



Your Complete Piping Solutions

HDPE
PE100 Pipe





COMPANY BACKGROUND

Cew Sin Plastic Pipe (243310-M) was founded in 1992 and is a renowned plastic pipe manufacturer in Malaysia that specializes in Unplasticized Polyvinyl Chloride (PVC-U) Pipes and Fittings, Polypropylene Random (PP-R) Pipes and Fittings and High-Density Polyethylene (HDPE) Pipes. Cew Sin (CS) uses primarily PVC-U, PP-R and HDPE raw materials to manufacture high-quality, safe and reliable plastic pipes and fittings for a wide range of applications, including water supply, drainage, sewage, cable and wire conduits for a wide spectrum of industries such as construction, infrastructure, utility, agriculture and many more. It is our cutting-edge technology and proven track record of quality excellence that has made us a respected leader in the market.

CS is also committed to providing green solutions for our customers. We offer environmentally friendly, lead-free options for our pipes and fittings. Our products also comply with various national and international professional certifications as part of our pursuit of quality excellence. At the same time, we invest heavily in Research and Development because we believe in continuously upgrading the quality of our products, as befitting our status as a market leader in Malaysia.

We owe our achievements in the plastic pipe manufacturing industry to sound management, professional production, continuous upgrades and efficient services. Our endeavours over the years have made us a well-trusted brand in both the domestic and international market.

We are ISO 9001:2015 Quality Management System certified, while stringent measures are adopted to ensure a high product quality that meets our local and export customers' needs. Our products are also endorsed by SIRIM QAS (Standard of Industrial and Research Institute in Malaysia) and TÜV SÜD certified according to local and international standards.

Apart from international certification, our pipes and fittings meet the requirements of the Malaysian National Water Authority (Suruhanjaya Perkhidmatan Air Negara or SPAN), Jabatan Air Negeri Sabah, and the State Water Authority of Sarawak.

2

Company Background

4

Vision, Mission and Quality Policy

6

Introduction and Product Code

8

HDPE PE100

11

**PE100 and PE80 Standard Dimension Ratio
and Working Pressure Rating**

12

Jointing Method

15

Other Catalogues

**THE
NEW
TITAN
CON**



OUR COMMITMENTS AND SERVICES

VISION

To become the leading manufacturer and distributor of complete PVC-U, PP-R and HDPE pipping systems in the region.

MISSION

To ensure total customer satisfaction through continuously improving our products, resources, facilities and services.

QUALITY POLICIES

- ◆ Customer satisfaction is our top priority
- ◆ Strive to be the best in the industry
- ◆ People competency is the key driver
- ◆ Plan for and commit to continuous improvement



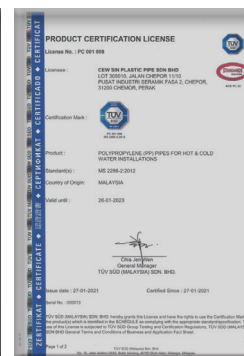
CONTINUOUS RESEARCH & DEVELOPMENT AND PRODUCT QUALITY

CS strongly believes in the importance of high-quality, durable, safe and reliable products. We have a comprehensive range of equipment in our laboratory where all products are rigorously tested in compliance with local and international standards. Fine raw materials and compounds are assessed in terms of temperature, pressure and energy input, while pipe samples are put under stringent impact and tensile strength inspections. Our dedicated Research and Development team is also always working on developing new ways to upgrade the quality of our pipes and fittings as according to industry standards.

OFFICIAL CERTIFICATIONS

CS's wide range of products adheres to ISO 9001 certification, as well as both local and international standards, including but not limited to:

- ◆ SIRIM (Standard and Industrial Research Institute of Malaysia)
- ◆ TÜV SÜD Malaysia



HIGH DENSITY POLYETHYLENE (HDPE) PIPES

High Density Polyethylene (HDPE) is a popular material for pipes due to its flexible, durable and outstanding chemical and environmental stress resistant properties. HDPE pipeline systems are widely used in water supply, rural irrigation, sewerage and drainage, as well as electrical and communication conduit applications.

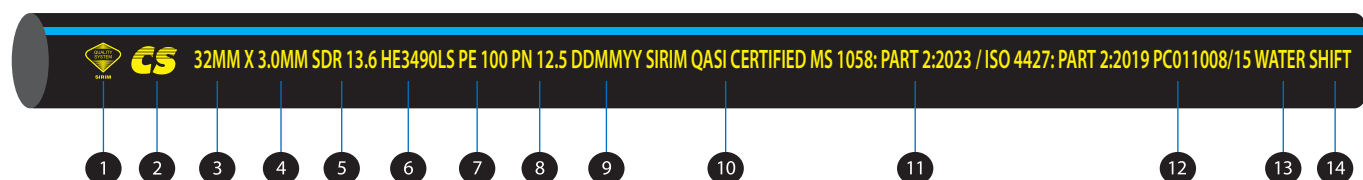
HDPE pipes can also be installed by boring instead of the open-trench method. The advantage of installation via boring, or Horizontal Directional Drilling is that this method is less disruptive to surroundings, minimizes hauling associated both with excavation and paving and can result in lower costs for installation and also longer material life cycles. The HDPE pipe is also resistant to internal build up or abrasion and provides a leak-free, fully restrained system.


CS's products are classified and tested according to local and international standards for portable water application. Our HDPE pipes can be supplied in straight lengths or in coils, which reduce the need for joints and fittings.

Features:

- ♦ Low maintenance due to its chemical and abrasion resistance nature
- ♦ Flexible, lightweight and easy to transport and install
- ♦ Cost effective with high weathering resistance
- ♦ Joined by simple, secure and reliable fusion jointing

CS Pipe Marking



- | | |
|--|---------------------------------------|
| ① SIRIM Logo  | ⑧ Nominal Pressure |
| ② CEW SIN Logo  | ⑨ Production Period |
| ③ Dimension O.D (Nominal Diameter) | ⑩ Certification Body |
| ④ Dimension W.T (Minimum Wall Thickness) | ⑪ Standard References and Conformance |
| ⑤ SDR Series | ⑫ SIRIM Licenses No. |
| ⑥ Material Code | ⑬ "Water" |
| ⑦ Material Designation | ⑭ Shift Number |



PRODUCT CODE

PE 100 HDPE PIPE NEW CODE

HS-1.P016-160-012-BK

GROUP+
SERIES

MATERIAL
DESIGNATION

NOMINAL
PRESSURE

DIAMETER
SIZES

LENGTH

COLOUR

GROUP

H	HDPE PIPE
---	-----------

SERIES

S	SIRIM
C	CUSTOM MADE

MATERIAL DESIGNATION

1.	PE100
----	-------

NOMINAL PRESSURE

P006	PN 06
P008	PN 08
P010	PN 10
P12.5	PN 12.5
P016	PN 16
P020	PN 20

DIAMETER / SIZES

020	20MM
025	25MM
032	32MM
040	40MM
050	50MM
063	63MM
075	75MM
090	90MM
110	110MM
125	125MM
140	140MM
160	160MM
180	180MM
200	200MM
225	225MM
250	250MM
280	280MM
315	315MM
355	355MM
400	400MM
450	450MM
500	500MM
560	560MM
630	630MM

LENGTH

006	6.0 MTR
012	12.0 MTR
050	50.0 MTR
100	100.0 MTR
250	250.0 MTR

COLOR

BK	BLACK
----	-------

HIGH DENSITY POLYETHYLENE PIPE (HDPE) / (PE 100)

MS 1058: PART 2: 2023
(ISO 4427: PART 2: 2019)



PE 100 is the upgraded version of PE 80. Technological advancements made it possible for PE 100 pipes to withstand a higher operating pressure with the same wall thickness as a PE 80 pipe, or alternatively, withstand the same operating pressure with thinner walls. PE 100 HDPE pipes are also less sensitive to surface damage during laying and have improved resistance to rapid crack growth. This means that if a fast crack begins to grow in a PE 100 pipe, it will stop after only a short distance. HDPE PE 100 pipes also use less polymer and provides for a larger bore and increased flow capacity.

Features:

- ◆ More durable and able to withstand higher pressures
- ◆ Low maintenance due to its chemical and abrasion resistance nature
- ◆ Flexible, lightweight and easy to transport and install
- ◆ Cost effective with high weathering resistance
- ◆ Joined by simple, secure and reliable fusion jointing
- ◆ Long lasting and termite proof



HIGH DENSITY POLYETHYLENE PIPE (HDPE) / (PE 100)

MS 1058: PART 2: 2023

(ISO 4427: PART 2: 2019)

CLASS PN 10 (SDR 17)

PRODUCT CODE	NOMINAL SIZES (MM)	OUTSIDE DIAMETER		PN 10 WALL THICKNESS		WEIGHT KG / METER
		MIN	MAX	MIN	MAX	
		(MM)		(MM)		
HS-1.P010-032-100-BK	32	32.00	32.30	2.00	2.30	0.194
HS-1.P010-040-100-BK	40	40.00	40.40	2.40	2.80	0.295
HS-1.P010-050-100-BK	50	50.00	50.40	3.00	3.40	0.453
HS-1.P010-063-100-BK	63	63.00	63.40	3.80	4.30	0.722
HS-1.P010-075-100-BK	75	75.00	75.50	4.50	5.10	1.019
HS-1.P010-090-100-BK	90	90.00	90.60	5.40	6.10	1.465
HS-1.P010-110-100-BK	110	110.00	110.70	6.60	7.40	2.180
HS-1.P010-125-006-BK	125	125.00	125.80	7.40	8.30	2.780
HS-1.P010-140-006-BK	140	140.00	140.90	8.30	9.30	3.525
HS-1.P010-160-006-BK	160	160.00	161.00	9.50	10.60	4.555
HS-1.P010-180-006-BK	180	180.00	181.10	10.70	11.90	5.760
HS-1.P010-200-006-BK	200	200.00	201.20	11.90	13.20	7.111
HS-1.P010-225-006-BK	225	225.00	226.40	13.40	14.90	9.019
HS-1.P010-250-006-BK	250	250.00	251.50	14.80	16.40	11.052
HS-1.P010-280-006-BK	280	280.00	281.70	16.60	18.40	13.885
HS-1.P010-315-006-BK	315	315.00	316.90	18.70	20.70	17.583
HS-1.P010-355-006-BK	355	355.00	357.20	21.10	23.40	22.379
HS-1.P010-400-006-BK	400	400.00	402.40	23.70	26.20	28.282
HS-1.P010-450-006-BK	450	450.00	452.70	26.70	29.50	35.382
HS-1.P010-500-006-BK	500	500.00	503.00	29.70	32.80	44.27
HS-1.P010-560-006-BK	560	560.00	563.40	33.20	36.70	55.47
HS-1.P010-630-006-BK	630	630.00	633.80	37.40	41.30	70.25

CLASS PN 12.5 (SDR 13.6)

PRODUCT CODE	NOMINAL SIZES (MM)	OUTSIDE DIAMETER		PN 12.5 WALL THICKNESS		WEIGHT KG / METER
		MIN	MAX	MIN	MAX	
		(MM)		(MM)		
HS-1.P12.5-025-100-BK	25	25.00	25.30	2.00	2.30	0.149
HS-1.P12.5-032-100-BK	32	32.00	32.30	2.40	2.80	0.231
HS-1.P12.5-040-100-BK	40	40.00	40.40	3.00	3.50	0.362
HS-1.P12.5-050-100-BK	50	50.00	50.40	3.70	4.20	0.550
HS-1.P12.5-063-100-BK	63	63.00	63.40	4.70	5.30	0.877
HS-1.P12.5-075-100-BK	75	75.00	75.50	5.60	6.30	1.242
HS-1.P12.5-090-100-BK	90	90.00	90.60	6.70	7.50	1.780
HS-1.P12.5-110-100-BK	110	110.00	110.70	8.10	9.10	2.636
HS-1.P12.5-125-006-BK	125	125.00	125.80	9.20	10.30	3.397
HS-1.P12.5-140-006-BK	140	140.00	140.90	10.30	11.50	4.220
HS-1.P12.5-160-006-BK	160	160.00	161.00	11.80	13.10	5.553
HS-1.P12.5-180-006-BK	180	180.00	181.10	13.30	14.80	7.046
HS-1.P12.5-200-006-BK	200	200.00	201.20	14.70	16.30	8.645
HS-1.P12.5-225-006-BK	225	225.00	226.40	16.60	18.40	10.977
HS-1.P12.5-250-006-BK	250	250.00	251.50	18.40	20.40	13.522
HS-1.P12.5-280-006-BK	280	280.00	281.70	20.60	22.80	16.943
HS-1.P12.5-315-006-BK	315	315.00	316.90	23.20	25.70	21.473
HS-1.P12.5-355-006-BK	355	355.00	357.20	26.10	28.90	27.225
HS-1.P12.5-400-006-BK	400	400.00	402.40	29.40	32.50	34.524
HS-1.P12.5-450-006-BK	450	450.00	452.70	33.10	36.60	43.731
HS-1.P12.5-500-006-BK	500	500.00	503.00	36.80	40.60	53.96
HS-1.P12.5-560-006-BK	560	560.00	563.40	41.20	45.50	67.70
HS-1.P12.5-630-006-BK	630	630.00	633.80	46.30	51.10	85.62



HIGH DENSITY POLYETHYLENE PIPE (HDPE) / (PE 100)

MS 1058: PART 2: 2023

(ISO 4427: PART 2: 2019)

CLASS PN 16 (SDR 11)

PRODUCT CODE	NOMINAL SIZES (MM)	OUTSIDE DIAMETER		PN 16 WALL THICKNESS		WEIGHT KG / METER
		MIN	MAX	MIN	MAX	
		(MM)		(MM)		
HS-1.P016-020-100-BK	20	20.00	20.30	2.00	2.30	0.117
HS-1.P016-025-100-BK	25	25.00	25.30	2.30	2.70	0.171
HS-1.P016-032-100-BK	32	32.00	32.30	3.00	3.40	0.279
HS-1.P016-040-100-BK	40	40.00	40.40	3.70	4.20	0.431
HS-1.P016-050-100-BK	50	50.00	50.40	4.60	5.20	0.669
HS-1.P016-063-100-BK	63	63.00	63.40	5.80	6.50	1.057
HS-1.P016-075-100-BK	75	75.00	75.50	6.80	7.60	1.476
HS-1.P016-090-100-BK	90	90.00	90.60	8.20	9.20	2.139
HS-1.P016-110-100-BK	110	110.00	110.70	10.00	11.10	3.172
HS-1.P016-125-006-BK	125	125.00	125.80	11.40	12.70	4.115
HS-1.P016-140-006-BK	140	140.00	140.90	12.70	14.10	5.090
HS-1.P016-160-006-BK	160	160.00	161.00	14.60	16.20	6.732
HS-1.P016-180-006-BK	180	180.00	181.10	16.40	18.20	8.506
HS-1.P016-200-006-BK	200	200.00	201.20	18.20	20.20	10.495
HS-1.P016-225-006-BK	225	225.00	226.40	20.50	22.70	13.282
HS-1.P016-250-006-BK	250	250.00	251.50	22.70	25.10	16.334
HS-1.P016-280-006-BK	280	280.00	281.70	25.40	28.10	20.478
HS-1.P016-315-006-BK	315	315.00	316.90	28.60	31.60	25.922
HS-1.P016-355-006-BK	355	355.00	357.20	32.20	35.60	32.907
HS-1.P016-400-006-BK	400	400.00	402.40	36.30	40.10	41.777
HS-1.P016-450-006-BK	450	450.00	452.70	40.90	45.10	52.902
HS-1.P016-500-006-BK	500	500.00	503.00	45.40	50.10	65.28
HS-1.P016-560-006-BK	560	560.00	563.40	50.80	56.00	81.78
HS-1.P016-630-006-BK	630	630.00	633.80	57.20	63.10	103.61

CLASS PN 20 (SDR 9)

PRODUCT CODE	NOMINAL SIZES (MM)	OUTSIDE DIAMETER		PN 20 WALL THICKNESS		WEIGHT KG / METER
		MIN	MAX	MIN	MAX	
		(MM)		(MM)		
HS-1.P020-020-100-BK	20	20.00	20.30	2.30	2.70	0.133
HS-1.P020-025-100-BK	25	25.00	25.30	3.00	3.40	0.212
HS-1.P020-032-100-BK	32	32.00	32.30	3.60	4.10	0.328
HS-1.P020-040-100-BK	40	40.00	40.40	4.50	5.10	0.512
HS-1.P020-050-100-BK	50	50.00	50.40	5.60	6.30	0.793
HS-1.P020-063-100-BK	63	63.00	63.40	7.10	8.00	1.266
HS-1.P020-075-100-BK	75	75.00	75.50	8.40	9.40	1.779
HS-1.P020-090-100-BK	90	90.00	90.60	10.10	11.30	2.566
HS-1.P020-110-100-BK	110	110.00	110.70	12.30	13.70	3.813
HS-1.P020-125-006-BK	125	125.00	125.80	14.00	15.60	4.932
HS-1.P020-140-006-BK	140	140.00	140.90	15.70	17.40	6.130
HS-1.P020-160-006-BK	160	160.00	161.00	17.90	19.80	8.044
HS-1.P020-180-006-BK	180	180.00	181.10	20.10	22.30	10.175
HS-1.P020-200-006-BK	200	200.00	201.20	22.40	24.80	12.587
HS-1.P020-225-006-BK	225	225.00	226.40	25.20	27.90	15.930
HS-1.P020-250-006-BK	250	250.00	251.50	27.90	30.80	19.577
HS-1.P020-280-006-BK	280	280.00	281.70	31.30	34.60	24.609
HS-1.P020-315-006-BK	315	315.00	316.90	35.20	38.90	31.132
HS-1.P020-355-006-BK	355	355.00	357.20	39.70	43.80	39.540
HS-1.P020-400-006-BK	400	400.00	402.40	44.70	49.30	50.155
HS-1.P020-450-006-BK	450	450.00	452.70	50.30	55.50	63.504
HS-1.P020-500-006-BK	500	500.00	503.00	55.80	61.50	78.25
HS-1.P020-560-006-BK	560	560.00	563.40	62.50	68.90	98.18
HS-1.P020-630-006-BK	630	630.00	633.50	70.30	77.50	124.24



PE100 AND PE80 STANDARD DIMENSION RATIO AND WORKING PRESSURE RATING

Pipe Series										
	SDR 9 S 4		SDR 11 S 5		SDR 13.6 S 6.3		SDR 17 S 8		SDR 21 S 10	
	Nominal pressure, PN in bar									
PE 100	PN 20		PN 16		PN 12.5		PN 10		PN 8	
PE 80	PN 16		PN 12.5		PN 10		PN 8		PN 6	
Nominal Size (mm)	Wall Thickness									
	e _{min}	e _{max}	e _{min}	e _{max}	e _{min}	e _{max}	e _{min}	e _{max}	e _{min}	e _{max}
20	2.3	2.7	2.0	2.3	-	-	-	-	-	-
25	3.0	3.4	2.3	2.7	2.0	2.3	-	-	-	-
32	3.6	4.1	3.0	3.4	2.4	2.8	2.0	2.3	-	-
40	4.5	5.1	3.7	4.2	3.0	3.5	2.4	2.8	2.0	2.3
50	5.6	6.3	4.6	5.2	3.7	4.2	3.0	3.4	2.4	2.8
63	7.1	8.0	5.8	6.5	4.7	5.3	3.8	4.3	3.0	3.4
75	8.4	9.4	6.8	7.6	5.6	6.3	4.5	5.1	3.6	4.1
90	10.1	11.3	8.2	9.2	6.7	7.5	5.4	6.1	4.3	4.9
110	12.3	13.7	10.0	11.1	8.1	9.1	6.6	7.4	5.3	6.0
125	14.0	15.6	11.4	12.7	9.2	10.3	7.4	8.3	6.0	6.7
140	15.7	17.4	12.7	14.1	10.3	11.5	8.3	9.3	6.7	7.5
160	17.9	19.8	14.6	16.2	11.8	13.1	9.5	10.6	7.7	8.6
180	20.1	22.3	16.4	18.2	13.3	14.8	10.7	11.9	8.6	9.6
200	22.4	24.8	18.2	20.2	14.7	16.3	11.9	13.2	9.6	10.7
225	25.2	27.9	20.5	22.7	16.6	18.4	13.4	14.9	10.8	12.0
250	27.9	30.8	22.7	25.1	18.4	20.4	14.8	16.4	11.9	13.2
280	31.3	34.6	25.4	28.1	20.6	22.8	16.6	18.4	13.4	14.9
315	35.2	38.9	28.6	31.6	23.2	25.7	18.7	20.7	15.0	16.6
355	39.7	43.8	32.2	35.6	26.1	28.9	21.1	23.4	16.9	18.7
400	44.7	49.3	36.3	40.1	29.4	32.5	23.7	26.2	19.1	21.2
450	50.3	55.5	40.9	45.1	33.1	36.6	26.7	29.5	21.5	23.8
500	55.8	61.5	45.4	50.1	36.8	40.6	29.7	32.8	23.9	26.4
560	62.5	68.9	50.8	56.0	41.2	45.5	33.2	36.7	26.7	29.5
630	70.3	77.5	57.2	63.1	46.3	51.1	37.4	41.3	30.0	33.1
710	79.3	87.4	64.5	71.1	52.2	57.6	42.1	46.5	33.9	37.4
800	89.3	98.4	72.6	80.0	58.8	64.8	47.4	52.3	38.1	42.1
900	-	-	81.7	90.0	66.1	72.9	53.3	58.8	42.9	47.3
1000	-	-	90.8	100.0	73.5	79.9	59.3	65.4	47.7	52.6

JOINTING METHOD

There are five assembly methods for HDPE pipes: **Butt Fusion / Welding**, **Electro Fusion**, **Compression Fitting**, **Socket Fusion** and **Mechanical Bolt Type Couplings**.

Butt Fusion / Welding



Butt Fusion or Welding is an economical, permanent and flow efficient jointing method done by parallelly heating both ends of the pipes to the desired temperature using a metal plate at an aligned position. The heated ends of the pipes are then pushed into the correct depth with sufficient force and left to cool. The usage of support structures is recommended during the jointing of long pipes.

Electro Fusion



Electro Fusion is a jointing method which requires a prefabricated fitting (double socket coupler) equipped with heating elements within the bore. Squared and scraped pipe ends are inserted into the coupler and a current is supplied through the two connection terminals. The heating elements melt the pipe and fitting and fuses the jointing surfaces. The assembly is held stationary for the cooling process to occur. The joints should be allowed to cool before handling.

Compression Fitting



Compression Fitting is commonly used to join PE to PE or other pipes with bolt type and stab type couplings. The couplings consist of a body, threaded compression nut, an O-ring acting as an elastomer seal ring and a stiffener along with a grip ring. When compressed, the seal and grip rings provide gripping to the outside of the pipe, thus creating a pressure-tight seal.

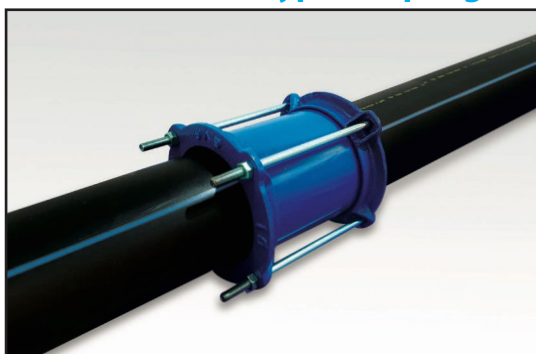
JOINTING METHOD

Socket Fusion



Fusion jointing is when two pipes are slightly melted and joined together to create a homogenous bond, essentially turning two lengths of pipe into a single system. No cement or glue is needed, greatly lowering the risk of any solvents that could affect the bond and the water quality. Fusion jointed pipes are leak proof, reliable and durable.

Mechanical Bolt Type Couplings

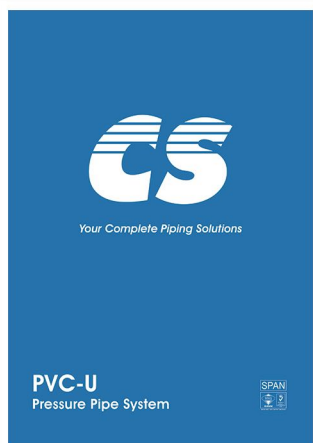


There are many styles and varieties of "Bolt Type" couplings available to join HDPE pipe to HDPE pipe or other types of pipes such as PVC, Mild steel and Ductile iron in sizes from 90mm and larger. Components for this style of fitting are shown in picture. As with the mechanical compression fittings, these couplings work on the general principle of compressing an elastomeric gasket around each pipe end to be joined, to form a seal. The gasket, when compressed against the outside of the pipe by tightening the bolts, produces a pressure seal and it expands a little and shortens slightly due to Poisson's effect.

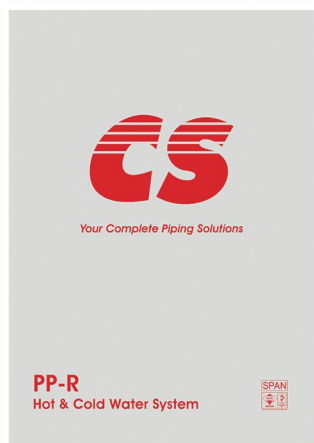
NOTEPAD



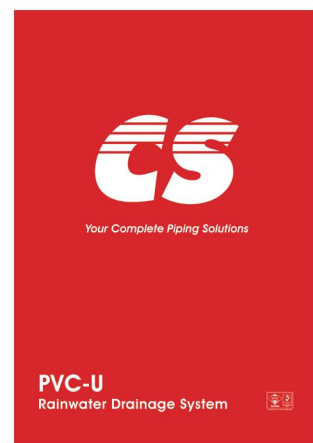
OTHER CS CATALOGUES



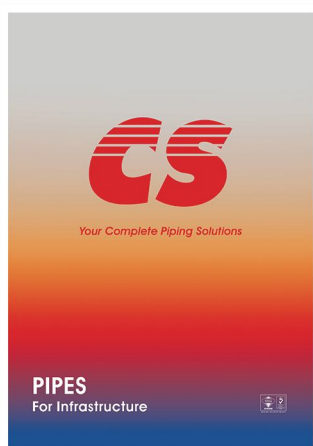
PVC-U Pressure Pipe System



PP-R Hot & Cold Water System



PVC-U Rainwater Drainage System



Pipes For Infrastructure



PVC-U Soil, Waste, Vent System



PVC-U Underground Sewerage System



Your Complete Piping Solutions



Water Storage Tank, Waste Water Management
& Road Safety Management

CONTACT US

Tel: +605-201 1273
Fax: +605-201 1062
Email: cs@cewsin.com.my
Website: www.cewsin.com.my



Scan the QR code
to get **more & quick information**
from our new catalogue!

Disclaimer:

The information provided by Cew Sin Plastic Pipe Sdn. Bhd. in this catalogue is for general informational purposes only. All information in this catalogue is provided in good faith. However, we make no representation or warranty of any kind, express or implied, regarding the accuracy, adequacy, validity, reliability or completeness of any information in this catalogue. Under no circumstance shall we have any liability to you for any loss or damage of any kind incurred as a result of the use of this information. Your use of the catalogue and your reliance on any information provided is solely at your own risk.