DBR Supery ABS Pipe Fitting Co.,Ltd

ABS DWV FITTING SCH40 TECHNICAL MANUAL

GLOBAL
PLUMBING & FIRE SUPPLY



General Infoamation

Standards

ASTM D3965

This specification covers materials from only virgin ABS polymers and blends of ABS polymers suitable for use in the extrusion of pipe and molding of fittings.

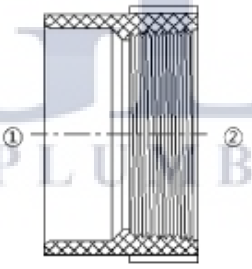
ASTM D2661

This specification covers fittings and single and coextruded acrylonitrile-butadiene-styene(ABS) plastic drain, waste, and vent pipe(DWV) made to Schedule 40 iron pipe sizes(IPS). Plastic which does not meet the material requirements specified in Section 5 is excluded from single layer and all coextruded layers.

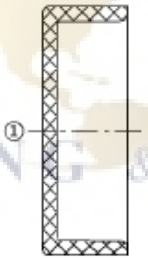
CSA B181.1

This standard specifies requirements for acrylonitrile-butadiene-styrene(ABS) drain,waste, and vent (DWV) pipe, pipe fittings, and accessories such as factory-assembled expansion joints, closet flanges, and backwater valves.

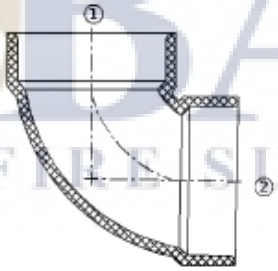
Methods of Designating Inlets of Fittings:



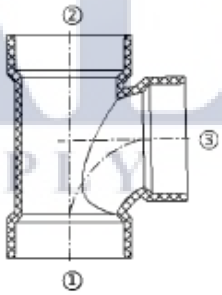
Female Adapter



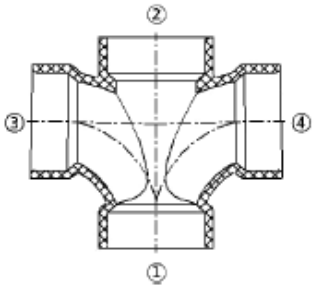
Cap



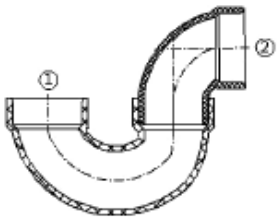
90° Elbow



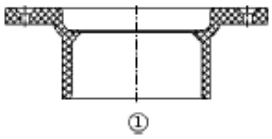
Sanitary Tee



Double Sanitary Tee

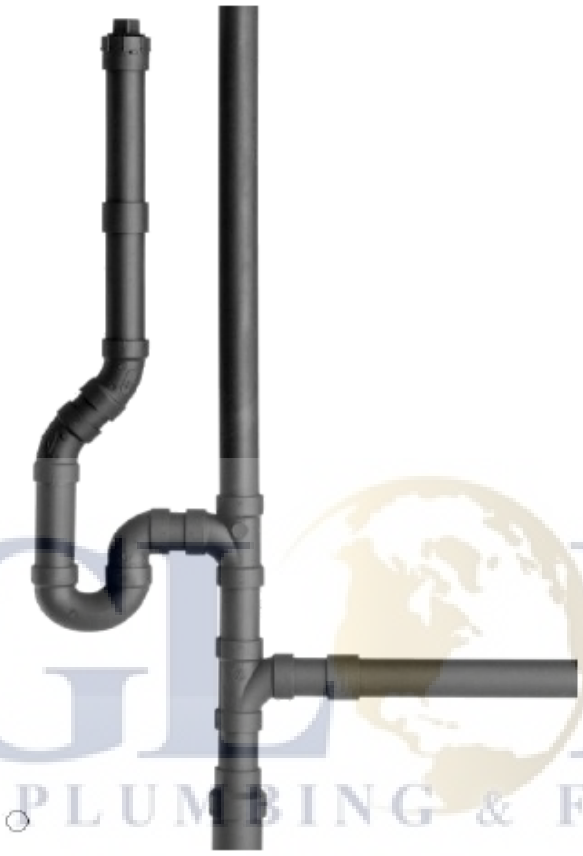


P–Trap



Closet Flange

GLOBAL PLUMBING & FIRE SUPPLY



ABS Pipe: For Drain, Waste and Vent Applications

WHAT IS ABS PIPE?

ABS pipe and fittings are made from a thermoplastic resin called Acrylonitrile-Butadiene-Styrene (or ABS for short). Strict quality control procedures for the manufacturing of ABS resins are practiced throughout the industry. In addition, third party certifiers periodi-cally audit resin manufacturers for compliance with applicable standards and quality control requirements.

THE ORIGIN OF ABS PIPE

ABS pipe and fittings were originally developed in the early 1950s for use in oil fields and the chemical industry. In 1959, John F. Long, a prominent Arizona builder, used ABS pipe in an experimental residence, which he built to test the latest ideas in effective, cost-cutting building supplies. Twenty-five years later, an independent research firm dug up and analyzed a section of the drain pipe. The result: no evidence of rot, rust or corrosion.

In 1960, the FHA approved the use of ABS pipe for DWV applications. Since that time, it has become the leading material for DWV applications because it offers an outstanding combination of properties. Contractors have installed more than 10 billion feet of ABS pipe in residential and commercial construction.

GLOBAL PLUMBING & FIRE SUPPLY

INTRODUCTION

Supery ABS Pipe Fitting Co.,Ltd is a leader in the manufacturing of quality plastic pipe fittings in China which includes ABS DWV pipe &fitting,PVC DWV Pipe &fittings and other Specialty Products.

Through our exceptional relationships with pipe and fitting wholesalers, we service the world's most demanding needs in North America. All pipes and fittings are manufactured applicable ASTM specifications and cUPC certificated.

Large manufacturing capacity combined with our technical expertise allows us to meet profitable product needs with uncompromised service and always with the highest quality.

Our growth is in direct response to ever-increasing customer demands.
We have particular confidence in our products due to meticulous in-house testing and our quality assurance program. Within our program, those include drop-weight test as well as hydraulic test and positive material identification analysis.

GLOBAL
PLUMBING & FIRE SUPPLY

. Plastic Pipe Fittings



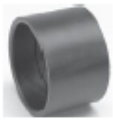
Range of Materials and Applications

Plastic fittings made of ABS, PVC include a range of tees, adapters, elbows, crosses, couplings, bushings, caps, plugs, traps, and unions. The plastic materials are suitable for a variety of applications including DWV, hot and cold water pressure distribution systems, pool and spa, and irrigation.

DIMENSIONAL CATALOG

ABS DWV FITTINGS

COUPLING HUB X HUB

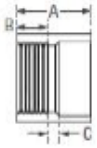




SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2933	130	1/8				
2"	2934	70	1/8				
3"	2935	60	3/16				
4"	2936	30	1/4				

ADAPTER • FEMALE H x FPT





SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2866	100	1-5/8	15/16	1/4		
2"	2867	80	1-7/8	1	1/4		
3"	2869	78	3-1/32	1-27/32	5/16		

PIPE INCREASER • REDUCER H x H



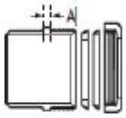


SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
2" x 1-1/2"	2948	100	17/32				
3" x 1-1/2"	2949	60	17/16				
3" x 2"	2950	60	7/8				
4" x 2"	2951	60	1-3/8				
4" x 3"	2952	60	5/8				

GLOBAL PLUMBING & PIPE SUPPLY

TRAP ADAPTER • MALE • W/PLASTIC NUT & 1-1/2" & 1-1/4" WASHERS SP x SJ





SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2" x 1-1/4"	3389	100	3/16				
OR							
1-1/2"	3389	90	3/16				

TRAP ADAPTER • FEMALE • W/PLASTIC NUT & WASHER H x SJ





SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	3383	90	3/16				
1-1/2" x 1-1/4"	3384	100	3/16				

ADAPTER • CLEANOUT SP x FPT





SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2922	100	1-5/8	7/8	5/32		
2"	2923	90	1-17/32	29/32	5/32		

ADAPTER • CLEANOUT • W/CLEANOUT PLUG SP x FPT





SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	3001	90	1-5/8	7/8	5/32	1-15/32	
2"	3002	180	1-17/32	29/32	5/32	1-1/2	

GLOBAL PLUMBING & PIPE SUPPLY

PLUG • CLEANOUT MPT



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2938	150	5/8	1-3/8			
2"	2939	150	5/8	1-3/8			
3"	2941	120	3/4	1-3/4			
4"	2942	100	7/8	1-7/8			

BUSHING • FLUSH SP x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
2" x 1-1/2"	2906	100	1-1/16	5/16			
3" x 2"	2908	100	1-1/2	3/4			
4" x 2"	2910	90	2	1/4			
4" x 3"	2909	90	1-3/4	1/4			

ADAPTER • MALE H x MPT



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2927	100	3/16				
2"	2928	100	3/16				
3"	2929	120	3/8				

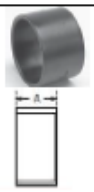
CAP • SOCKET H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2977	100	1-1/16				
2"	2978	100	1-3/16				
3"	2979	100	2-1/4				
4"	2980	55	2-5/16				

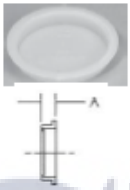
GLOBAL PLUMBING STORE SUPPLY

COUPLING • REPAIR H x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2965	100	1-1/2				
2"	2966	75	1-3/4				
3"	2967	60	3				
4"	2968	69	3-1/2				

CAP • TEST • STYRENE FITS PIPE I.D.



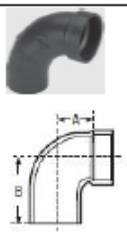
SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2411	100	1-15/16				
2"	2412	100	2-3/8				
3"	2413	100	3-1/2				
4"	2414	100	4-1/2				

ELBOW • 1/4 BEND H x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2876C	100	1-5/16				
2"	2877C	100	1-3/5				
3"	2878C	100	2-7/20				
4"	2879C	100	3				

ELBOW • STREET • 1/4 BEND SP x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2880C	100	1-5/16	2			
2"	2881C	100	1-3/5	2-7/10			
3"	2882C	100	2-7/20	3-5/6			
4"	2883C	100	3	4-3/4			

GLOBAL PLUMBING & FIRE SUPPLY

ELBOW • STREET • 1/4 BEND • W/LOW HEEL INLET ALL HUB



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
3" x 3" x 2"	3042	100	3-1/16	4-7/16			

ELBOW • LONG SWEEP • 1/4 BEND H x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2871	100	2-3/4				
2"	2872	60	3-1/4				
3"	2873	28	4-1/16				
4"	2874	16	4-15/16				

ELBOW • LONG SWEEP • 1/4 BEND • STREET SP x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	3060	100	2-1/4	2-15/16			
2"	3061	60	3-1/4	4			
3"	3063	28	4-1/16	5-9/16			

ELBOW • 1/8 BEND H x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2885C	100	9/16				
2"	2886C	90	5/8				
3"	2887C	48	7/8				
4"	2888C	24	1				

GLOBAL PLUMBING SUPPLY

ELBOW • 1/8 BEND • STREET SP x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2890C	100	9/16	1 1/5			
2"	2891C	100	5/8	1-2/5			
3"	2892C	52	7/8	2-9/25			
4"	2893C	24	1	2-3/4			

ELBOW • 1/16 BEND H x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2899C	70	1/2				
2"	2900C	100	1-1/16				
3"	2901C	36	1-3/16				
4"	2983C	36	1-5/16				

GLOBAL PLUMBING & FIRE SUPPLY

ELBOW • 1/16 BEND • STREET SP x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2984	70	7/16	1-3/16			
2"	2985	100	5/8	1-1/2			

ELBOW • DOUBLE • 1/4 BEND ALL HUB



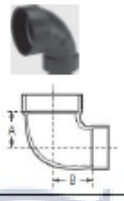
SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	3045	100	1-11/16	1-11/16			
3"	3047	25	3-1/16	3-1/16			

ELBOW • CLOSET BEND • REDUCING • STREET • TEST CAP SP x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
4" x 3"	3108	30	6-1/16	3-3/8			

ELBOW • CLOSET BEND • REDUCING • H x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
4" x 3"	3093	30	3	3-3/8			

ELBOW • VENT ELL H x H



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	3084	100	1-3/16				
2"	3085	100	11/2				

GLOBAL PLUMBING & FIRE SUPPLY

TEE • SANITARY ALL HUB



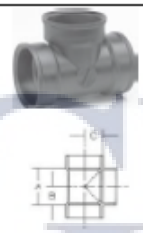
SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2752	100	2-3/4	1-3/4	1-3/4		
2"	2753	54	3-11/16	2-5/16	2-5/16		
3"	2754	28	4-7/8	3-1/16	3-1/16		
4"	2755	10	6-1/8	3-7/8	3-7/8		

TEE • SANITARY ALL HUB



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
2" x 1-1/2" x 1-1/2"	2761	65	3-1/8	1-15/16	2-3/16		
2" x 1-1/2" x 2"	2760	60	3-11/16	2-5/16	2-5/16		
2" x 2" x 1-1/2"	2758	64	3-1/8	1-15/16	2-3/16		
3" x 3" x 1-1/2"	2764	40	2-11/16	1-3/4	2-9/16		
3" x 3" x 2"	2763	40	3-5/16	3-5/16	2-7/8		

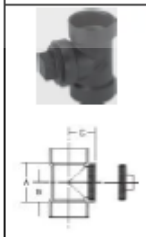
TEE • VENT ALL HUB



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	3403		2 3/8	1 3/16	1 3/16		
2"	3404		3	1 1/2	1 1/2		
4"	3406		5	2 1/2	2 1/2		

GLOBAL PLUMBING & FIRE SUPPLY

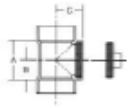
TEE • CLEANOUT • W/CLEANOUT PLUG H x H x FPT



SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2997		2 3/8	1 3/16	1 13/16		
2"	2998		3	1 1/2	2 1/8		
3"	2999		3 3/4	1 7/8	2 5/8		
4"	3000		5	2 1/2	3 3/8		

TEE • FLUSH CLEANOUT H x H x FPT

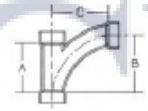




SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	3413		2 3/8	1 3/16	1 13/16		
2"	3414		3	1 1/2	2 1/8		
3"	3415		3 3/4	1 7/8	2 5/8		
4"	3416		5	2 1/2	3 3/8		

COMBINATION WYE & 1/8 BEND-ONE PIECE ALL HUB

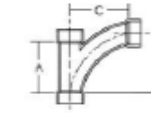




SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2853		3-1/2	3 7/8	3 15/16		
2"	2858		4 7/16	5 1/8	5 1/8		
3"	2852		6 1/2	7 9/16	7 9/16		
4"	2860		8 1/2	10	10		

COMBINATION WYE & 1/8 BEND • REDUCING • ONE PIECE ALL HUB





SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
3" x 3" x 2"	2857		4-7/16	5-1/8	5-11/16		
4" x 4" x 2"	2863		4-1/2	5-1/8	6-1/8		
4" x 4" x 3"	2864		6-1/2	7-9/16	8-1/16		

WYE ALL HUB





SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2822		2-7/8	1-1/8	2-7/8		
2"	2823		3-5/8	1-3/8	3-5/8		
3"	2824		5	1-5/8	5		
4"	2825		6-3/8	1-7/8	6-3/8		

GLOBAL PLUMBING & FIRE SUPPLY

WYE • REDUCING ALL HUB





SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
2" x 1-1/2" x 1-1/2"	2831		2-13/16	3/4	2-15/16		
2" x 2" x 1-1/2"	2826		3-5/16	1-1/16	3-7/16		
3" x 3" x 1-1/2"	2827		3-3/4	1/2	4-5/16		
3" x 3" x 2"	2828		4-1/8	7/8	4-5/8		
4" x 4" x 2"	2829		4-11/16	3/8	5-9/16		
4" x 4" x 3"	2830		5-9/16	1-1/16	6		

WYE • DOUBLE • REDUCING H x H





SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
3" x 3" x 2" x 2"	2844		4-1/8	7/8	4-5/8		

P-TRAP • W/SOLVENT WELD JOINT H x H





SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2214	55	3-1/2	1-17/32	3-5/8	4-23/32	
2"	2222	25	5-1/4	2-3/8	5-1/8	6-7/8	
3"	2230	8	6 5/16	3-11/16	7-9/16	12-7/16	

P-TRAP • W/UNION H x H



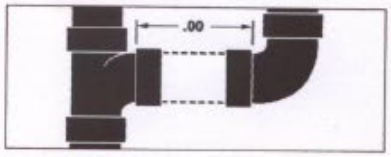


SIZE	PART NUMBER	CTN QTY	Dimensions A	B	C	D	E
1-1/2"	2215	55	3-1/2	1-17/32	3-5/8	4-23/32	
2"	2216	25	5-1/4	2-3/8	5-1/8	6-7/8	

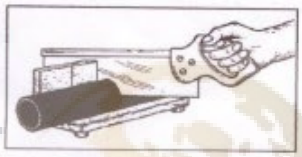
GLOBAL PLUMBING SUPPLY

10 Quick Installation Steps

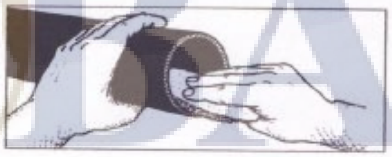
1 Measure pipe from bottom or shoulder of each socket into which pipe is to fit.



2 Cut pipe to required length, making sure cut is square. (See page 10 for a listing of proper tools.)



3 Ream inside and chamfer outside of pipe to eliminate all burrs. Sand lightly.



4 Clean all dirt, moisture, and grease from pipe and fitting socket, using a clean, dry cloth.



5 Check dry fit of pipe in fitting socket. Pipe should enter fitting socket to between 1/3 and 3/4 of the socket depth. Be sure to use only approved types of fittings and adapters.



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6



Using a brush or dauber-type device, apply a light coat of ASTM D2235 ABS solvent cement to the inside of the fitting socket, using straight, outward strokes. Apply solvent cement to the outside of the pipe in a similar manner. Time is important at this stage: apply cement quickly and do not allow it to set before the joint is put together. Be especially quick when the temperature is over 100°F (38°C) or humidity is over 60 percent. Always follow safe-handling practices when using solvent cements: use in a well-ventilated area, avoid skin contact (wear gloves) and do not use near heat, sparks or open flame.

7

Immediately insert pipe into fitting socket, giving the pipe a one-quarter turn and making sure it goes all the way to the socket bottom.



8

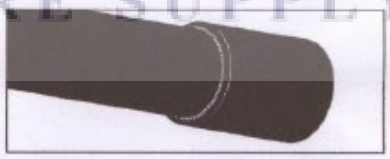


Hold the joint together until a tight set is attained.

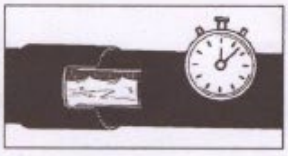
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9

Check cement bead around joint. A proper joint will normally show a bead around its entire perimeter. Any gaps may indicate insufficient cement or the use of light-bodied cement on larger diameters where heavy-bodied cement was required. After setting, wipe excess cement from the pipe.



10

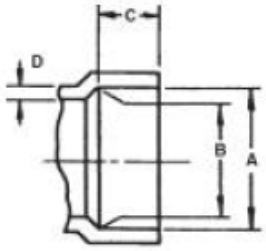


Don't move the system until the joints have cured (set) at least as long as recommended by the solvent manufacturer. MEK-based solvent cement conforming to ASTM D2235 usually sets up in two minutes at about 70°F (21°C), with faster setting at higher temperatures and slower at lower temperatures. An ABS pipe stack can usually be tested within one hour after the last joint is completed. At this point, a water test can be done to test the integrity of each joint. Do not air test, as it is not recommended for ABS pipe systems. Check local code requirements for clarification.

Supery ABS Pipe Fitting Co.,Ltd

PVC and ABS DWV Fittings

HUB DIMENSIONS



ABS

SIZE	A	B	C	D
1½	1.910	1.895	.687	.156
2	2.385	2.370	.750	.156
3	3.515	3.495	1.500	.218
4	4.515	4.495	1.750	.250
6	6.647	6.614	3.000	.281

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PLUMBING & FIRE SUPPLY

PVC

SIZE	A	B	C	D
1¼	1.675	1.650	.687	.156
1½	1.915	1.895	.687	.156
2	2.390	2.370	.750	.156
3	3.520	3.495	1.500	.218
4	4.520	4.495	1.750	.250
6	6.647	6.614	3.000	.281
8	8.655	8.610	4.000	.322
10	10.776	10.737	5.000	.365
12	12.778	12.736	6.000	.406
14	14.035	13.085	7.000	.437
16	16.045	15.980	8.000	.500

Product Physical Characters

ABS COMPOUND CHARACTERS

Property	Requirement	Test Method
Izod Impact, 23°C	210J/m	ASTM D3965
Izod Impact, -30°C	110J/m	
Deflection temperature under load , 1.82MPa	82°C	
Tensile stress at yield point	31.0MPa	
Modulus of elasticity in tension	1650MPa	

ABS DWV FITTING PHYSICAL CHARACTERS(ASTM D2661)

Property	Requirement	Test Method
Tup Impact Test	27J	ASTM D2444
Flattening The minimum load of 750	lbf/ft (11kN/m)	ASTM D2412

ABS DWV FITTING PHYSICAL CHARACTERS(CSA B181.1)

Property	Requirement	Test Method
Chemical Resistance Test	The Maximum Weight Change,0.5%	CSA B181.0
Crush Resistance Test	The Maximum Platen Travel,01 inches	
Dimensional Stability	The Maximum ID Change,10%	
Water Resistance	The Maximum Weight Change,0.5%	

GLOBAL
PLUMBING & FIRE SUPPLY

Product Chemical Resistance Information

Chemical & Concentration	Usage	20°C (68°F)	40°C (104°F)	60°C (140°F)	80°C (176°F)	100°C (212°F)
A						
Acetaldehyde	Usual technical	–	–	–	–	–
Acetamide 5%	Aqueous	+	+			–
Acetic acid 10%	Aqueous	+				–
Acetic acid 50%	Aqueous	–	–	–	–	–
Acetic acid 80%	Aqueous	–	–	–	–	–
Acetic acid glacial	Usual technical	–	–	–	–	–
Acetic anhydride	Usual technical	–	–	–	–	–
Acetone	Usual technical	–	–	–	–	–
Acetophenone	Usual technical	–	–	–	–	–
Acetyl chloride	Usual technical	–	–	–	–	–
Acrylonitrile	Usual technical	–	–	–	–	–
Adipic acid	Staturated aqueous					–
Alcohol (see note 1)	Usual technical					–
Allyl alcohol	Usual technical	–	–	–	–	–
Allyl chloride	Usual technical	–	–	–	–	–
Alum (s)(see note 2)	Staturated aqueous	+	+	+	–	–
Aluminium chloride	Staturated aqueous	+	+	+	–	–
Aluminium fluoride	Staturated aqueous	+	+	+	–	–
Aluminium hydroxide (see note 3)	Suspended aqueous	+	+	+	–	–
Aluminium nitrate	Staturated aqueous	+	+	+	–	–
Aluminium oxalate (see note3)	Suspended aqueous	+	+	+	–	–
Aluminium sulphate	Staturated aqueous	+	+	+	–	–
Ammonia 35%Sp.gr.=0.88	Aqueous	+	+	+	–	–
Ammonia dry gas	Usual commercial	–	–	–	–	–
Ammonia liquid	Usual commercial	–	–	–	–	–
Ammonium carbonate (see note4)	Staturated aqueous	+				–
Ammonium chloride (see note4)	Staturated aqueous	+	+	+	–	–
Ammonium fluoride (see note4)	Staturated aqueous	+				–
Ammonium hydroxide Sp.gr.=0.88	Aqueous	+	+	+	–	–
Ammonium molybdate	Staturated aqueous	+				–
Ammonium nitrate	Staturated aqueous	+	+	+	–	–
Ammonium persulphate	Staturated aqueous	+	+	+	–	–
Ammonium phosphate(s)	Staturated aqueous	+	+	+	–	–

GLOBAL PLUMBING & FIRE SUPPLY

Product Chemical Resistance Information

Chemical & Concentration	Usage	20°C (68°F)	40°C (104°F)	60°C (140°F)	80°C (176°F)	100°C (212°F)
Ammonium sulphate	Staturated aqueous	+	+	+	–	–
Ammonium thiocyanate	Staturated aqueous	+	+	+	–	–
n-Amyl acetate	Usual technical	–	–	–	–	–
n-Amyl alcohol	Usual technical	–	–	–	–	–
Aniline	Usual technical	–	–	–	–	–
Animal glue,oils (see note5)	Usual commercial					–
Antifreeze (see note5)	Usual proprietary					–
Antimony trichloride	Staturated aqueous					–
Aqua regia	Usual technical	–	–	–	–	–
Aromatic hydrocarbons	Various blends	–	–	–	–	–
B						
Barium bromide	Staturated aqueous	+	+	+	–	–
Barium carbonate (see note6)	Staturated aqueous	+	+	+	–	–
Barium chloride	Staturated aqueous	+	+	+	–	–
Barium hydroxide	Staturated aqueous	+	+	+	–	–
Barium sulphate (see note6)	Staturated aqueous	+	+	+	–	–
Battery acid Sp.gr=1.18	Aqueous	+	+	+	–	–
Beer	Usual commercial	+				–
Benzaldehyde	Usual technical	–	–	–	–	–
Benzene	Usual technical	–	–	–	–	–
Benzoyl chloride	Usual technical	–	–	–	–	–
Benzyl chloride	Usual technical	–	–	–	–	–
Borax	Staturated aqueous	+	+	+	–	–
Boric acid	Staturated aqueous	+	+	+	–	–
Brake fluids (see note 5)	Usual proprietary					–
Brine (seenote7)	Usual proprietary	+	+	+	–	–
Bromine	Anhydrous liquid	–	–	–	–	–
Bromine water	Staturated aqueous	–	–	–	–	–
Bromine, trace levels	Aqueous, for sterilization	+				–
Butane	Gaseous	+	+	+	–	–
2-Butoxyethanol	Usual technical	–	–	–	–	–
Buttermilk	Usual commercial	+				–
n-Butyl acetate	Usual technical	–	–	–	–	–
n-Butyl alcohol	Usual technical	–	–	–	–	–
n-Butyl acid	Usual technical	–	–	–	–	–

GLOBAL PLUMBING & FIRE SUPPLY

Product Chemical Resistance Information

Chemical & Concentration	Usage	20°C (68°F)	40°C (104°F)	60°C (140°F)	80°C (176°F)	100°C (212°F)
Cutting fluids (see note 5)	Usual industrial					–
Cyclohexane	Usual technical	–	–	–	–	–
Cyclohexanol	Usual technical	–	–	–	–	–
Cyclohexanone	Usual technical	–	–	–	–	–
D						
Dekalin	Usual technical	–	–	–	–	–
Detergents (see note 5)	Usual proprietary					–
Developers, photographic (see note 5)	Usual industrial					–
Dextrins	Staturated aqueous	+	+	+	–	–
Dextrose	Staturated aqueous	+	+	+	–	–
Di-iso-butyl ketone	Usual technical	–	–	–	–	–
Di-n-butyl phthalate	Usual technical					
Dichlorobenzene(s)	Usual technical	–	–	–	–	–
1,2-Dichloroet hane	Usual technical	–	–	–	–	–
1,1-Dichloroet hylene	Usual technical	–	–	–	–	–
Dichloromethane	Usual technical	–	–	–	–	–
1,2-Dichloropr opane	Usual technical	–	–	–	–	–
Diesel	Usual commercial					–
Diethanolamine	Usual technical	+	+	*	–	–
Diethyl ether	Usual technical	–	–	–	–	–
Diethyl phthalate	Usual technical	–	–	–	–	–
Dimethylform amide	Usual technical	–	–	–	–	–
Di-octyl phthalate	Usual commercial	–	–	–	–	–
1,4-Dioxan	Usual technical	–	–	–	–	–
Drinking Water	Usual domestic	+	+	+	–	–
E						
EDTA	Staturated aqueous	+	+	+	–	–
Emulsifiers (see note5)	Usual proprietary					–
Emulsions photographic (see note 5)	Usual industrial					–
2-Ethoxyethanol	Usual commercial	–	–	–	–	–
2-Ethoxyethyl acetate	Usual commercial	–	–	–	–	–
Ethyl acetate	Usual technical	–	–	–	–	–
Ethyl acrylate	Usual technical	–	–	–	–	–
Ethyl alcohol	Usual technical	–	–	–	–	–
Ethyl chloride	Usual technical	–	–	–	–	–
Ethyl ether	Usual technical	–	–	–	–	–
Ethylene glycol	Usual commercial	+	+	+	–	–
Ethylene oxide	Usual commercial	–	–	–	–	–
Expandite PJ700	Proprietary mastic	+				–

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Product Chemical Resistance Information

Chemical & Concentration	Usage	20°C (68°F)	40°C (104°F)	60°C (140°F)	80°C (176°F)	100°C (212°F)
F						
Fatty acids (see note18)	Usual technical					–
Ferric chloride	Staturated aqueous	–	–	–	–	–
Ferric nitrate	Staturated aqueous	+	+	+	–	–
Ferric sulphate (see note 4)	Staturated aqueous	+				–
Ferrous chloride	Staturated aqueous	+	+	+	–	–
Ferrous sulphate	Staturated aqueous	+	+	+	–	–
Fixing solutions (see note 5)	Usual industrial					–
Fluorine	Pure gas	–	–	–	–	–
Fluorosiliclic acid 34%	Aqueous	+	+	+	–	–
Flutec PP3	Usual technical	+				–
Formalin	Usual technical	–	–	–	–	–
Formic acid 3%	Aqueous	+	+	+	–	–
Formic acid 50%	Aqueous	–	–	–	–	–
Formic acid 90%	Usual technical	–	–	–	–	–
Fructose	Usual technical	+	+	+	–	–
Furfural	Usual technical	–	–	–	–	–
Furfuryl alcohol	Usual technical	–	–	–	–	–
G						
Gasoline	Usual commercial	–	–	–	–	–
Gelatin (e)	Usual commercial	+	+	+	–	–
Gypsum (see note6)	Staturated aqueous	+	+	+	–	–

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Solvent Cement Joint Procedure

RECOMMENDED INITIAL SET TIME

Temperature Range/Nominal Pipe Size	1/2"-1 1/4"	1 1/2"-2"	2 1/2"-8"
16-38°C/60-100°F	2min	5min	30min
5-16°C/40-60°F	5min	10min	2h
-10-5°C/0-40°F	10min	15min	12h

Note: Initial set schedule is the necessary time to allow before the joint can be carefully handled.
In damp or humid weather allow 50% more set time.

RECOMMENDED JOINT CURING TIME

Relative humidity≤60%/ Nominal Pipe Size	1/2"-1 1/4"		1 1/2"-2"		2 1/2"-8"	
Temperature Range during assembly and cure periods	≤1.1MPa	≤1.1-2.5MPa	≤1.1MPa	≤1.1-2.5MPa	≤1.1MPa	≤1.1-2.5MPa
16-38°C/60-100°F	15min	6h	30min	12h	1.5h	24h
5-16°C/40-60°F	20min	12h	45min	24h	4h	48h
-10-5°C/0-40°F	30min	48h	1h	96h	72h	8days

Note : Joint cure schedule is the necessary time to allow before pressurizing system.
In damp or humid weather allow 50% more cure time.

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Limited Warranty

Except as otherwise mandated by law, SUPERY ABS PIPE FITTING CO.,LTD warrants to Buyer only that the Products directly manufactured bY SUPERY ABS PIPE FITTING CO.,LTD will be free from defects in material and workmanship for a period of three years from the date of installation. Buyer agrees that this warranty shall be effective so long as the Products are used solely for the normal purposes for which they are intended and in conformity with industry established engineering, installation, operating, and maintenance specificaiton, recommendations and instructions. Violation thereof shall void this warranty and relieve SUPERY ABS PIPE FITTING CO.,LTD from any obligation under this warranty.

SUPERY ABS PIPE FITTING CO.,LTD may modify at any time design of products or materials used therein or discontinue their manufacture without any liability.

SUPERY ABS PIPE FITTING CO.,LTD shall not assume responsibility, and expressly disclaims any liability, due to Buyer's or end user's failure to comply with such specifications, recommendations and instructions, including, but not limited to, damage due to improper control of system hydraulics, impropre winterization procedures, impropre voltage supply, contact with incompatible materials or chemicals shall not be liable for dramages due to any acts of nature including, but not limited to, lightning, earthquakes, ground movement, frost heave, floods, or any other event of force majeure.

Buyer shall notify SUPERY ABS PIPE FITTING CO.,LTD of any alleged defects within 48 hours of discovery of any alleged defect and within three years' warranty period. SUPERY ABS PIPE FITTING CO.,LTD is not liable for any warranty claim if such notice is not provided. After the examination of the returned products, if the goods are determined to be defective in materials or workmanship directly provided by SUPERY ABS PIPE FITTING CO.,LTD, SUPERY ABS PIPE FITTING CO.,LTD will, at its sole option, may either repair or replace the defective Products, or reimburse Buyer for the cost of such Products. This shall be Buyer's only remedy. All costs of shipping such questionable Products and any replacements thereof to and from SUPERY ABS PIPE FITTING CO.,LTD's facility shall be bome by Buyer.

THIS LIMITED WARRANTY REPLACES ALL OTHER ORAL OR WRITTEN WARRANTIES, LIABILITIES OR OBLIGATIONS OF SUPERY ABS PIPE FITTING CO.,LTD. THIS WARRANTY MAY NOT BE EXTENDED,ALTERED OR OTHERWISE MODIFIED EXCEPT BY WRITTEN AGREEMENT SIGNED BY COMPANY. BY ITS ACCEPTANCE OF THE PRODUCTS, CUSTOMER HEREBY SPECIFICALLY AND EXPRESSLY WALVES ALL OTHER LIABILITY OR OBLIGATION OF ANY KIND OR CHARACTER OF COMPANY , INCLUDING WITHOUT LIMITATION LIABILITY PREDICATED UPON STRICT LIABILITY OR TORT, AND ALL DAMAGES AND LOSSES AS A RESULT THEREOF, INCLUDING BUT NOT LIMITED TO ALL KNOWN, UNKNOWN, FORESEEABLE, UNFORESEEABLE, ABSOLUTE, CONTINGENT,

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LIQUIDATED, NON-LIQUIDATED, COMPENSATORY, GENERAL, SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR PUNITIVE DAMAGES, AND WITH RESPECT TO THE PREODUCTS, THEIR RETURN, REPAIR, RESTORATION AND REPLACEMENT.

Buyer agrees that SUPERY ABS PIPE FITTING CO.,LTD will not be responsible for other parts or labor in connection with repairing, replacing, or returning such Products while Products are in possession of SUPERY ABS PIPE FITTING CO.,LTD for analysis, not for any delays beyond SUPERY ABS PIPE FITTING CO.,LTD's reasonable control(including, with limitation, delays due to unavailability of materials, equipment, other supplies or labor, strikes,governmental regulation etc.), provided that any delay shall toll the warranty period for the same amount of time as the delay itself. In no event shall SUPERY ABS PIPE FITTING CO.,LTD be liable for consequential or incidental damages of any kind, including any damage to any property, building, its contents or any person therein, resulting from the breach of this warranty.

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