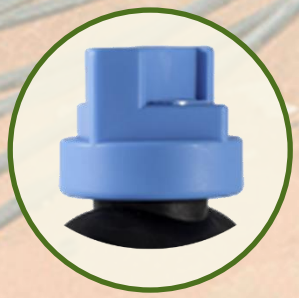
Integrity Fusion Products is proud to offer a line of **IntegriFuse Polyethylene Ball Valves**, that are unlike any other polyethylene ball valve currently available on the market. Manufactured using our own ***patent-pending*** design, our ***full-port***, ***1-piece Polyethylene Ball Valve body*** design, increases the valves strength, durability, and reliability - making it ideal for meeting the rugged demands found in most potable water, golf course, irrigation, natural gas, industrial, and landfill applications.

Currently available in **3/4" IPS to 6" IPS** sizes, **IntegriFuse Injection Molded Polyethylene Ball Valves** are all manufactured and tested to meet the requirements of **ASTM D2513**, **ASTM D3261**, **NSF/ANSI 61**, **ANSI/AWWA C901, C906, C521,** and **ASME 16.40,** and available in two "seat" and "stem", and "weather seal" options (***Option 1:*** **Blue Cap Valves = NSF/ANSI 61, AWWA C521-23, ASTM D4101 EPDM Seals for potable water applications, and** ***Option 2:*** **White Cap Valves = ASTM D4101, ASME 16.40 HNBR/Nitrile Seals for gas, industrial, landfill, and other non-potable water applications)**;** designed for ***Butt Fusion*** or ***Electrofusion*** to outside diameter-controlled pipe and fittings **(molded or fabricated)** conforming to **ASTM D2513**, **ASTM D3035**, and **ASTM F-714**.

The industry's first one-piece injection molded valve body



1. Valve bodies molded from 100% HDPE PE3408 / PE4710 / PE100 bi-modal copolymer resin.
2. Pipe ends molded from 100% HDPE PE3408 / PE4710 / PE100 bi-modal copolymer resin.
3. ASTM D4101, AWWA C521-23, ANSI/NSF61 compliant PP0211 Polypropylene Pivot Ball for excellent strength and thermal resistance
4. Over-Molded ASTM D4101, AWWA C521-23, ANSI/NSF 61 compliant PP0211 Polypropylene Retainer to ensure a positive seal under any condition, retaining the seat under high differential pressures
5. Available with ASTM D1418, ASME 16.40 Nitrile (HNBR), or ASTM D1418, NSF/ANSI 61, AWWA C521-23 EPDM Pivot Ball Seat, providing reliable sealing from -20° F to +140°F
6. Redundant sealing with multiple ASTM D1418, ASME 16.40 Nitrile (HNBR), or ASTM D1418, NSF/ANSI 61, AWWA C521-23 EPDM Stem Seat O-rings
7. ANSI/AWWA C800 compliant316 Stainless Steel Stainless-steel pivot ball stem for excellent durability and strength
8. Protection from ground water and dirt with ASTM D1418, ASME 16.40 Nitrile (HNBR), or ASTM D1418, NSF/ANSI 61, AWWA C521-23 EPDM weather seal
9. ASTM D4101, AWWA C521-23, ANSI/NSF 61 compliant PP0211 Polypropylene 1/4 turn 2" square operating nut that can be turned with standard valve and curb keys.



MADE IN THE USA

BABA COMPLIANT

Blue Cap on Valves = ASTM D1418, NSF/ANSI 61, AWWA C521-23, EPDM Seals
Most commonly used in potable water applications

White Cap on Valves = ASME 16.40, ASTM D1418 HNBR/Nitrile Seals
Most commonly used in Gas, Industrial, Landfill, Golf Courses, and other non-potable water applications

Molded Polyethylene Ball Valve Specification Sheet

Molded Full-Port Polyethylene Ball Valves manufactured by Integrity Fusion Products, are injection over-molded **High-Density Polyethylene valves** that are designed and manufactured for use in applications that include, but are not limited to:

- *Municipal water distribution & service lines*
- *Wastewater conveyance*
- *Irrigation*
- *Oil and Gas Production*
- *Industrial piping applications*
- *Process Lines*
- *Mining*
- *Landfill*

MADE IN THE USA

BABA COMPLIANT

POLYETHYLENE VALVE BODY:

Integrity Fusion Products Polyethylene Ball Valve bodies are manufactured from virgin, NSF listed, pre-blended, bi-modal black high density polyethylene resin that has a cell classification of 445574C-CC3 that conforms to ASTM D3350 and is recognized by the Plastic Pipe Institute as having a PE3408 / PE4710 / PE100 rating with an HDB (Hydrostatic Design Basis) of 1600 psi @ 73° F, and can be heat fused to any manufacturers' PE pipe, molded fittings, or fabricated fittings manufactured from material made from PE3408 / PE4710 / PE100 resin that complies to ASTM D3350.

INTERNAL RETAINERS – PIVOT BALLS and OPERATING NUTS:

The over-molded Full-Port Pivot Balls and Pivot Ball Retainers, and the external Square Operating Nuts are produced from virgin Polypropylene resin that has a designated cell class of PP0211 that complies with all requirements of ASTM D4101, AWWA C521, and ANSI/NSF/CAN 61.

INTERNAL PIVOT BALL SEATS – STEM SEATS and WEATHER SEALS:

IntegriFuse Polyethylene Ball Valves come available with a choice of either EPDM, or Nitrile (HNBR) internal Pivot Ball Seats, Stem Seats, and Weather Seals. IntegriFuse Polyethylene Ball Valves manufactured with EPDM material is visually designated with Blue Polypropylene Square Operating Caps. The EPDM material used in IntegriFuse Poly Ball Valves is ASTM D1418, NSF/ANSI/CAN 61, AWWA C521 compliant, and provides reliable sealing from -20° F to +140° F. IntegriFuse Polyethylene Ball Valves with EPDM seats are designated and approved for use in potable water systems. IntegriFuse Polyethylene Ball Valves manufactured with Nitrile (HNBR) seats, are much more resistant to heat, ozone, and abrasion than EPDM seats, and are designed and approved for use in more aggressive, non-potable water applications such as; oil and gas, industrial, chemical, food and pharma. IntegriFuse Polyethylene Ball Valves with Nitrile (HNBR) seals are ASTM D1418, ASME 16.40 compliant, and are visually designated with White Polypropylene Square Operating Caps.

STAINLESS-STEEL PIVOT BALL STEMS

The **Stainless-Steel Pivot Ball Stems** are designed to provide excellent strength and durability, and manufactured from **ANSI/AWWA C800 compliant 316 Stainless Steel.**

IntegriFuse Full-Port Polyethylene Ball Valves are manufactured, tested, certified, and listed in accordance with standards and requirements that meet a wide range of project requirements that include:

ASTM D2513	-	**Specification for Thermoplastic Gas Pressure Pipe, Tubing and Fittings**
ASTM D3350	-	**Specification for Polyethylene Plastic Pipes and Fittings Materials**
ASTM D3261	-	**Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Pipe and Tubing**
ASTM D4101	-	**Standard Classification System and Basis for Specification for Polypropylene Injection and Extrusion Materials**
AWWA C901	-	**Polyethylene (Pe) Pressure Pipe and Tubing, 3/4 In. Through 3 In. For Water Service**
AWWA C906	-	**Polyethylene (PE) Pressure Pipe and Fittings, 4 In. Through 65 In. (100 mm Through 1,650 mm), for Waterworks**
AWWA C521	-	**Plastic Ball Valves**
ANSI/NSF 61	-	**Plastic Piping System Components & Related Materials**

Conditions for the Required De-Rating of a Transition Fitting Fittings MAOP

The Maximum Allowable Operating Pressures (MAOP) for molded PE4710 fittings ***must be de-rated for elevated temperatures in all service applications***, including Oil & Gas Gathering Systems installed in Class 1 or Class 2 locations (low population areas not subject to DOT CFR *Title 49 Part 192* regulations) or where Federal Codes do not apply. *Including Water, Brine, Dry Natural Gas applications with NO associated hydrocarbons.*

API Specification 15LE (1995) states "In most circumstances, the HDB obtained at 73° F can be used for applications up to 100° F without further derating" Values in this table use a material design factor of .63 and a Fluid Service Factor of 1.0

The maximum operating temperature of Integrity Fusion Products PE4710 Molded Fittings ***should not exceed 140° F.*** (TABLE 2)

Fitting MAOP by SDR vs. Operating Temperature				
SDR	73.4° F	100° F	120° F	140° F
7	333 psi	260 psi	210 psi	166 psi
9	250 psi	195 psi	158 psi	125 psi
11	200 psi	156 psi	126 psi	100 psi
17	125 psi	98 psi	79 psi	63 psi

TABLE 2

Dry, gaseous hydrocarbons have no adverse effect on our molded fittings normal expected service life, and naturally occurring chemicals in the soil will not attack or cause our fittings to degrade. They do not rust, rot, or corrode; they naturally resist the buildup of scale and other deposits, and they do not support the growth of algae, bacteria, fungi, or other marine life.

Table 3 provides an added derated MAOP of a molded electrofusion fitting when installed into services and applications subjected to an extended exposure of liquid hydrocarbon concentrations of 2% and greater.

Values in Table 3 use a material design factor of .63 and a Fluid Service Factor of 0.5

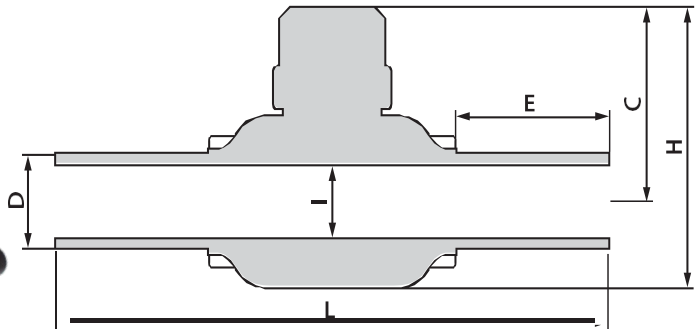
MAOP by SDR Derated for Operating Temperature and Transporting a Media Containing 2% or greater Hydrocarbon Content				
SDR	73.4° F	100° F	120° F	140° F
7	166 psi	129 psi	105 psi	83 psi
9	125 psi	98 psi	79 psi	63 psi
11	100 psi	78 psi	63 psi	50 psi

TABLE 3

Fluid Service Factors

Produced Water, Brine, Process Water with no associated liquid hydrocarbons	1.0
Dry Natural Gas (no hydrocarbon liquids used in Class 1 and Class 2 locations and in low population area not subject to DOT CFR *Title 49 part 192*	1.0
Crude Oil, Wet Natural Gas, Liquid Hydrocarbons, Process Water with >2% liquid hydrocarbons	.5
Gas Distribution piping that is permeated by solvating chemicals, liquid hydrocarbons or liquified gas condensate	.5

Molded Polyethylene Full-Port Ball Valve



CERTIFIED TO NSF/ANSI 61 SECTION 4 NSF/ANSI 372

AWWA C901/C906

ASME SETTING THE STANDARD

ANSI American National Standards Institute

MADE IN THE USA

BABA COMPLIANT

Product Family:	Injection Molded Poly Ball Valve	**Fitting Design:**	Over Molded - Full Port
Resin Status:	NSF Listed Bi-Modal Virgin Resin	**Nominal Base Sizes:**	3/4" – 6"
Resin Type:	ASTM D3350 designated PE3408/PE4710/PE100	**Nominal Pipe Standard:**	IPS
Resin Cell Class:	445574C-CC3	**Currently Available SDR's:**	11
PP Retainer, Pivot Ball & Operating Nut Cap	PP0211 Resin complies with ASTM D4101, ANSI/AWWA C521, NSF/ANSI 61	**EPDM Seals:**	ASTM D1418. NSF / ANSI 61, AWWA C521
Stainless Steel Stem	ANSI/AWWA C800 316 Stainless Steel	**Nitrile (HNBR) Seals:**	ASTM D1418, Meets ASME 16.40 Requirements
Manufactured and tested to meet requirements of:	ASTM F1055, ASTM D2513, ASTM D3261, ANSI/AWWA C901, C906, C521, and NSF 61		
For use on pipe and fittings conforming to:	ASTM D2513, ASTM D3035, ASTM F-714		

IPS w/EPDM Seals

SDR 11 (standard dimension ratio) — **200 PSI** (MAOP @ 73.4° F)

Nominal Size	D [in.]	L [in.]	H [in.]	C [in.]	E [in.]	I [ins.]	CV	Weight (lbs.)	Item Code
¾"	1.050	11.50	5.12	3.70	3.62	1.06	32	1.1	500009
1"	1.315	11.50	5.12	3.70	3.62	1.06	50	1.1	500010
1 ¼"	1.660	11.50	5.12	3.70	3.62	1.06	79	1.1	500008
1 ½"	1.900	11.81	5.51	3.78	3.15	1.26	104	1.7	500011
2"	2.375	19.53	9.65	7.01	6.69	1.77	164	4.6	500021
3"	3.500	21.18	11.81	8.50	6.69	2.52	375	8.8	500012
4"	4.500	24.02	14.92	10.39	6.69	3.58	591	14.7	500013
6"	6.620	31.04	20.55	14.21	7.00	4.98	TBD	TBD	500027

NOTE: Valves with Blue Caps indicate they have EPDM seals that are designed and approved for use in potable water applications

IPS w/Nitrile (HNBR) Seals

SDR 11 (standard dimension ratio) — **200 PSI** (MAOP @ 73.4° F)

Nominal Size	D [in.]	L [in.]	H [in.]	C [in.]	E [in.]	I [ins.]	CV	Weight (lbs.)	Item Code
¾"	1.050	11.50	5.12	3.70	3.62	1.06	32	1.1	500000
1"	1.315	11.50	5.12	3.70	3.62	1.06	50	1.1	500001
1 ¼"	1.660	11.50	5.12	3.70	3.62	1.06	79	1.1	500002
1 ½"	1.900	11.81	5.51	3.78	3.15	1.26	104	1.7	500003
2"	2.375	19.53	9.65	7.01	6.69	1.77	164	4.6	500005
3"	3.500	21.18	11.81	8.50	6.69	2.52	375	8.8	500006
4"	4.500	24.02	14.92	10.39	6.69	3.58	591	14.7	500007
6"	6.620	31.04	20.55	14.21	7.00	4.98	TBD	TBD	500026

NOTE: Valves with White Caps indicate they have HNBR/Nitrile seals that are designed and approved for use in gas & other non-potable water applications

INTEGRITY
Fusion Products, Inc.

Date: **November 6, 2024**

Re: **Buy America Act & BABAA Compliance**

Job Name:

Customer:

To:

Attn:

Sample Letter

Integrity Fusion Products is an American owned company specializing in molded HDPE fittings and accessories. Integrity Fusion's production plant is located at 270 Parkade Court, Peachtree City, GA, and has been supplying HDPE related fittings to North America since 2007.

This letter is to confirm that all IntegriFuse brand of molded HDPE **Butt Fittings**, **Flange Adapters**, **MJ Adapters,** and **Stainless-Steel Stiffeners** are all manufactured in the USA, and fully comply with the **Buy America Act (BAA)**, as well as the **Build America, Buy America Act (BABA**). To include, but not limited to **Title 49 USC Section 50101**.

The following items do comply with BABA:

Part # 100523/100521	- IntegriFuse brand, 6" IPS SDR 9, HDPE MJ Adapter, FM 250
Part # 100531/100529	- IntegriFuse brand, 8" IPS SDR 9, HDPE MJ Adapter, FM 250
Part # 100539/100537	- IntegriFuse brand, 10" IPS SDR 9, HDPE MJ Adapter, FM 250
Part # 100016	- IntegriFuse brand, 6" IPS SDR 9, HDPE Flange Adapter, FM 250
Part # 100020	- IntegriFuse brand, 8" IPS SDR 9, HDPE Molded 45, FM 250
Part # 100043	- IntegriFuse brand, 10" IPS SDR 9, HDPE Molded 45,
Part # 100120	- IntegriFuse brand, 6" IPS SDR 9, HDPE Molded 90, FM 250
Part # 100124	- IntegriFuse brand, 8" IPS SDR 9, HDPE Molded 90, FM 200

Best Regards,

Greg Swindell

Greg Swindell
VP of Operations greg@integrityfusion.com
770-632-7530