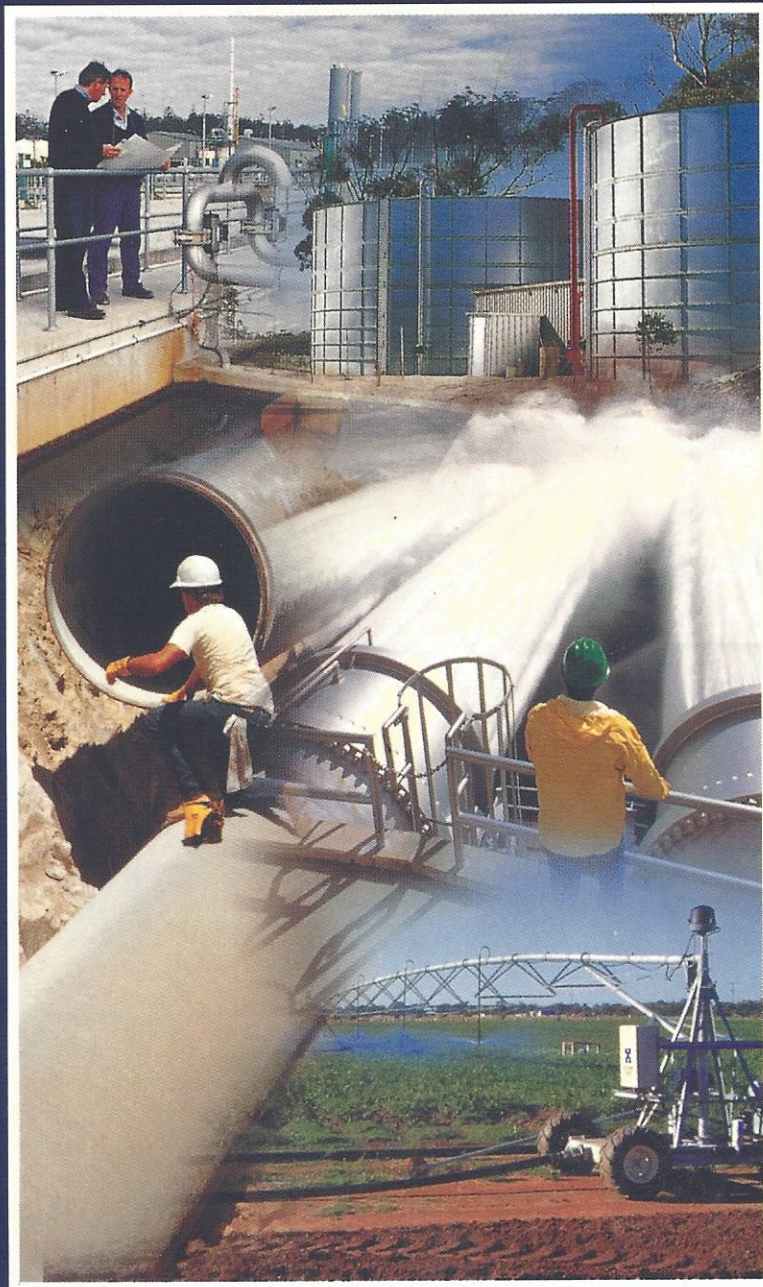


Euratech (Malaysia) Sdn. Bhd.



ABS Product Catalogue

INTRODUCTION

Euratech (Malaysia) Sdn Bhd, a wholly owned by Tyco Flow Control Group of Companies, has within itself a group of highly trained and dedicated staff in the design, manufacture, installation and operation of its products. The company is committed to a continuing program of quality and reliable products and services. A comprehensive technical advisory service is available from the company's technical service engineers including design of special customers' requirements, application advice and other information.

Our ABS products are manufactured and conformed to the highest international engineering quality standard such as the Australian Standard AS3518, the British Standard BS5391 and Malaysian Standard MS1419. Euratech (Malaysia) Sdn Bhd is also certified to ISO9001:2000 Quality System.

Euratech (Malaysia) Sdn Bhd is principally engaged in the manufacturing and sales of ABS pressure pipes and fittings. Our products are widely used in a variety of industries such as:-

- 1) Water reticulation
- 2) Domestic plumbing
- 3) Water treatment plants
- 4) Waste water treatment and recycling plants
- 5) Power generation plants
- 6) Industrial plants such as electronics, food processing, chemical, paper mills, palm oil and rubber mills.
- 7) HVAC

It is Euratech's corporate objective to be the preferred supplier for high quality advanced thermoplastic piping system by meeting our customers' need in a timely and effective manner by giving full technical support and advice.

LIMITATIONS OF LIABILITY

All information contained in this catalogue has been compiled and presented in good faith and is subject to change without notice. Euratech (Malaysia) Sdn Bhd makes no express or implied warranty of any kind regarding the accuracy of the information contained herein.

Euratech (Malaysia) Sdn Bhd reserve the right to withdraw or alter the specification of any product without notice. The products listed in this catalogue have been designed

and manufactured to be in accordance with the instructions guiding their use, care and maintenance. The products should not be used for any purpose other than those for which they were designed.

For further information regarding these products, reference should be made to the instructions and the guidelines for care and use issued by Euratech (Malaysia) Sdn Bhd representative listed on this publication.

EURAPIPE



INTRODUCTION

Because of a unique balance of properties, modern ABS copolymers are being used on an ever increasing scale for the manufacture of many industrial and domestic products.

The material is very tough and resilient, has high impact strength, good chemical resistance and is non toxic and taint free. These advantageous properties have attracted engineers from many industries, which do not have these distinctive benefits.

ABS piping systems are replacing many failed piping systems made from other materials.

The Eurapipe ABS system comprises a range of matched pressure pipes and fittings, jointed together by a wide variety of methods including cold solvent cement welding or our rubber ring joint system.

THE MATERIAL

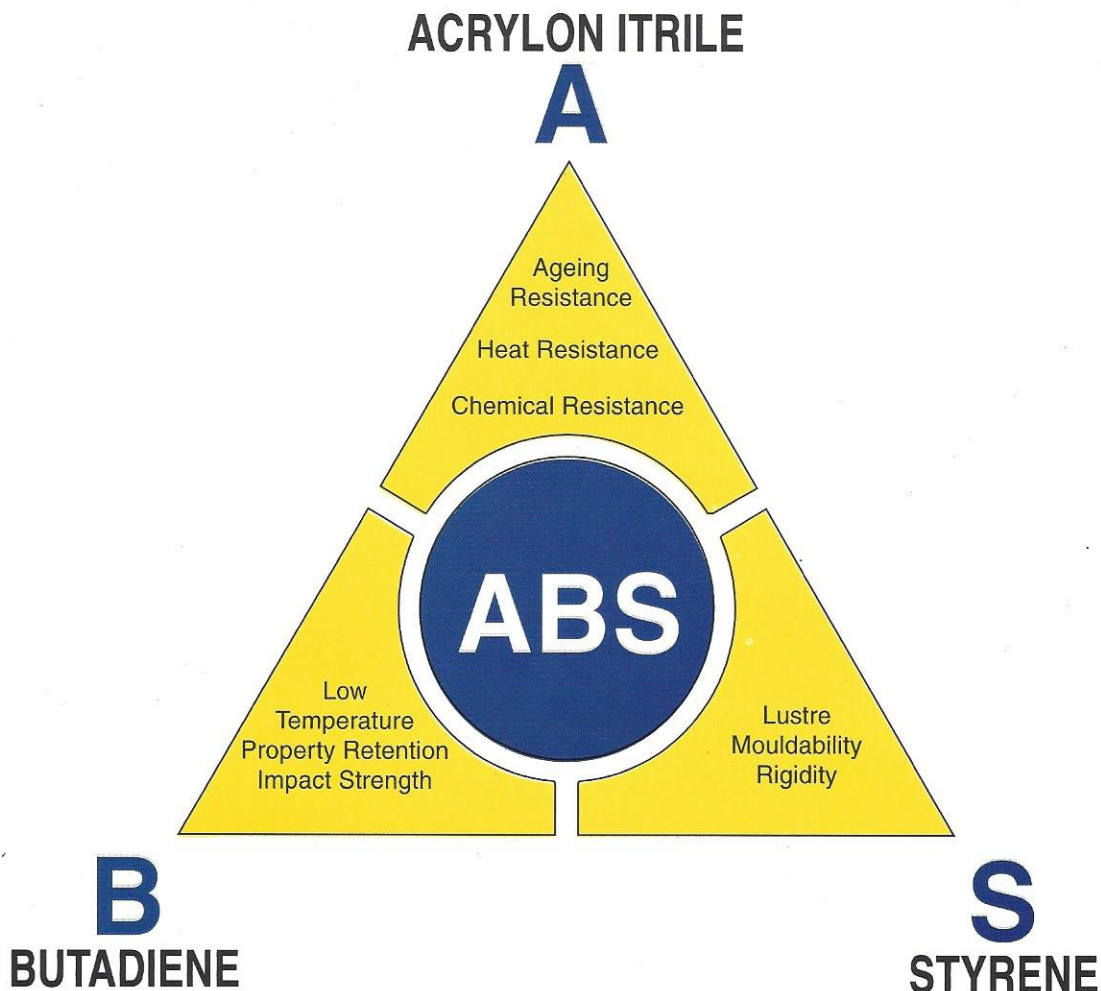
Acrylonitrile - Butadiene - Styrene (ABS) identifies a family of engineering thermoplastics with a broad range of performance characteristics.

The copolymeric system is alloyed to yield the optimum balance of properties suited to the selected end use.

ACRYLONITRILE - imparts chemical resistance and rigidity,

BUTADIENE - endows the product with impact strength, toughness and abrasion resistance.

STYRENE - contributes to the lustre, ease of processing and rigidity.



MATERIALS PROPERTIES

The formulation used by Euratech has been developed in conjunction with polymer manufacturers to optimise performance in respect to tensile strength, chemical resistance, ductility, resistance to weathering, heat stability, low toxicity, taint free and ease of processing from raw material to finished product.

ABS is tough and strong over the recommended temperature range of -40°C to + 70°C.

The outstanding properties of ABS are:

- ✓ High impact strength and ductility, which combine to give exceptional toughness.
- ✓ Good chemical resistance.
- ✓ Abrasion resistance.
- ✓ High strength solvent weld jointing which allows efficient system assembly and modification.
- ✓ Rubber Ring jointing methods, allowing compatible systems jointing techniques.
- ✓ Withstands aggressive ground waters.
- ✓ High strain tolerance for buried applications.
- ✓ Good resistance to ultraviolet light.
- ✓ Lower celerity and extreme tolerance to water hammer surges.



Property	Reference Temperature	S. I. Unit	Other Units
Ultimate tensile strength (strain rate 50 mm/min) ASTM D638 Type 1	20°C	30 MPa	4350 lbf/in ²
Elongation at break	20°C	25%	25%
Instantaneous Flexural Modulus ASTM P750	20°C	2000 MPa	290 000 lbf/in ²
Compressive strength	20°C	42 MPa	6 100 lbf/in ²
Izod impact strength (notched) ASTM D256 (method A)	23°C	340 J/m notch	6.4 ft lb/in notch
Specific gravity		1.05 x 10 ³ Kg/m ³	1.05 x 10 ³ lb/ft ³
Vicat softening point ASTM D1525		104°C	219°F
Coefficient of thermal expansion		10.1 x 10 ⁻⁵ m/m °C	5.6 x 10 ⁻⁵ ft/ft °F
Maximum operating temperature		80°C	176°F
Poisson's ratio		0.35	0.35
Thermal conductivity		0.25W/m °K	1.7 BTU/ft ² /in °F
Specific heat		1.47 KJ/kg °K	0.35 BTU/lbm °F
Volume resistivity		3.5x10 ¹⁶ Ωcm	
Dielectric constant		3.2 at 60Hz 3.12 at 10 ³ Hz 2.9 at 10 ⁶ Hz	

* Test pieces machined from moulded specimens yielded to the above mentioned typical properties.

EURAPIPE

ABS

ABS (Acrylonitrile - Butadiene - Styrene) is a modern thermoplastic polymer found in everyday applications such as construction site safety helmets.

Piping Systems manufactured from this polymer display outstanding properties and so make ABS pipes the first choice for many of the most demanding piping applications.

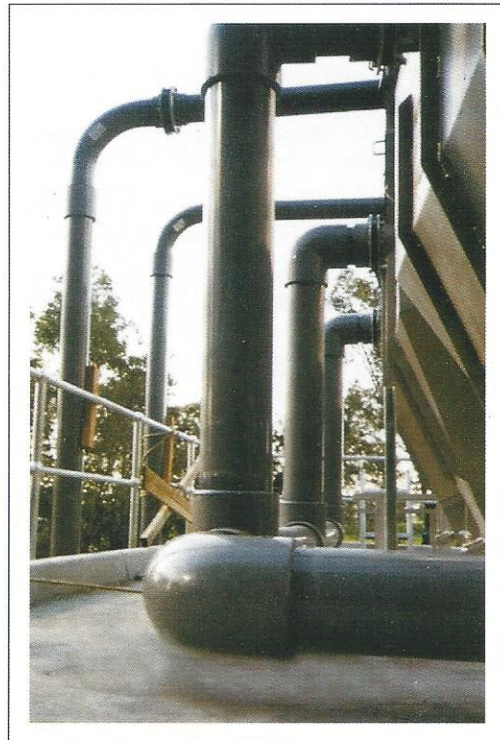
ABS pipe and fittings are designed and manufactured by Euratech to suit extreme climatic conditions.

The EURAPIPE piping systems is manufactured from ABS polymer.

ENVIRONMENTAL ADVANTAGE

The use of ABS contributes positively to the environment as it takes approximately one sixth of the energy to manufacture compared to metal products. This has direct savings in green house gas emissions.

Additionally ABS is lead and chlorine free and can be readily recycled.



IMPACT STRENGTH

The butadiene constituent in ABS affords unrivalled resistance to impact. This means that EURAPIPE Piping Systems may be used in more critical applications where other types of plastic could not be considered.

CHEMICAL RESISTANCE

EURAPIPE ABS is unaffected by both internal and external chemical attack by a wide range of acids, alkalis, ground water salts and other environmental factors.

ABRASION RESISTANCE

EURAPIPE ABS offers outstanding resistance to abrasion and erosion from aggressive slurries, that can rapidly damage steel or other traditional pipe materials.

WEATHER RESISTANCE

EURAPIPE ABS is one of the most weather resistance polymers available today. Successful field tests have been completed on piping systems having been exposed to weathering for over 30 years.

NON-TOXIC/TAINT FREE

The ABS formulation contains no harmful metallic stabilizers and it has been widely used for many years in piping systems for high purity water, medical preparations, food products and soft drinks.

EURAPIPE ABS systems is ideal for potable cold water. They conform to World Health Organisation, E.E.C. and AS4020 / BS6920 requirement for potable water reticulation and distribution.



EXCEPTIONALLY SMOOTH BORE

EURAPIPE ABS does not suffer from internal corrosion and provides a smooth bore for the life of the piping system.

The smooth bore does not support the formation of scale and slime as cement based lined products.

SIZE AND PRESSURE RANGE

EURAPIPE ABS piping systems is manufactured in size ranging from 15mm to 630mm. Standard pressure ratings at 20°C start at 450 KPa and go to 1500 KPa (PN4.5 to PN 15). Larger sizes and heavier classes are in development and reference should be made to Euratech.



TEMPERATURE RANGE

A great advantage of EURAPIPE ABS over other plastic systems is its ability to perform over a wide temperature range from -40°C to + 70°C. This makes EURAPIPE ABS very versatile and capable of handling a wide variety of fluids from refrigerants to moderately hot corrosive liquids

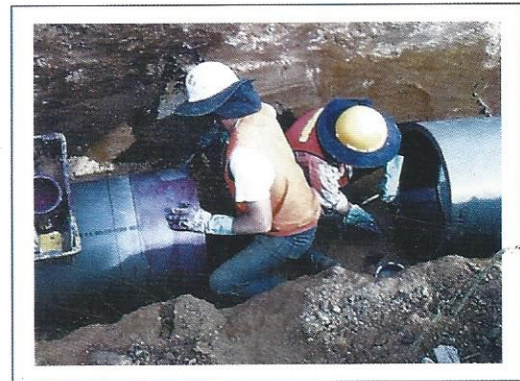
LIGHT WEIGHT

ABS is one-sixth the weight of steel systems, making EURAPIPE easy to handle and install. This reduces the cost of installation, handling and transport.

JOINING SYSTEMS

Cold Solvent Weld Joining

The EURAPIPE size range also utilizes the proven traditional method of joining ABS pipes, cold solvent cement welding, which provides an homogenous bond between pipes and fittings (SWJ).



Elastomeric Seal Joining

EURAPIPE ABS piping systems size ranges utilise an elastomeric seal joining systems (Rubber Ring Joint, or RRJ), for special application and is available upon request.

Other Joint Systems

Other joint systems are also available as standard for both EURAPIPE systems and are detailed further in this catalogue.

EURAPIPE



EURAPIPE ABS PRESSURE PIPE
SERIES 1



PLAIN SOCKET
CODE 100



STUB FLANGE
CODE 135



FULL FACE FLANGE
CODE 129, 130, 317, 319, 322



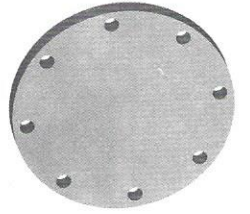
SHOULDER END
CODE 954



SHOULDER STYLE COUPLING
CODE 953



BLANK FLANGE STUB STYLE
CODE 136



BLANK FULL FACE FLANGE
CODE 131, 313, 315, 316



BACKING RING
CODE 415, 416, 425



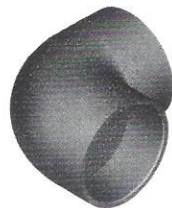
VALVE SUPPORT PLATE
CODE 460



GASKET (FULL FACE STYLE)
CODE 410



GASKET (STUB FLANGE STYLE)
CODE 431



ELBOW 90°
CODE 115



ELBOW 45°
CODE 119



FAUCET ELBOW 90°
CODE 116



MOULD BEND 90°
CODE 118



BEND 90° R=1.2D (SP-SP)
CODE 301



BEND 45° R=1.2D (SP-SP)
CODE 302



BEND 90° R=2.5D (SP-SP)
CODE 308



BEND 45° R=2.5D (SP-SP)
CODE 312



BEND 90° R=5D (SP-SP)
CODE 309



BEND 45° R=5D (SP-SP)
CODE 310



EQUAL TEE
CODE 122



REDUCING TEE SPIGOT
OFFTAKE (So-SoxSP)
CODE 120

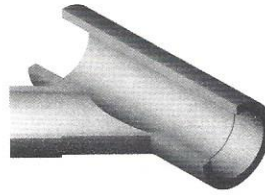




REDUCING TEE SOCKET
OFFTAKE (So-SoxSp)
CODE 122



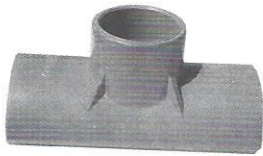
TEE THREADED OFF TAKE
(So-SoxTh)
CODE 121



Y PIECE 45°
CODE 128



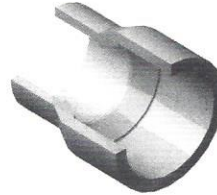
SADDLE STRIPS
CODE 146



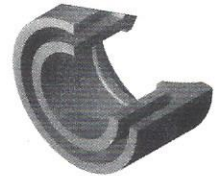
SADDLE
CODE 126



TAPPING SADDLES
CODE 127



REDUCING SOCKET
CODE 114



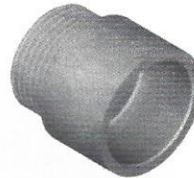
REDUCING BUSH
CODE 109



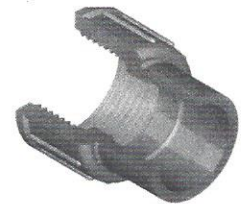
FAUCET SOCKET
CODE 101



VALVE ADAPTOR /
HEXAGON NIPPLE
CODE 107



VALVE SOCKET / MALE ADAPTOR
CODE 151



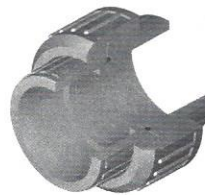
FAUCET ADAPTOR
CODE 153



END CAP
CODE 140



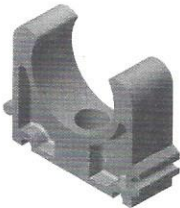
THREADED PLUG
CODE 155



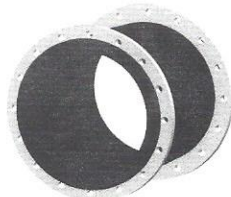
SOCKET UNION
CODE 205



SADDLE CLIP
CODE 455



PIPE CLIP
CODE 434



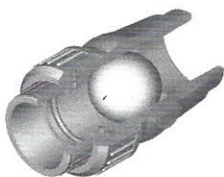
RUBBER EXPANSION JOINT
CODE 452



ANCHOR SLEEVE
CODE 272



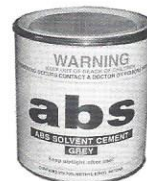
ANCHOR FLANGE
CODE 137



BALL CHECK VALVE DOUBLE
UNION
CODE 836, 838



BALL VALVE DOUBLE UNION
CODE 880



ABS SOLVENT CEMENT
CODE 461



MEK CLEANER/PRIMER
CODE 463



PIPES & FITTINGS

EURAPIPE ABS PIPE DIMENSION TABLE

PIPE SIZE (mm)	PIPE CLASS	MAXIMUM OPERATING PRESSURE (kPa)	ORDER DIAMETER (mm)	OUTSIDE DIAMETER (mm)	INSIDE DIAMETER (mm)	WALL THICKNESS (mm)	MASS (Kg/m)
1/2" (15DN)	15	1500	01 513 015	21.4	17.0	2.2	0.14
3/4" (20DN)	9	900	01 511 020	26.8	23.4	1.7	0.14
3/4" (20DN)	12	1200	01 512 020	26.8	22.4	2.2	0.18
3/4" (20DN)	15	1500	01 513 020	26.8	21.4	2.7	0.21
1" (25DN)	9	900	01 511 025	33.6	29.3	2.1	0.22
1" (25DN)	12	1200	01 512 125	33.6	28.1	2.7	0.28
1" (25DN)	15	1500	01 513 025	33.6	26.9	3.3	0.33
1 1/4" (32DN)	9	900	01 511 032	42.3	37.0	2.6	0.34
1 1/4" (32DN)	12	1200	01 512 032	42.3	35.5	3.4	0.44
1 1/4" (32DN)	15	1500	01 513 032	42.3	34.0	4.1	0.52
1 1/2" (40DN)	9	900	01 511 040	48.3	42.3	3.0	0.44
1 1/2" (40DN)	12	1200	01 512 040	48.3	40.5	3.9	0.57
1 1/2" (40DN)	15	1500	01 513 040	48.3	38.8	4.7	0.68
2" (50DN)	9	900	01 511 050	60.4	53.0	3.7	0.69
2" (50DN)	12	1200	01 512 050	60.4	50.7	4.8	0.88
2" (50DN)	15	1500	01 513 050	60.4	48.6	5.9	1.06
2 1/2" (75mm)	6	600	11 510 075	75.1	68.8	3.1	0.75
2 1/2" (75mm)	10	1000	11 511 075	75.1	65.0	5.1	1.17
2 1/2" (75mm)	12	1200	11 512 075	75.1	63.1	6.0	1.36
2 1/2" (75mm)	15	1500	11 513 075	75.1	60.5	7.3	1.63
3" (80DN)	6	600	01 510 080	88.9	81.5	3.7	1.04
3" (80DN)	9	900	01 511 080	88.9	78.1	5.4	1.49
3" (80DN)	12	1200	01 512 080	88.9	74.8	7.0	1.90
3" (80DN)	15	1500	01 513 080	88.9	71.7	8.6	2.28
4" (100DN)	3	300	01 508 100	114.3	109.4	2.5	0.91
4" (100DN)	4.5	450	01 509 100	114.3	107.1	3.6	1.32
4" (100DN)	6	600	01 510 100	114.3	104.9	4.7	1.71
4" (100DN)	9	900	01 511 100	114.3	100.5	6.9	2.45
4" (100DN)	12	1200	01 512 100	114.3	96.3	9.0	3.13
4" (100DN)	15	1500	01 513 100	114.3	92.2	11.0	3.76
6" (150DN)	3	300	01 508 150	168.3	161.1	3.6	1.94
6" (150DN)	4.5	450	01 509 150	168.3	157.7	5.3	2.82
6" (150DN)	6	600	01 510 150	168.3	154.4	6.9	3.68
6" (150DN)	9	900	01 511 150	168.3	148.0	10.1	5.28
6" (150DN)	12	1200	01 512 150	168.3	141.8	13.2	6.75
6" (150DN)	15	1500	01 513 150	168.3	135.9	16.2	8.12

1. All values quoted are average and are subject to manufacturing tolerances.
2. Standard pipe length supplied 5.8 m. Lengths up to 12 m available upon request.
3. Other sizes such as 65 mm and 125 mm are available to customer order.
4. Other pressure ratings are available upon request i.e. 4.5, 18.
5. Pipe is supplied plain ended.

EURAPIPE ABS PIPE DIMENSION TABLE

PIPE SIZE (mm)	PIPE CLASS	MAXIMUM OPERATING PRESSURE (kPa)	ORDER DIAMETER (mm)	OUTSIDE DIAMETER (mm)	INSIDE DIAMETER (mm)	WALL THICKNESS (mm)	MASS (Kg/m)
8" (200DN)	3	300	01 508 200	219.1	209.9	4.6	3.27
8" (200DN)	4.5	450	01 509 200	219.1	205.5	6.8	4.77
8" (200DN)	6	600	01 510 200	219.1	201.2	9.0	6.21
8" (200DN)	9	900	01 511 200	219.1	192.8	13.1	8.93
8" (200DN)	12	1200	01 512 200	219.1	184.8	17.2	11.43
8" (200DN)	15	1500	01 513 200	219.1	177.0	21.0	13.75
140 mm	4.5	450	11 509 140	140.2	133.5	3.3	1.50
140 mm	6	600	11 510 140	140.2	131.5	4.4	1.95
140 mm	9	900	11 511 140	140.2	127.5	6.4	2.81
140 mm	12	1200	11 512 140	140.2	123.6	8.3	3.61
225 mm	3	300	11 508 225	225.3	218.1	3.6	2.63
225 mm	4.5	450	11 509 225	225.3	214.7	5.3	3.85
225 mm	6	600	11 510 225	225.3	214.7	6.9	5.00
225 mm	10	1000	11 511 225	225.3	202.9	11.2	7.92
225 mm	12	1200	11 512 225	225.3	198.7	13.3	9.29
225 mm	15	1500	11 513 225	225.3	192.7	16.3	11.22
250 mm	3	300	11 508 250	250.3	242.3	4.0	3.23
250 mm	4.5	450	11 509 250	250.3	238.6	5.9	4.72
250 mm	6	600	11 510 250	250.3	234.9	7.7	6.16
250 mm	10	1000	11 511 250	250.3	225.4	12.5	9.77
250 mm	12	1200	11 512 250	250.3	220.8	14.7	11.45
250 mm	15	1500	11 513 250	250.3	214.2	18.1	13.84
315 mm	3	300	11 508 315	315.4	305.4	5.0	5.10
315 mm	4.5	450	11 509 315	315.4	300.7	7.4	7.47
315 mm	6	600	11 510 315	315.4	296.0	9.7	9.76
315 mm	10	1000	11 511 315	315.4	284.1	15.7	15.49
315 mm	12	1200	11 512 315	315.4	278.3	18.6	18.17
315 mm	15	1500	11 513 315	315.4	269.6	22.7	21.96
355 mm	3	300	11 508 355	355.5	344.2	5.6	6.47
355 mm	4.5	450	11 509 355	355.5	338.9	8.3	9.48
355 mm	6	600	11 510 355	355.5	333.7	10.9	12.39
355 mm	10	1000	11 511 355	355.5	320.2	17.6	19.66
355 mm	12	1200	11 512 355	355.5	313.7	20.9	23.06
355 mm	15	1500	11 513 355	355.5	304.2	25.6	27.87
400 mm	3	300	11 508 400	400.5	387.9	6.3	8.20
400 mm	4.5	450	11 509 400	400.5	381.9	9.3	12.02

1. All values quoted are average and are subject to manufacturing tolerances.
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3. Other sizes such as 65 mm and 125 mm are available to customer order.
4. Other pressure ratings are available upon request i.e. 4.5, 18.
5. Pipe is supplied plain ended.



EURAPIPE ABS PIPE DIMENSION TABLE

PIPE SIZE (mm)	PIPE CLASS	MAXIMUM OPERATING PRESSURE (kPa)	ORDER DIAMETER (mm)	OUTSIDE DIAMETER (mm)	INSIDE DIAMETER (mm)	WALL THICKNESS (mm)	MASS (Kg/m)
400 mm	6	600	11 510 400	400.5	376.0	12.3	15.71
400 mm	10	1000	11 511 400	400.5	360.8	19.9	24.95
400 mm	12	1200	11 512 400	400.5	353.4	23.5	29.26
400 mm	15	1500	11 513 400	400.5	342.8	28.9	35.37
450 mm	3	300	11 508 450	450.6	436.4	7.1	10.35
450 mm	4.5	450	11 509 450	450.6	429.6	10.5	15.19
450 mm	6	600	11 510 450	450.6	423.0	13.8	19.86
450 mm	10	1000	11 511 450	450.6	405.9	22.3	31.55
450 mm	12	1200	11 512 450	450.6	397.6	26.5	37.01
450 mm	15	1500	11 513 450	450.6	385.7	32.4	44.75
500 mm	3	300	11 508 500	500.7	484.9	7.9	12.77
500 mm	4.5	450	11 509 500	500.7	477.4	11.6	18.74
500 mm	6	600	11 510 500	500.7	470.0	15.3	24.51
500 mm	10	1000	11 511 500	500.7	451.0	24.8	38.95
500 mm	12	1200	11 512 500	500.7	441.9	29.4	45.69
500 mm	15	1500	11 513 500	500.7	428.6	36.0	55.24
560 mm	3	300	11 508 560	560.7	543.1	8.8	15.99
560 mm	4.5	450	11 509 560	560.7	534.7	13.0	23.48
560 mm	6	600	11 510 560	560.7	526.4	17.1	30.72
560 mm	10	1000	11 511 560	560.7	505.2	27.8	48.83
560 mm	12	1200	11 512 560	560.7	494.9	32.9	57.28
560 mm	15	1500	11 513 560	560.7	480.0	40.4	69.27
630 mm	3	300	11 508 630	630.8	611.1	9.9	20.22
630 mm	4.5	450	11 509 630	630.8	601.6	14.6	29.70
630 mm	6	600	11 510 630	630.8	592.3	19.3	38.86
630 mm	10	1000	11 511 630	630.8	568.3	31.2	61.78
630 mm	12	1200	11 512 630	630.8	556.8	37.0	72.48
630 mm	15	1500	11 513 630	630.8	544.0	45.4	87.65
710 mm	3	300	11 508 710	710.9	688.7	11.1	25.65
710 mm	4.5	450	11 509 710	710.9	678.0	16.5	37.70
710 mm	6	600	11 510 710	710.9	667.5	21.7	49.33
710 mm	10	1000	11 511 710	710.9	640.5	35.2	78.45
826 mm	3	300	11 508 826	825.5	799.7	12.9	34.58
826 mm	4.5	450	11 509 826	825.5	787.3	19.1	50.85
826 mm	6	600	11 510 826	825.5	775.1	25.2	66.55

1. All values quoted are average and are subject to manufacturing tolerances.
2. Standard pipe length supplied 5.8 m. Lengths up to 12 m available upon request.
3. Other sizes such as 65 mm and 125 mm are available to customer order.
4. Other pressure ratings are available upon request i.e. 4.5, 18.
5. Pipe is supplied plain ended.

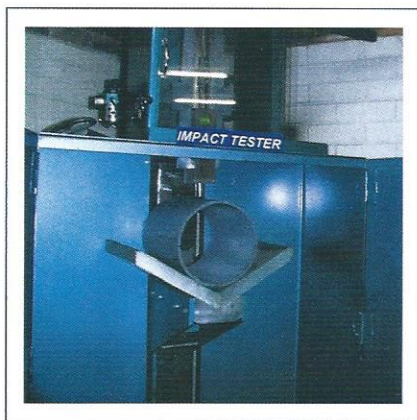
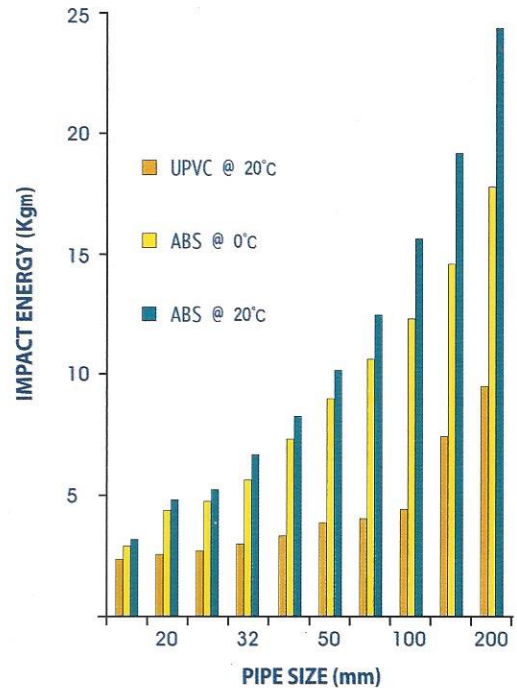
IMPACT STRENGTH

ABS is a relatively ductile thermoplastic, which exhibits very high impact strength compared to other thermoplastics such as uPVC particularly at low temperatures. It is for this reason ABS is used in demanding applications requiring exceptionally high impact strength material such as construction site safety helmets.

As part of the Euratech Quality Assurance programme, sample lengths of pipe are routinely impact tested at 0°C as required by the AS3518 standard.

ABS is unique in retaining high levels of impact strength at sub zero temperatures and is significantly superior to most other thermoplastics used in pipe systems.

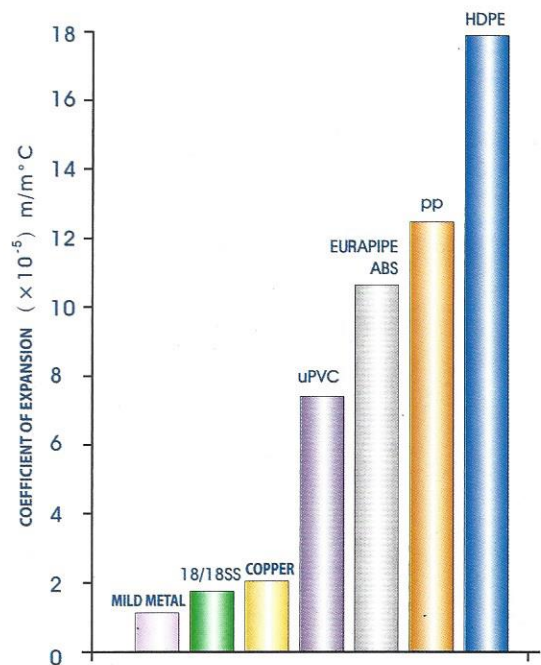
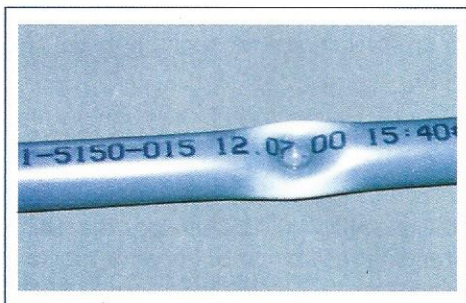
The graph shows the relatively small reduction in impact strength of ABS between 20°C and 0°C compared with another thermoplastic pipe systems.



MODE OF FAILURE

ABS is a ductile material and the mode of failure resembles that of soft copper. Failure is by ductile distortion and tearing, the localised nature minimising the loss of pipe contents.

In contrast, crack propagation and hazardous material fragmentation accompany the failure of brittle material, such as UPVC.



THERMAL EXPANSION

All thermoplastics expand at a greater rate than metals as shown in the diagram above.

Expansion need not cause undue concern in design or installation of an ABS piping system provided that due recognition is taken at the design stage. The reduced flexural modulus of ABS over that of steel results in reduced loads on supports and equipment arising from thermal strains.

The linear coefficient of thermal expansion of ABS is 10.1 x 10⁻⁵ m/m°C.

EURAPIPE

TOXICITY AND TAINT

ABS is **free** from heavy metal stabilisers such as **lead** which are often used in the processing of other thermoplastic materials. Therefore, there is **no** possibility of any toxic heavy metals substances being leached from the ABS pipe material into the fluid being conveyed by the pipe.

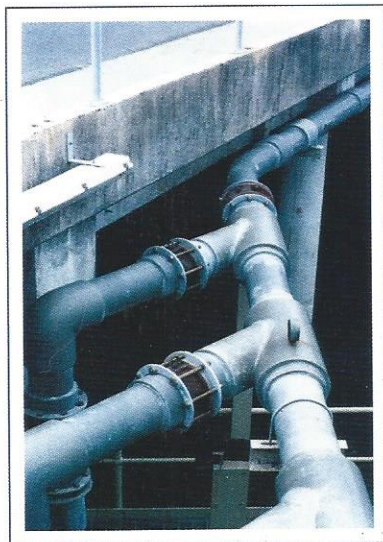
Eurapipe ABS conforms to AS4020 / BS6920 and has been safely used for many years with potable water, grade I distilled water for medical use, renal dialysis fluid and many foods and beverages.

ABS is regarded as taint free and has been used for conveying potable water, beer, soft drinks, caramel, wines, sauces, chocolate, custard cream and other similar products. It is recommended that food and drink manufacturers test for taste tainting on their own product before installation commences.

RIGIDITY AND STIFFNESS

ABS is classified as a rigid thermoplastic over its working temperature range -40°C to + 70°C.

With increased temperature, pipe rigidity decreases thus necessitating more frequent support.



WEATHERING

Eurapipe ABS piping systems are suitable for external installation under extreme conditions without additional surface protection.

When ABS products are exposed to the weather, they will suffer some minor degradation of the exposed surface. The degradation results in a reduction of surface gloss, and shift in surface colour to light grey. The degradation is confined to the exposed surface only.

The effect of long-term exposure to sunlight over prolonged periods has minimal effect on the physical properties of ABS systems.



Because of the relatively high flexural modulus of ABS, the stresses induced in a component whilst in service result in smaller strains, therefore minimising the possibility of environmental stress cracking of the exposed surface.

This resistance to failure is further improved by the inherently high impact strength of ABS, particularly at low temperatures, and the ability of the polymer to withstand long term heat exposure with little change to physical properties.



ABRASION RESISTANCE

ABS piping systems have long been successfully employed in applications where abrasion resistance is the prime consideration. The conveying of slurries in the mining, food, power generation and waste water industries is a typical example where ABS has been demonstrated to outlast steel and stainless steel pipes previously employed.

The chemical resistance of ABS combined with impact resistance makes it an ideal choice for such corrosive and erosive environments.

It is these conditions which lead to reduced life of metal pipe systems.

The rubber-like butadiene phase in ABS provides the piping material with outstanding resistance to abrasive media.

Euratech sales engineers have the experience to advise on the suitability of ABS pipe for slurry or abrasive applications.

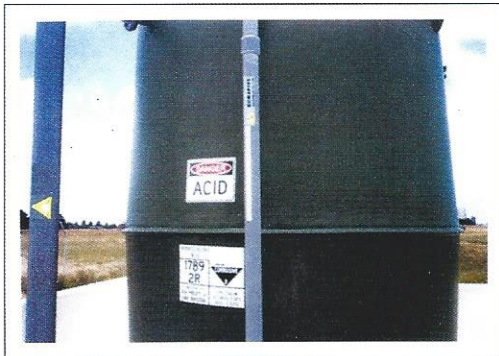
For gravity flow system the long term low surface roughness enables less steep slopes to be used. Lower slopes can mean reduced building heights which has a great effect on capital costs. Additionally, lower slopes reduce transport velocity, which in turn reduces the wearing of the piping material.

CHEMICAL RESISTANCE

The information given is based on the recommendations of the manufacturers of the polymers, field experience and subsequent tests by Euratech.

The data is based on the exposure of tensile bars to the environment, and associated weight changes, tensile strength and elongation determination. These results are augmented by environmental stress cracking tests.

Specific data on industrial chemical applications of ABS can be given by the Euratech organisation. Such enquiries are invited for applications not shown here.



Under no circumstances is it to be assumed that mixture of individually acceptable chemicals may be safely used with ABS or any other product.

The information is to be used as a guide and is not a guarantee, either expressed or implied.

Absence of notation indicates the substance has not been tested.

Unless stated, all concentrations are 100% or saturated aqueous solution. Reference to saturated solutions is at 20°C.

QUICK REFERENCE CHEMICAL RESISTANCE	
Chemical	Resistance
Weak acids	Good resistance
Strong acids	Limited resistance
Weak Alkalis	Good resistance
Strong alkalis	Good resistance
Aggressive soils	Excellent resistance
Metal salts	Good resistance
Sea water	Excellent resistance
Aromatic hydrocarbons	Poor resistance
Organic solvents	Poor resistance

It should be noted that production of substances might involve process upsets which subject piping systems to varying pressures, temperatures and chemicals. It is the design engineers responsibility to assess the materials and the exposure under such conditions. A detail chemical resistance chart is available upon request.

RESPONSE FORM

This brochure you received is only the brief summary of our ABS products. If you are interested to have an indepth technical details of our ABS products, please fill up this form and we will be pleased to forward our full technical brochure to you.

To: **Euratech (Malaysia) Sdn. Bhd.**

Lot 1478, Nilai Industrial Estate Phase II, 71800 Nilai, Negeri Sembilan D. K., Malaysia

Tel: (60 6) 799 8989 Fax: (60 6) 799 8626 E-mail: euratech@eura.po.my

Please send me/us a copy of your full technical brochure to :

Name & address of company : _____

Requisitioner's name : _____ Job Position : _____

Tel : _____ Fax : _____ Email : _____

Nature of company business : _____



Note

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Euratech (Malaysia) Sdn. Bhd. (52749-K)

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