



AB-3P[®]

High Impact Resistant, Anti-Bacteria 3-Layer Pipe





Product History

“We aspire to be the world most advanced and leader of special Polymer Water Pipe manufacturer.”

- December 1983 **Korea uPVC pipe factory set up**
- November 1990 **Korea Golee center layer foamed 3 layer pipe start**
- August 1993 **HI-3P award new technology prize in Korea**
- August 1995 **JIS K6742 certificate approved**
- September 1999 **AB-3P® compound patent approved in Korea**
- April 2002 **High Impact Resistance 3 Layer Pipe patent approved**
- April 2005 **ME-PLAS(M) started AB-3P® factory construction in Malaysia**
- November 2006 **AB-3P® comercial production started with SIRIM approval**
- May 2008 **SPAN approves AB-3P®**
- November 2009 **AB-3P® patent approved in Malaysia, China, Vietnam and etc.**

About Company

ME-PLAS (M) SDN BHD, was established in 2004.

It has been set up exclusively to produce the most technically advanced polymer pipe, AB-3P® (High Impact Resistant, Anti-Bacterial 3 Layer Pipe).

AB-3P® pipe is a worldwide patented pipe. The first generation of this pipe called HI-3P has achieved enormous success by supplying most of its product to S.Korea Central procurement since 1993.

ME-PLAS acquired the Malaysian Industrial Development Authority's (MIDA) pioneer status recognition in early 2005.

ME-PLAS is equipped with the latest machines such as 8 co-extrusion lines, supra-tite bellong system, silo, conveyor system and etc.

ME-PLAS is also fully equipped with up to date computerized hydro test and all other necessary testing equipments.

ME-PLAS aspires and pledges to serve the water industry and improve NRW problems by reducing Total Cost of Ownership(TCO).

ME-PLAS has the necessary approval or certificates from SPAN, SIRIM and FITI Korea for its products.

ME-PLAS production is strictly in accordance with ISO-9001:2008, certified by SGS Switzerland.

Our Mission

- To provide the best quality of special Polymer pressurized water pipe.
- To be sensitive to public health, as such we shall continuously improve our products through R&D to provide the best standard for health parameters.
- To meet customer's demand, we shall achieve the best QC and competitive advantage in design, manufacturing, distribution, delivery, installation and provide quick and reliable pre-sales and after sales services.





How AB-3P Works

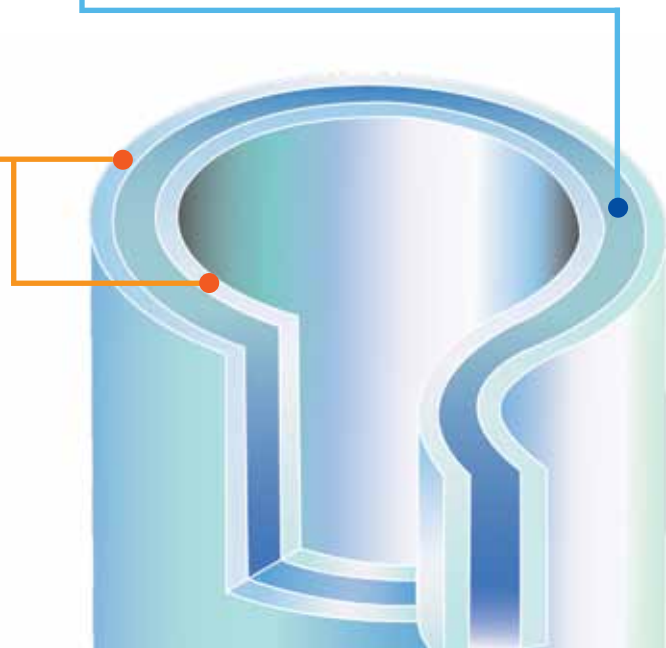
The secret of AB-3P®'s performance is its unique 3-layer structure and bell mouth design.

The inner and outer layers are formed by high quality no-lead non-toxic polymer to provide superb impact resistance and resistance to external corrosion and environmental factors. It also incorporates a patented and safety proven anti-bacterial material which cannot be found in other pipes.

The center layer is made of extremely high density polymer to offer remarkable tensile strength and to provide extraordinary internal water pressure resistance.

Skin Layer : High concentration of Nano-Tech Anti-Microbial particles permanently compounded for life-time functionality. High concentration of Quality Impact Resistance Enhancement, UV protection etc.

Center Layer : Super High Density core layer with High Tensile enhancement.



About AB-3P®

AB-3P® stands for Anti-Bacteria 3-Layer Pipe. Its unique triple layer structure with patented polymer compound and super high pressure twin conical screw extrusion process makes it an extra strong pipe.

AB-3P® surpasses the conventional polymer pipe characteristics. It shows very high tensile strength and also shows high external impact resistance.

In addition, the latest Nano - Technology Anti-Bacteria feature that eliminates more than 99% of micro-organisms such as bacteria and viruses in the bio film that stick to pipe wall.

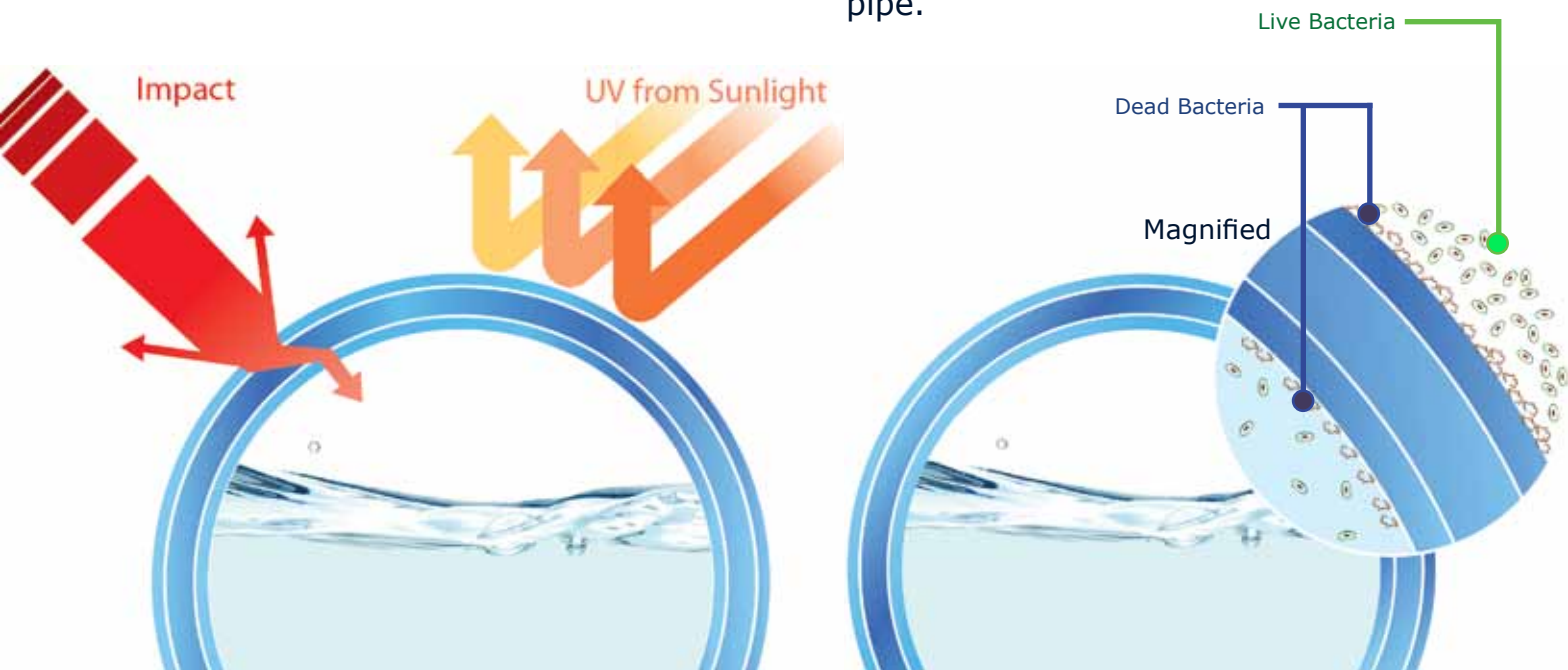
AB-3P® system is suitable for applications such as,

- *Portable Water Reticulation Water treatment & Swimming pool: Chlorine resistance*
- *Irrigation, Fish farming, Power plant*
- *Swampy area, Flooding area with DOG bite accessory*
- *Domestic plumbing, Hospital, Hotel, Condominium*
- *Fight against Sea water: Sea-side*
- *Chemical attack in hostile soil area*
- *Sewerage Pipe (Pumping Main)*

Superposition triple layer provides differential densities that deflect external impact while it passes through the 3 layers to the inside.

High quality UV additives prevent aging effect from sunlight.

Water molecule is negatively ionized as it contact Anti-Bacteria agent compounded in pipe material. Membrane of bacteria in slime will break down by the negatively ionized oxygen (O⁻). This effectively kills bacteria as the water moves through the pipe.



Advantages



Anti-Bacteria and Anti-Static Formula

The AB-3P® piping system is made from patented nano-technology anti-bacterial materials and high quality anti-static component that prevent pipe from water scale, and suppresses the growth of micro-organisms, bacteria and viruses unlike other polymer or metal pipes. JISZ2801 test was done with Eicoli Bacteria in FITI Korea and 99.9% was killed.



Multiple Resistances to Harmful Agents and Conditions

AB-3P® has outstanding resistance to harmful household and industrial chemicals, whether exposed from within or outside the pipe. It is also invulnerable to internal and external corrosions, and highly resistant to UV-light and abrasions.

It is the perfect choice for drinking water as well as corrosive sewage application.



High Impact resistance for Durability

AB-3P® patented 3-layer structure has enabled it to pass the most rigorous impact tests conducted by internationally accredited laboratories, making it uniquely resistant to external shock. AB-3P® has been tested according to many international standards, as well as Malaysian standards.



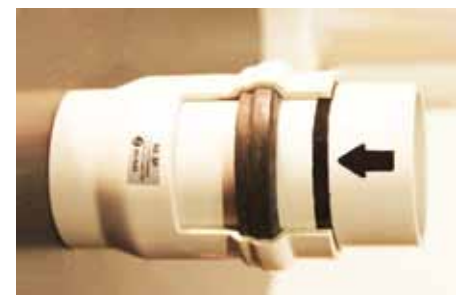
Economical for maintenance and Extremely long service life with Extra warranty period

AB-3P® is designed for ease of cutting, jointing and installing, light weight, minimum 50 years service life*, high durability and high reliability. Therefore labor, transportation, maintenance, repair and water wastage costs are reduced to a minimum. Popular VJ joint is suitable for repair works thus can be done even under the heavy rain & water pond from bursting pipe. Conditions unlike others, we provide 10 years warranty.*



High Tensile Strength for High Pressure Performance

AB-3P®'s patented 3-layer structure also provides remarkable tensile strength and superb compression withstand capability. Applying force by 100% compressing the AB-3P® pipe until inner wall meets, the pipe does not show any sign of crack. It shows minimum 510kgf/cm²* and with that strength, it shows much better hydro test performance than standard requirement.



Easy Speedy Installation with Supa-Tite® Bell mouth joint

AB-3P®'s uniquely designed multiple angle *supa-tite* EPDM rubber ring jointing system allows pipes to be joined in one simple step, without use of any other processes or materials. AB-3P® bell-mouth design is a special design that is MS628 part 2 and BS4346 part 2. This special design minimizes worker's error and ensures 5 times stronger grip than other simple uPVC pipe. AB-3P® piping system can be assembled and installed in the shortest possible time.

Variety of Fitting Systems

AB-DF

Ductile Iron Fittings for water reticulation

Many other types are available. Product ranges up to 195 items of fittings.
(BS/EN454 SPAN approved IKRAM certified)



Elbow 90° (2G)



T-Joint (3G)



Elbow 45° (2G)



Coupling (2G)



Flange Adaptor (1G1F)



Reducer (2G)

BRACO

Brass Compression Fittings for Plumbing

Many other types are available. Product ranges up to 111 items of fittings.



Straight Coupling



Coupling Reducer



Tee (Branch Reducer)



Elbow 90°



Straight Coupling



Coupling (Male Thread)

Unlike other PVC or PE pipes, AB-3P® system provides full range of fitting systems for both water reticulation and domestic plumbing and customized fitting for many other applications.

Dimensions of AB-3P® Pipes

Nominal Size (BS3505) (Inch)	Nominal Size (MS628) (mm)	Outside Diameter		PN9+ (Class C+)		PN12+ (Class D+)		PN15+ (Class E+)	
		OD Min	OD Max	Wall-t	ID	Wall-t	ID	Wall-t	ID
				Average	Average	Average	Average	Average	Average
½	15	21.2	21.5	Non-MS/BS Standard		Non MS/BS standard but can be manufactured on demand of client		2.1	17.2
¾	20	26.6	26.9			2.5	21.8		
1	25	33.4	33.7			2.7	28.2		
1¼	32	42.1	42.4			2.7	36.9		
1½	40	48.1	48.4			3.0	42.3		
2	50	60.2	60.5	3.0	54.4	3.7	53.0	4.5	51.4
	65	75.0	75.3	3.5	68.2	4.5	66.2	5.5	64.2
3	80	88.7	89.1	4.1	80.7	5.3	78.3	6.5	75.9
4	100	114.1	114.5	5.2	103.9	6.8	100.7	8.3	97.7
5	125	140.0	140.4	6.3	127.6	8.3	123.6	10.1	120.0
6	155	168.0	168.5	7.5	153.3	9.9	148.5	12.1	144.1
	175	193.5	194.0	8.7	176.4	11.4	171.0	13.9	166.0
8	200	218.8	219.4	8.8	201.5	11.6	195.9	14.1	190.9
10	250	272.6	273.4	10.9	251.2	14.3	244.4	17.5	238.0
12	300	323.4	324.3	12.9	298.1	17.0	289.9	20.8	282.3
14	350	355.0	356.0	14.1	327.3	18.6	318.3	22.8	309.9
16	400	405.9	406.9	16.2	374.0	21.1	364.2	26.0	354.4

Note:

Plus sign after PN (+) sign means that it shows much better performance in many aspects.

AB-3P® comply with MS628 part 1 & 2 and BS3505, BS4346 dimension to facilitate easy inter-facing with other pipes.

AB-3P® can also comply to KS M3401 , JIS K 6742 and AS/NZS 1477 sizes as well.

Standard length: Both Bell-Mouth and plain end type are 6M. However, customized length can be ordered as per client demand.*

AB-3P® recommended standard color is Light Grey but any color can be produced as per client preference.*

Fitting Selection Table

No	Type of application	Type of connection	Application	Size	Fitting / Brand	
1	Outdoor Application (Pumping main & gravity Flow)	Straight Connection	Pumping Main	15mm ~ 50mm	Braco Brass Compression Fitting	✓
			Pumping Main	15mm ~ 200mm	SCH80 PVC Fittings (Alternative)	
			Pumping Main (PN12)	65mm	PVC Fittings , JIS Standard	
	Indoor Application (Pumping Main)	Tee, Elbow, Reducer Flange adaptor Endcap etc	Pumping Main	80 mm ~ 400mm	Rubber Ring Joint	✓
			Pumping Main	15mm ~ 50mm	Braco	✓
			Pumping Main	15mm ~ 200mm	SCH80 PVC Fittings (Alternative)	
			Pumping Main (PN12)	65mm	PVC Fittings , JIS Standard	✓
			Pumping Main	80 mm ~ 400mm	Epoxy Coating Ductile Iron Fitting (AB-DF)	✓
			Pumping Main	80 mm ~ 400mm	Epoxy Coating Ductile Iron Fitting (AB-DF)	
			Gravity Flow below 5 bar	80 mm ~ 400mm	Epoxy Coating Ductile Iron Fitting (AB-DF)	
2	Indoor Application (Gravity Flow Only)	Straight Connection	Gravity Flow	15mm ~ 80mm	SCH80 PVC Fittings	
			Gravity Flow	65mm	PVC Fittings , JIS Standard	
			Gravity Flow	100 mm ~ 400mm	Rubber Ring Joint	
		Tee, Elbow, Reducer Flange adaptor Endcap etc	Gravity Flow	15mm ~ 80mm	PVC Fittings , BS Standard (Except 65mm)	✓
			Gravity Flow	65mm	PVC Fittings , JIS Standard	✓
			Gravity Flow	80 mm ~ 400mm	Epoxy Coating Ductile Iron Fitting (AB-DF)	✓
3	Seaside Sandy area Submarine application Swampy area application (Must use DOG grip for Bell mouth joint and AB-DF fitting)	Straight Connection	Pumping Main	15mm ~ 50mm	isiFlo® UK Stainless Steel Compression Joint	✓
			Pumping Main	15mm ~ 400mm	PVC Fittings , BS Standard (Except 65mm)	
			Pumping Main	100 mm ~ 400mm	Rubber Ring Joint	✓
		Tee, Elbow, Reducer Flange adaptor Endcap etc	Pumping Main	15mm ~ 50mm	isiFlo® UK Stainless Steel Compression Joint	
			Pumping Main	15mm ~ 400mm	PVC Fittings , BS Standard (Except 65mm)	✓
			Pumping Main (PN12)	65mm	PVC Fittings , JIS Standard	✓
			Pumping Main	80 mm ~ 400mm	Rylsan Nylon or Special Coated DI Fitting (AB-DF)	

✓ Recommended

Note 1

PVC Fitting Recommended brand: SCH80 of USA origin PVC Fitting or Nanya® or equivalent with IPS® Weld-On Primer and Solvent Cement. Skilled workmanship is extremely important.

Note 2

When DI fitting, AB-DF, is used, Double Omega Grip (DOG®) grip shall be used if exposed run or no thrust block design is preferred.

Note 3

For Straight Pipe Rubber ring Joint, if exposed run or installed in the soil settlement area, DOG® grip shall be used in the same manner like Note 2.

Certificates & Approvals



FITI JIS Z2801 Anti Bacteria Test



SGS ISO 9001-2008

Patents



South Korea



China



Malaysia



**SIRIM BS3505,
MS628 part1 & part 2**



SPAN Approval



IWK Approval

Project Reference

Pekan Chuah, Negeri Sembilan
 Raub Felda Tersang, Pahang
 Serapan Ulu Asajaya, Sarawak
 Ayer Tawar, Perak
 Airport Road, Pulau Pangkor, Perak
 Laman Budaya 3 Loji Air Bukit Asahan, Melaka
 Tesco, Kulai, JB
 Kota Srimas, Nilai, N.Sembilan
 Batu Enam, Bukit Guntung, Kuala Terengganu
 Kawasan Industri Pandan, Johor Bahru (replacing DCIP)
 Batu Pahat District (replacing MSCL)
 Tmn Krubong Perdana, Melaka
 Konica Factory at MITC, Melaka
 Bandar Spring Hills Phase 3, N. Sembilan
 Taman Ampangan Jaya, N.Sembilan
 Bt.Sena Pdg. Terap, Kedah Irrigation Project

SAINS
 JBA Pahang
 JKR Sarawak
 Lembaga Air Perak
 Lembaga Air Perak
 SAMB
 IWK
 IWK
 Syarikat Air Terengganu Bhd
 SAJ Holdings Sdn Bhd
 SAJ Holdings Sdn Bhd
 GJH Development Sdn Bhd
 Konica Minolta Glass Tech Sdn Bhd
 West Synergy S/B
 Oriental Growth S/B
 Sri Haruman

Please request for the complete list of the project reference.



High Impact Resistant, Anti-Bacteria 3-Layer Pipe
WWW.AB3P.COM

Designed by JINSTER, LKW 3r

**For further details on products
Please contact our distributor.**



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