



شركة الفا العربية للصناعة

PVC / CPVC / uPVC Pipes Manufacturing Co.

PVC / CPVC / Upvc Pipes

FOR POTABLE WATER, IRRIGATION, MINING & SEWER SYSTEM



VISION 2030
Sustainable Growth, Resilient
Inclusion, and Quality Leadership



شركة الفا العربية للصناعة
Alfa Al-Arabia Manufacturing Co.
www.alfaalarabia.com

Chairman Statement:

Alfa Al-Arabia believe in three simple principles:

Operational excellence,
Quality products, and
Superior customer service.

More than ten years before, we zealously uphold these principles. They are not only the cornerstone of Alfa success but also the pathfinder to the future.

Since our inception, we have been witness to a radically changing business Environment; domestically and globally. Alfa AL-Arabia has adapted to the changes and successfully evolved and diversified. Today, our corporate standing is a testament to this ability. Throughout the years, we have allowed our business philosophy to mature, yet remain flexible. This approach has eased the integration and management of our diversification and evolution.

We believe innovation and decentralization give us our competitive edge.

Alfa Al-Arabia has emerged as one of the leading company in Saudi Arabia and the region by keeping a watchful eye on the business environment and constant process improvements.

Our corporate values center-around our customers:

Honesty in all our relationships
Integrity in financial commitments
Uncompromising quality and
Individual empowerment.

These ideals define our reputation today.

As we look forward to a challenging and rewarding future, **Alfa A-Arabia** stands committed to the philosophies and ideals that have brought us so far.

As we expand and diversify, seeking new frontiers to explore and develop, we are confident that our values will guide us on the right path.

Alfa's most valuable assets today are our loyal and dedicated Employees who wear the Alfa Al-Arabia badge, and we ensure that they embrace our expansion.

For them it is a symbol of pride, for us it is an honor.

Muhammad Aslam

Chairman

INTRODUCTION

1. Name of Company:	Alfa Al-Arabia Manufacturing
2. Address: Head Office	Industrial Area - 3 Jeddah Kingdom of Saudi Arabia
3. Telephone:	+ 966 - 50 183 5126
4. E-mail:	<u>alfaalarabia@hotmail.com</u> info@alfaalarabia.com
5. Web:	<u>www.alfaalarabia.com</u>
2. Description of Company:	PVC, uPVC, CPVC
3. Company Established	2010
4. Chairman:	Muhammad Aslam
4. Chief Executive Officer:	M. Affan

ALFA Al-Arabia is one of the best PVC pipe manufacturing company in Kingdom of Saudi Arabia. It manufactures a wide range and variety of PVC Pipes according to the market needs and standards.

Alfa constantly conducts an extensive research and development to come up with additional varieties in this field. Which makes ALFA as a market leader in this field.

Alfa initiates market-oriented techniques to meet increasing civil and industrial demands by generating quality PVC, UPVC and CPVC pipes to fulfil market demand.

Alfa pipes are widely used in civil and industrial process lines, as well as water and gas reticulation systems. They are also used for irrigation installation together with electric supply conduit and flexible corrugate pipes.

Muhammad Affan

General Manager

MISSION

- To provide the most optimal and the excellent service to our valuable customers
- Striving towards world class standards, practices and performance and continuous improvement
- Committed, motivated and empowered workforce through holistic employee focus and team work
- Applying innovative and latest technology for our products and processes
- Reduced flow and crush resistance
- Superior abrasion resistance
- Ensuring long term prosperity of all our distributors, customers, employees and suppliers
- Acting in a socially and environmentally responsible manner
- Maintain a secure and healthy working environment for our employees.

VISION

Alfa vision is to be a pioneer in innovation of “PLASTIC WORLD”.

Our Values

Honesty, Integrity and Quality

- Quality is always at first
- Honesty and Integrity
- Mutual Respect and Trust
- Investment in staff training
- Loyalty
- Co-operation and Commitment
- Open Communication and information Flow
- Social and environment responsibility



APPLICATION OF PVC PIPE

ALFA UPVC Pipes are ideal for

Water Supply:

Used for water supply schemes, such as water distribution work, mainline, casing for tube work and raising main for hand pump.

Industrial Application

Used for transporting of chloride acid and other chemicals. Distribution of milk, chemicals and gases in dairies, plants and industrial estates, also in agriculture, communication, irrigation, sanitary projects.

Ventilation

Used for ventilation disposing corrosive gases

Sewer Systems

Large diameter pipes can be used for sewer systems.

Cable Conduits

Most suitable for electrical conduits.

Agriculture

Used for agricultures purposes like irrigation sprinkling pip for farmlands etc.



ADVANTAGE OF UPVC /PVC PIPES

ALFA AL-ARABIA UPVC / PVC Pipe have many properties, which make them suitable for a wide range of applications particularly in difficult soil climatic conditions.

These are:

HIGH CORROSION RESISTANCE

UPVC / PVC pipes do not adversely affected either internally by water or externally by corrosive subsoil. There is no loss of carrying capacity or physical determination in aggressive ground.

LIFE DURABILITY (CONVENIENCE)

UPVC / PVC Pipes have long durability (expectancy) than metal pipes or other plastic pipes.

HEALTH CONCERNS (CONVENIENCE)

UPVC/ PVC Pipes are non-toxic having a healthy in their ability to corrode due weather conditions and bacteria never builds up similarly as in other plastic pipes.

STRENGTH

UPVC/ PVC Pipes have heavy-duty usage characteristics and solid strength.

SAFETY

UPVC/ PVC Pipes are safe in case of fire because they do not support combustion as in case of plastic pipes.

EASY TO INSTALL

UPVC / PVC Pipes are easy to install without any special equipment and extra work force. The solvent cement used in joining them together guaranties the solid fitting of different parts a characteristic only seen in these Pipes.

مميزات انابيب UPVC / PVC

انابيب الفا - لها مميزات عدة مما يجعلها ذات استعمالات تناسب أغراض متعددة خصوصا في الأرضيات الصلبة وعوامل المناخ القاسية وهذه المميزات:

المقاومة العالية للتآكل

أن أنابيب UPVC / PVC لا تتأثر عموما سواء داخلها بالماء أو خارجيا بالتربة، ولم تسجل أي تأثيرات أو تآكل نتيجة وضعها في التربة الصلدة.

العمر الافتراضي

انابيب UPVC / PVC يعتبر عمرها الافتراضي اكبر بكثير من الأنابيب الحديدية وكذلك الأنابيب البلاستيكية الأخرى .

ملائمة صحيا

تتمتع انابيب UPVC-PVC بملائمتها الصحية حيث أنها لا تصدأ كما في انابيب الحديد ولا تتكون فيها البكتيريا كما هو الحال في الأنابيب البلاستيكية الأخرى

الصلابة

تمتاز انابيب UPVC-PVC بالصلابة وقوة التحمل مقارنة بالأنابيب البلاستيكية الأخرى

الأمان

الأنابيب UPVC -PVC غير قابلة للاشتعال بخلاف الأنابيب البلاستيكية الأخرى

سهولة التركيب

تتميز أنابيب UPVC -PVC بسهولة وسرعة التركيب دون الحاجة لأستخدام معدات وأدوات خاصة حيث أن اللحام السائل المستخدم في توصيل الأنابيب يذيب مادة UPVC-CPVC مما يضمن اللحام الأطراف بصورة كاملة كخاصية كيميائية لاتتوفر في الأنابيب البلاستيكية الأخرى

توفير الكلفة الناتجة عن حفظ الطاقة

أن كلفة هذه الأنابيب منخفضة مقارنة بالأنابيب الأخرى لأن كلفة المادة الأولية منخفضة نسبيا بالقياس الي الطاقة المستعملة في تصنيعها.



Quality Control Department

TESTS

Several test are carried out in Alfa Alaboratories to ensure the compliance of the products acirding to quality standards:

1. RAW MATERIAL TSET

- Gelation Time
- Bulk Density
- Sleeve Analysis
- Heat Stability

2. Final Product Test

- Pressure Test.
- Impact Test.
- Chemical Resistance Test(Sulphric Acid).
- Heat Reversion Test.
- Water Absorption Test.
- Resistance to Environment Conditions
- (Extrusion) Methyle Chloride Test.
- Tensile Strength Test.
- Elongation at break Test.
- HDT / VSP / Vcat Test.
- Opacity Test.

يتم عمل اختبار الضغط للتأكد من ان الأنابيب تتحمل الضغط اللازم حسب المواصفات السعودية(14/15/1996) (1997/675) والألمانية 8061 والأمريكية ASTM D 1785 ويختلف الضغط باختلاف الأنبوب والأغراض المستخدمة له.

A pressure test IDS done to ensure pipes are manufactured according to Saudi Standard (14/15/1996) German Standarad (8061) & American Standarad (ASTM D1785).

Pressure varies depending on size & usage.



إدارة مراقبة الجودة

الاختبارات

تتم في مصنع الظاهر مجموعة من الاختبارات على الأنابيب لضمان التأكد من مطابقتها لمواصفات الجودة ومنها

1. اختبار المواد الخام والذي يشمل:

- اختبار مادة التلدن
- اختبار الكثافة الظاهرية
- حجم الحبيبات
- الثبات الحراري

2. اختبار المنتج النهائي ويشمل

- اختبار الضغط
- اختبار الصدمات
- اختبار المقاومة الكيماوية (حمض الكبريتيك)
- اختبار الأنكماش بالحرارة
- اختبار امتصاص المياه
- اختبار مقاومة الظروف الجوية
- اختبار كلوريد الميثيلين (البثق)
- اختبار قوة الشد
- اختبار الأستطالة عند الكسر
- اختبار درجة التلدن
- اختبار العتامة



يتم عمل اختبار الصدم للتأكد من أن الأنابيب تتحمل وزن الصدم اللازم حسب المواصفات السعودية والألمانية والأمريكية مع العلم بأن الوزن يزداد كلما زاد قطر الأنبوب.

Impact test is subjecting pipes to a strikers weight, which is increased proportionately to pipe diameter.

Lab Testing Facilities

Alfa Al-Arabiya Manufacturing Company have a state of the art Laboratory driven by highly qualified engineers. Since we believe on quality assurance of our product range to our respectable domestic and commercial clients.

ALFA TEST MATERIAL AND PRODUCTS ACCORDING TO VARIOUS NATIONAL & INT. STANDARDS

Name of the Test	Method	Value	Unit
Stress Test	SASO 15/1998	No Baloon @ 20°C, 1 Hours No Burst No Weep @ 60°C, 1000 Hours	-
Opacity Test	SASO 1177 / 1997	< 0.2	%
Impact Test	SASO 15/1998	No Track, No Split	-
Extrusion Test (Methyl Chloride)	SASO 15/1998	No Track (20 min)	-
Water Absorption	SASO 1177 / 1997	< 40	G / m2
Heat Reversion	SASO 15/1998	No Delamination, No Track, No Blister	-
Sulphuric Acid Resistance	SASO 15/1998	0.316 (Increases) @55°C 0.013 (Decreases)	G / 14 Days
Toxic Matters Test	SASO 15/1998	Pb (1 st Extraction) < 1 Pb (3 rd Extraction) < 0.3 Sn (3 rd Extraction) < 0.02 Ba,Cd,Zn (3 rd Extraction) <0.01	Mg / ltr
Density	ASTMD - 792	1.40 – 1.50	G / cm3
Tensile Strength	ASTMD - 638	7500	psi
Hardness	ASTMD -2240	80 + - 3	Shore "D"
Vicat Sofening Point	ASTMD -1525	< 80@ 5 kgf	°C
Heat Deflection	ASTMD - 648	78 @ 264 psi	°C



Technical & standards Data APF u-PVC Pipes

SASO – Saudi Arabian Standards Organization

SASO -14 Pipes for Portable Water of

Un-Plasticized Plastic (UPVC)

SASO -15 Method of Testing of Pipes for Portable Water of

Un-Plasticized Plastic (UPVC)

ASTM – American Standards for Testing and Materials

ASTM D -256 Impact Resistance of Plastic & Electrical Insulating Materials.

ASTM D -1785 for schedules 40 & 80.

ASTM D -2241 (SDRS).

ASTM F -441



UL – Underwriters Laboratories Inc.

UL -651 Schedule – 40 & 80 PVC Conduits.

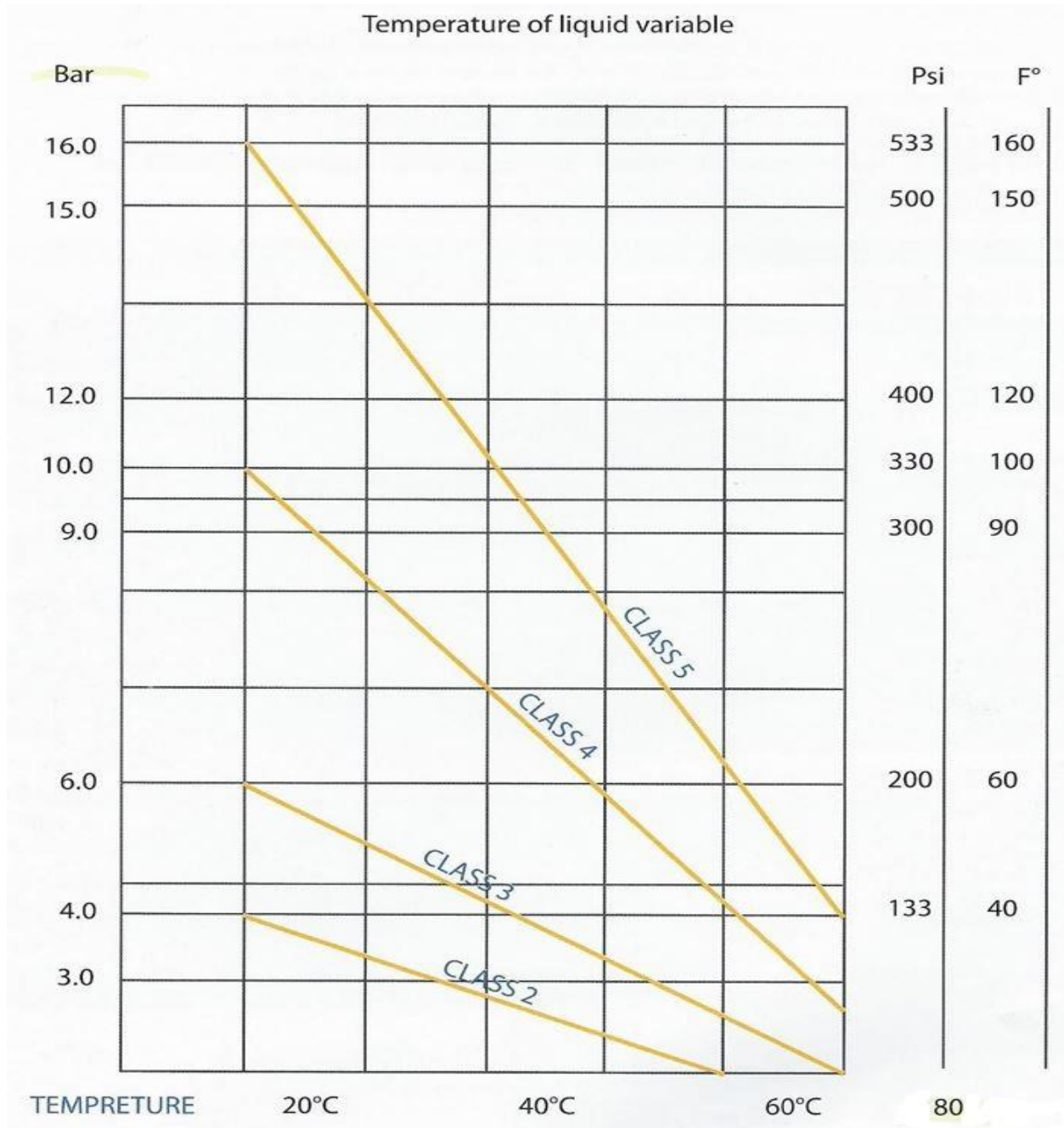
NEMA TC-2, TC-6, & TC-8, Electrical Plastic Tubing (EPT)

And Conduit (EPC-40, & EPC-80)

Physical, Mechanical, Chemical and Electrical Properties of U-PVC Pipes

	Propertis at 23°C/73°F	Standard	Values	Unit
Physical Properties	Density	ASTMD 792	1.4	g/cm ³
	Flammability	ASTMD 635	Resistance	Self Extinguishing
	Vicat softening Point	ASTMD 1525	>80	°C
	Hardness	ASTMD 2240	80+ -3	Shore "D"
	Thermal Conductivity	ASTMD 177	0.14	Wm/k/m ²
	Co-efficient of linear Expansion	ASTMD 696	6.0x10 ⁵	cm/(cm°C)
	Specific Heat	.	0.25	kcal./kg/°C
	Maximum Operating Temperature	.	60	°C
	Burning Rate	.	Self Extingulshing	In/min
	Mechanical Properties	Tensile Strength	ASTM D 638 Type 1	>50
Zode Impact		ASTM D 256/notch	0.65	ft-lbs/inch of notch
Modulus of Elasticity in Tension		ASTM D 639 Type 1	>2700	Mpa
Compressive Strength		ASTM D 695	62	Mpa
Flextural Strength		ASTM D 790 /proc.B	100	Mpa
Elongation at brake		ASTM D 638	>125	%
Electrical Properties	Yield Stress	ISO R 527	>400	kp/cm ²
	Dielectric Strength	ASTM D 149	1100	Volts/mm
	Power Factor	ASTM D 150	1.93	60cps@30°C
	Dielectric Constant	ASTM D 150	.4	60cps@20°C
Toxicity	Specific Volume Resistivity	ASTM D 257	>1014	ohm(Ω)cm
	Lead(pb)	SAS 14/1396H	<0.3	mg/L
	Tin(Sn)	SAS 14/1396H	<0.02	mg/L
	Zinc(Zn)	SAS 14/1396H	<0.01	mg/L
	Cadmium(Cd)	SAS 14/1396H	<0.01	mg/L

Pressure – Temperature Relationship



EXAMPLE (for guidance only) Reference should be made to our technical Service Department for further details.

Required Working pressure 7.0 bar with a liquid temperature of 40C therefore a 10 bar rated pipe is required.

Alfa Al-Arabia UPVC Pressure Pipes available in Socketed (Self Fit)

Alfa Al-Arabia business activities are focus on the development, manufacturing and Distribution of plastic piping systems. Our product range complies with a host of International standards. We provide solutions for the complete water cycle, energy and Power distribution, telecommunication networks and various industrial applications.

Alfa Al-Arabia is prefer Quality Consistency customer satisfaction.

Alfa Al-Arabia strives for excellence, investment in technology and engineering.

A genuine team spirit, clear objectives, ethical practices and well define goals, made all This possible.





Dimension of uPVC Pipe Based on DIN Standards (SAS14, Din 8062, ISO / DIN 4422)

NORMAL DIMENSIONS

CLASS		CLASS-2		CLASS-3		CLASS-4		CLASS-5	
Pressure in Bars		4		6		10		16	
Nominal Outside Diameter (MM)	Nominal Tolerance Diameter (MM)	Wall (mm)	Wt. Kg/ Mtr	Wall (mm)	Wt. Kg/ Mtr	Wall (mm)	Wt. Kg/ Mtr	Wall (mm)	Wt. Kg/ Mtr
16	+0.2	-	-	-	-	-	-	1.2	0.090
20	+0.2	-	-	-	-	-	-	1.5	0.137
25	+0.2	-	-	-	-	1.5	0.174	1.9	0.212
32	+0.2	-	-	-	-	1.8	0.264	2.4	0.342
40	+0.2	-	-	1.8	0.334	1.9	0.350	3.0	0.525
50	+0.2	-	-	1.8	0.422	2.4	0.552	3.7	0.809
63	+0.2	-	-	1.9	0.562	3.0	0.854	4.7	1.290
75	+0.3	1.8	0.642	2.2	0.782	3.6	1.220	5.6	1.820
90	+0.3	1.8	0.774	2.7	1.130	4.3	1.750	6.7	2.610
110	+0.3	2.2	1.160	3.2	1.640	5.3	2.610	8.2	3.900
125	+0.3	2.5	1.480	3.7	2.130	6.0	3.340	9.3	5.010
140	+0.3	2.8	1.840	4.1	2.650	6.7	4.180	10.4	6.270
160	+0.4	3.2	2.410	4.7	3.440	7.7	5.470	11.9	8.170
200	+0.5	4.0	3.700	5.9	5.370	9.6	8.510	14.9	12.800
225	+0.5	4.5	4.700	6.6	6.760	10.8	10.800	16.7	16.100
250	+0.6	4.9	5.650	7.3	8.310	11.9	13.200	18.6	19.900
280	+0.6	5.5	7.110	8.2	10.400	13.4	16.600	20.8	24.900
315	+0.7	6.2	9.020	9.2	13.200	15.0	20.900	23.4	31.500
355	+0.7	7.0	11.400	10.4	16.700	16.9	26.500	26.3	39.900
400	+0.7	7.9	14.500	11.7	21.100	19.1	33.700	29.7	50.800
500	+0.9	9.8	22.400	14.6	32.900	23.9	52.600	-	-
630	+1.1	12.4	35.700	18.4	52.200	30.0	83.200	-	-
710	+1.2	14	45.3	20.7	66.1	-	-	-	-
800	+1.3	15.7	57.2	23.3	83.9	-	-	-	-

UPVC Pipe according to ASTM S 1785 Schedule 40

Nominal Size In (Inch)	Outside Diameter		Wall Thickness		Weight Kg/M	Max Pressure Rating (Bar @ 23°C)
	Min.	Max.	Min.	Max.		
1/2"	21.24	21.44	2.77	3.28	0.24	41.38
3/4"	26.57	26.77	2.87	3.38	0.33	33.10
1"	33.27	33.53	3.38	3.89	0.48	31.03
1-1/4"	42.03	42.29	3.56	4.07	0.65	25.51
1-1/2"	48.11	48.41	3.68	4.19	0.77	22.75
2"	60.17	60.47	3.91	4.42	1.04	19.31
2-1/2"	72.84	73.20	5.16	5.77	1.65	20.68
3"	88.70	89.10	5.49	6.15	2.14	17.93
4"	114.07	114.53	6.02	6.73	3.05	15.17
6"	168.01	168.56	7.11	7.97	5.37	12.41
8"	218.70	219.46	8.18	9.17	8.11	11.03

NOTES

- The Standard length of pipe is 6 meters or as required.
- Pipe with one solvent cement socket or plain end.
- Pipe color is white.



UPVC Pipe according to ASTM S 1785 Schedule 80

Nominal Size In (Inch)	Outside Diameter		Wall Thickness		Weight Kg/M	Max Pressure Rating (Bar @ 23°C)
	Min.	Max.	Min.	Max.		
1/2"	21.24	21.44	3.73	4.24	0.31	58.60
3/4"	26.57	26.77	3.91	4.42	0.41	47.57
1"	33.27	33.53	4.55	5.08	0.61	43.43
1-1/4"	42.03	42.29	4.85	5.43	0.85	35.85
1-1/2"	48.11	48.41	5.08	5.69	1.03	32.40
2"	60.17	60.47	5.54	6.20	1.43	27.57
2-1/2"	72.84	73.20	7.01	7.85	2.18	28.95
3"	88.70	89.10	7.62	8.53	2.91	25.51
4"	114.07	114.53	8.56	9.58	4.26	22.06
6"	168.01	168.56	10.97	12.29	8.13	19.30
8"	218.70	219.46	12.70	14.22	12.40	17.23

Note: The Standard Length of Pipe is 6 meters Or as required.

Pipe Color is Grey.



Standard Dimension Ratio Pipe (SDR) uPVC According to ASTM D 2241

Nominal Size In Inch	Nominal Outside Diameter (mm)		Wall Thickness (MM) Standard Dimension Ratio (SDR)												
			41 W.P : 6.9 Bar		32.6 W.P : 8.6 Bar		26 W.P : 11 Bar		21 W.P : 13.8 Bar		17 W.P : 17.2 Bar		13.5 W.P : 21.7 Bar		
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1/2"	21.24	21.54	-	-	-	-	-	-	-	-	-	-	-	1.57	2.08
3/4"	26.57	26.77	-	-	-	-	-	-	1.52	2.03	1.57	2.08	1.98	2.49	
1"	33.27	33.53	-	-	-	-	1.52	2.03	1.60	2.11	1.96	2.46	2.46	2.97	
1-1/4"	42.03	42.29	-	-	1.52	2.03	1.63	2.13	2.01	2.52	2.49	3.00	3.12	3.63	
1-1/2"	48.11	48.41	-	-	1.52	2.03	1.85	2.36	2.29	2.80	2.84	3.35	3.58	4.09	
2"	60.17	60.47	-	-	1.85	2.36	2.31	2.82	2.87	3.38	3.56	4.06	4.47	4.98	
3"	88.70	89.10	2.16	2.67	2.74	3.25	3.43	3.94	4.24	4.75	5.23	5.87	6.58	7.37	
4"	114.07	114.53	2.80	3.30	3.51	4.01	4.39	4.90	5.44	6.10	6.73	7.54	8.46	9.49	
6"	168.01	168.56	4.11	4.62	5.18	5.79	6.48	7.26	8.03	9.00	9.91	11.10	12.47	13.97	
8"	218.70	219.46	5.33	5.97	6.73	7.54	8.43	9.45	10.41	11.66	12.90	14.45	-	-	

PRESSURE RATING 23°C

PIPE- SDR	41	32.5	26	21	17	13.5
RATING P.S.I	100	125	160	200	250	315





Alfa Al-Arabia is one the major manufacturer of PVC uPVC & HAR pipes in The Kingdom of Saudi Arabia established in 2015 to produce various kinds of PVC, uPVC and HAR pipes. One of APF main product in rigid PVC conduits according to American NEMA standard.

Material

Materials of electrical plastic conduit pipe according to (NEMA) standard from rigid Polyvinyl Chloride (PVC). The plastic compound used in manufacturing is according to ASM D 1784, and the color shell be grey color.

Dimension & sizes

NEMA TC 2 Electrical Plastic Tube (EPT) and conduit EPC- 40 and EPC – 80 sizes and dimensions enclosed, according to specification TC 2 – 1983 is shown in table# 1 .

NEMA TC –6

Plastic duct for underground installation. Sizes and dimensions is shown table#2

NEMA TC –8

Extra strength plastic duct for underground installation. Sizes and dimensions is shown table#3

To ensure and maintain high quality of products, Alfa have a high-experienced quality control and strict production control systems established in the quality control laboratories using latest technology tools and equipment to ensure the best and high quality products.

Chemical Resistance

Unlike Metallic conduits, APF PVC conduits are totally resistance to corrosive fluids, wide range of acids, alkaline soil and all king of water.

Usages

Rigid PVC conduits being a non-conducer of electricity are ideal media designed to suit for concrete encasement as well as for direct burial applications of power supply, telecommunications, street lightening and other network distributions.

Dimension of PVC Tubing & Conduit (based on NEMA TC2)

Nominal Size In (Inch)	Nominal Size In (Inch)	EPT - A - PVC		EPC - 40 - PVC		EPC - 80 - PVC	
		Wall Thickness (Min) MM	Wall Thickness (Max) MM	Wall Thickness (Min) MM	Wall Thickness (Max) MM	Wall Thickness (Min) MM	Wall Thickness (Max) MM
1/2"	21.34	1.52	2.03	2.77	3.28	3.73	4.24
3/4"	26.67	1.52	2.03	2.87	3.38	3.91	4.42
1"	33.40	1.52	2.03	3.38	3.89	4.55	5.08
1-1/4"	42.16	1.78	2.29	3.56	4.04	4.85	5.43
1-1/2"	48.26	2.03	2.54	3.68	4.19	5.08	5.69
2"	60.32	2.54	3.05	3.91	4.42	5.54	6.20
3"	88.90	3.18	3.30	5.49	6.15	7.62	8.53
4"	114.30	3.81	3.68	6.02	6.73	8.56	9.58
6"	168.28	-	4.32	7.11	7.97	10.97	12.29

EPT - A Electrical Plastic Tubing - Designed to be encased in concrete.

EPT - 40 Electrical Plastic Conduit - Designed for normal duty application.

EPT - 80 Electrical Plastic Conduit - Designed for heavy duty application.

All EPC - A - PVC and EPC - 40 - PVC and EPC - 80 - PVC - will be gray color

PVC Pipes Electrical Conduits

UPVC conduits rigid, light weight no combustion, excellent electrical according to BS 4607 and BS 6099 SASO 254 /1984

انابيب (يوبي في سي) كهرباء قوية وخفيفة الوزن ولا تشتعل صنعت حسب المواصفات الغنية BS 4607 and BS 6099 SASO 254 /1984

OUTSIDE DIAMETER	WALL THICKNESS	
	LIGHT GRADE	HEAVY GRADE
16 mm	1.2 mm	1.7mm
20mm	1.5 mm	1.8 mm
25mm	1.6 mm	1.9 mm
32mm	1.9 mm	2.3 mm
40mm	2.0 mm	2.5 mm
50mm	2.3 mm	3.2 mm



Storage and Handling

PVC / UPVC / CPVC pipes and fittings should ideally be stored in a well ventilated and shady area. However when pipe need to be stored in the sun and to protect from UV light, they should be covered in a way which leaves the end of pipes open for air to pass through. This should keep heat accumulation to minimum.

A six month exposure to sun light will change the color of UPVC pipe. This will be limited to 0.15 mm in depth after approximately 12 month exposure

Elstomeric rings should be stored in the shade and fitted in the socket when pipe in the trench and ready for jointing.

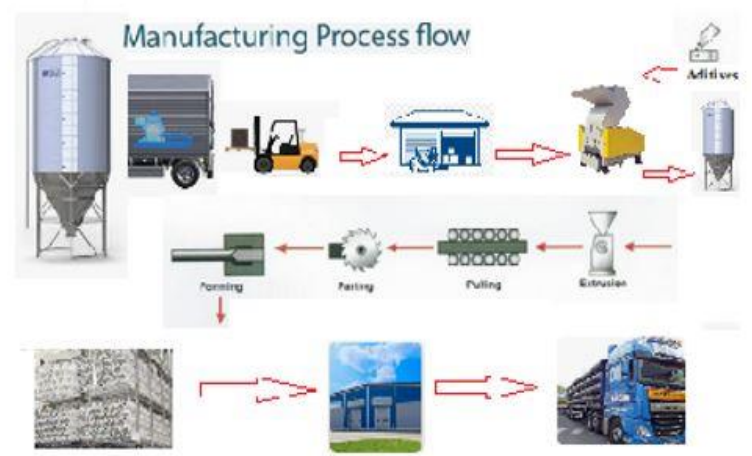
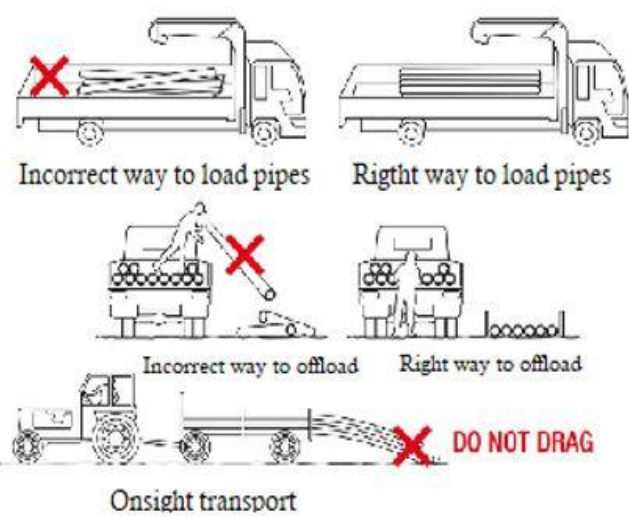
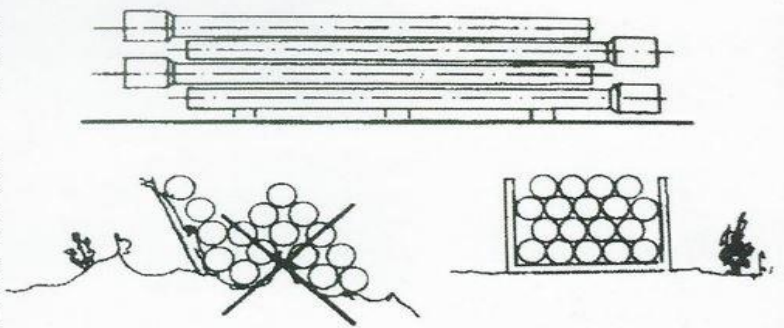
Solvent cement and cleaning fluid should always be stored in cool and dry places

Pipe should always be stored on levels and flat ground which is free from stones and sharp projections. Wooden planks with a minimum widths of 75 mm (3inches) whose centers are one meter (yard) apart should be used.

Stacking of individual pipes should not be more than one meter high. Stacking of bundles of pipes is possible up to three meter high. Nested pipes should be kept at bottom of stack or in a lower bundle .Loose pipe should have side support which are not more than 1.5 meter apart. For heavier pipes (160 mm or 6" and above),bundles should not be stacked more than two meters high .The principal

is to reduce the load on lower rows of pipe as much as possible either by having smaller and lighter pipe on top and distributing the weight of the upper rows of pipes as much as possible by using wooden planks or bundle frames.

Pipes and components should be unloaded from Trucks by hand in order to avoid damage. Forklift trucks will have to be used for bundles and large unit loads.



CPVC PIPES

Salient Features & Benefits

ALDHAHER CPVC Pipes and fittings come replete with a range of features and benefits

- Suitable for use upto 93°C
- No Scaling
- Detain bacterial growth
- Perfect for hot and cold water usage
- Life span of more than 50 years
- High impact strength and durability
- Excellent resistance to chemical
- Smooth internal surface
- Energy saving
- Fire-resistant and self extinguishing
- Light in weight
- Easy to install
- 100% leak-proof

Applications

ALDHAHER range of CPVC pipes & fittings can be used for an array of application, including

- Hot and Cold water distribution in residential, commercial and industrial spaces.
- Carrying potable water and edible fluids,
- Transportation of chemical and other hot, corrosive fluids and.
- Solar heating, central heating and radiant floor heating applications.

Dimension of CPVC Pipes Based on ASTM F441 Pressure Rating

Applies for Water at 23 °C and for Unthreaded Pipes SASO 1517/1999

Nominal Size In Inch	Outside Diameter		Schedule 80 Minmum Wall Thickness		Nominal Weight Kg/M	MaXIMUM Working Pressure @73 °F	
	Inch	mm	Inch	mm		PSI	Mpa
1/2"	0.840	21.340	0.147	3.73	0.337	850	5.86
3/4"	1.050	26.670	0.154	3.91	0.457	690	4.76
1"	1.315	33.401	0.179	4.55	0.671	630	4.34
1 1/4"	1.660	42.164	0.191	4.85	0.928	520	3.59
1 1/2"	1.900	48.260	0.200	5.08	1.130	470	3.24
2"	2.375	60.325	0.218	5.54	1.560	400	2.76
3"	3.500	88.900	0.300	7.62	3.180	370	2.55
4"	4.500	114.300	0.337	9.52	4.650	320	2.21
6"	6.625	168.275	0.432	10.97	8.870	280	1.93

Operating Temperature	(°F)	70 - 80	90	100	110	115	120	125	130	140	150	160	170	180	200
	(°C)	23 - 27	32	38	43	46	49	52	54	60	66	71	77	82	93
% of Working Pressure or derating factors		1.00	0.92	0.85	0.77	0.74	0.7	0.66	0.62	0.55	0.47	0.4	0.32	0.25	0.18





Material Data (Properties) of Alfa Pipes

All Values at (73 °F) 23 °C

Properties	Test Method as per ASTM	Unit	Values
General Properties			
Specific Gravity	D-792	g/cm ³	1.55
Water Absorption	D-570/24Hrs	%	0.03
Cell Designation	D-1785		23447
Flame Spread E-84			<25
Poisson's Ratio @ 73 °F			0.38
Friction Co-efficient	Hazen-William	(Factor) C	150
Mechanical Properties			
Tensile Strength	D-638 / Type1	PSI	8000
		MPA	55
Modulus of Elasticity In Tension	D-638 / TYPE1	PSI	>360,000
		MPA	>2500
Compressive Strength	D - 695	PSI	10,100
		MPA	70
Flexural Strength	D - 790 proc B	PSI	15,100
		MPA	104
Izod Impact	D - 256 / NOTCH	Ft-Lbs/In of notch	1.5
		JM	80
Hardness (Rockwell)	D - 2240	Durometer "D"	80+_3
	D - 785	Rockwell "R"	119
Thermal Properties			
Coefficient of Thermal Linear Expansion	D - 696	in/in/°F	3.4x10 ⁻⁵
	D-696	cm/(cm°C)	6.3x10 ⁻⁵
Thermal Conductivity	D - 177	BTU/hr/ft ² /°F/in	0.95
	D - 177	Wm/*K/m ²	0.14
Heat Delection Temp @ 264 PSI (1.82 Mpa)	D - 648	°C	103
Vicat Softening Temp.	D - 1525 (rate A)	°C	95
Electrical Properties			
Dielectri Strength			1250
Dielectri Constant 60Hz @ 30 °F			3.70
Specific Volume Resistivity @ 73 °F			3.4 x 10 ¹⁵
Flammability Properties			
Flammability	D - 635	Resistance	Self-Extinguishing
Rate of burning	D - 635	S	<10
Extent of burning	D - 635	mm	<15
Flammability Rating	UL-94/0.062"	Rating	V - 0



Certificate of Registration

This is to certify that the Quality Management System (QMS) of

Alpha Al-Arabia Plastic Factory Co.

3rd Industrial City, Jizan Rd, Jeddah 22766, Kingdom of Saudi Arabia.

Has been successfully assessed as per the requirement of

ISO 9001: 2015

For the scope of

Manufacturing and Distribution of PVC, CPVC & UPVC Plastic Pipes.

Initial Registration Date	:	07 - 04 - 2024
Certificate Issue Date	:	07 - 04 - 2024
1 st Surveillance Date	:	06 - 04 - 2025
2 nd Surveillance Date	:	06 - 04 - 2026
Expiry Date	:	07 - 04 - 2027

Certificate Registration Number	:	CN-QMS-1525343
Accreditation Number	:	CB - MS - 5638


Managing Director



Accredited by United Accreditation Foundation (UAF)
400 North Center DR, STE 202, Norfolk, VA 23502
United States of America

<https://uafaccreditation.org/>



<https://iafcertsearch.org/>




<https://anssystemcertification.com/>

Visit the websites to verify your certificate.



This certificate is the property of ANS System Certification Private Limited
& must be returned on request.



JORDAN
MINERALS EST.

TECHNICAL
DATA SHEET

PRODUCT: JM20C

■ PRODUCTS DESCRIPTION:

Surface Coated Fine Ground Calcium Carbonate powder with excellent dispersion produced from microcrystalline rhombohedral high purity white limestone.

■ APPLICATIONS

Plasticized PVC, Profiles, Floor coverings, PVC Plastisols, Rubber, Primers.

■ CHEMICAL ANALYSIS OF THE RAW MATERIAL

Oxide	Value	Method
CaCO ₃	≥ 99.61%	(BSI 795)
MgO	< 0.70%	
Fe ₂ O ₃	0.037%	
Al ₂ O ₃	< 0.1%	
P ₂ O ₅	0.01%	
TiO ₂	0.01%	
SiO ₂	0.06%	
CaO	55.82%	
L.O.I	44.15%	
HCl Insoluble Content	0.23%	

■ TECHNICAL DATA OF THE PRODUCED MATERIAL

- Packed bulk density 1100 kg/m³ (ISO 787/11)
- Moisture when packed 0.15 % (ISO 787/2)
- PH Value 8.7 (ISO 787/9)
- Oil absorption 20g/100g (ISO 787/5)

■ PHYSICAL PROPERTIES OF THE RAW MATERIAL

- Density 2650 kg/m³ (ISO 787/10)
- Hardness (Moh's) scale 3
- Refractive index 1.59

■ FINENESS

- Residue on a 40 µm sieve 0.01 %
- Top cut (d 98%) 17 µm
- Mean particle size (d50%) 4 µm
- Particles < 2 µm 30 %







The above data are average values from routine measurements on untreated material and can't be binding.

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LEAD STABILIZERS

AKROPAN 11084-1 FX

AKROPAN 11084-1 FX is a Lead based stabiliser which is used in all non-critical color pigmented applications.

It is especially suitable for pressure pipes and sewage pipe extrusions.

If filler content is increased an increased dosage of stabilizer and/or the addition of lubricants are recommended.

AKROPAN 11084-1 FX is very effective heat stabilizer with high stability and well balanced internal and external lubrication.

Application

Pressure pipe
Sewage pipe

Recommended dosage

Depends on the formulation, processing conditions and the type of product; usually in the range of 2,5 to 3,5 phr.

Handling

Wear suitable mask, protective clothing, gloves and eye/face protection.

Avoid release to the environment. Refer to special instructions/safety data sheet.

A material safety data sheet for the safe handling of this product is available on request.

This technical data sheet is not dispensing with the responsibility of the user to follow appropriate legal directives such as regulations regarding food stuff, dangerous substances and safety at working places.

Nothing in this technical data sheet can be construed as freedom to infringe patents of 3rd parties or to breach regulations and laws.

Date 30-11-2020

Definition

Lead Based onepack stabilizer

Chemical and physical properties

Appearance (Physical Form)	Flake
Appearance (Color)	White
Ash (800 ° C)	31 -34

Mixing

A minimum temperature of 120°C is recommended for optimal dispersion in the dryblend.

Standard packaging

25 kg net multilayer paper bags or 1 mt big-bag

Storage

Store in a cool and dry area, away from rain, snow and direct sun light.

Shelf life

12 months

The information in this technical data sheet is based on our own knowledge and personal experience. It should therefore only be regarded as a guide and not be taken as any form of guarantee. In the case of specific queries, please contact our technical service.

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Technical Data Sheet ArabianCarb®AC5ST

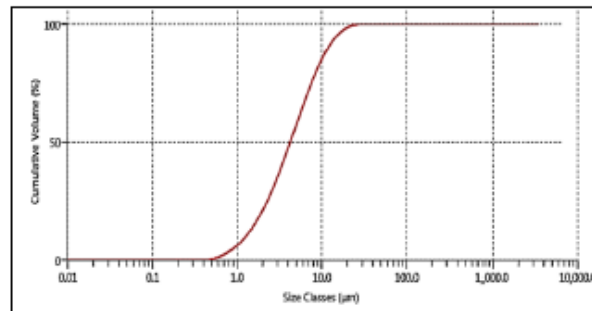
الكربونات العربية
Arabian Carbonate



Production Site:	Jeddah – Saudi Arabia. (Certified ISO 9001, ISO 14001, and ISO 45001)	
Product Description:	Surface Treated, very fine, calcium carbonate powder manufactured from high purity white limestone.	
Chemical Analysis:	CaCO₃	>99.0%
	MgO	<0.20 %
	Fe₂O₃	<0.01%
	SiO₂	<0.10 %
	Al₂O₃	0.05%
	L.O.I	43.67 %
*Physical Properties:	Residue on 45 µm sieve (ISO 787/7)	0.01%
	Top cut (d98%)	20 µm
	Mean particle size (D50%)	4.0 µm
	Particles < 2 µm	25 %
	Brightness (Ry, C/2°, DIN 53163) Min.	96%
	Whiteness CIE L*,a*,b* (DIN 6167)	98.0/0.4/1.3%
	Moisture ex works (ISO 787/2)	0.3 %
	Loose bulk density (ISO 787/11)	0.95 g/cm³
	pH value (ISO 787/9)	9.5
	DOP absorption (ISO 787/5)	15.5 g/100g
	Stearic Acid% (±0.1)	0.8 %
	* Measured on untreated material.	
Packing:	25 kg,Kraft bag, Big-Bag1000 Kg and Bulk truck 20 000 Kg.	

Main Applications:

- Plastic**
-Plasticized PVC.
-Cables
-PVC Profile.
-PVC Pipes
- Paint**
-Master batch.
-Lacquer paints.



PARTICLE SIZE DISTRIBUTION (Malvern Mastersizer 3000)

Arabian Carbonate Company: Jeddah Modon 3rd Industrial City Saudi Arabia
P.O Box: 1563 Jeddah 21441, Saudi Arabia
Website: www.arabiancarbonate.com Mail: Sales@arabiancarbonate.com
Telephone: +966122892343

The information provided are based on technical data that Arabian Carbonate believes to be reliable, however Arabian Carbonate makes no representation or warranty as to the completeness or accuracy thereof and Arabian Carbonate assumes no liability resulting from its use or for any claims, losses, or damages of any third party. Recipients receiving this information must exercise their own judgment as to the appropriateness of its use, and it is the user's responsibility to assess the material's suitability for a particular purpose prior to such use.



TECHNICAL DATA SHEET

1) NAME: SUPIGMENTI BLUE B-06

Chemical Structure: Sodium aluminum sulphosilicate

Color Index: Pigment Blue 29

Application: Plastic

Physical Form: Blue Powder

2) PHYSICAL PROPERTY

Specific Gravity: 2.5 (g/cm³)

Bulk Volume: 0.8~1.0 (l/kg)

Specific Surface: 14(m²/g)

Conductivity: <400 μ S/cm

PH value: 5~8

Heat Stability: 350 (°C)

3) Fastness Property

Acid Resistance 1

Alkali Resistance 4-5

Light Fastness 7-8

This information is based on our best knowledge and experience. Since we do not have control over the exact use of our products or other factors that may affect your specific process and application, our providing this data does not relieve you of the responsibility of carrying out your own tests and experiments prior to use. Therefore, we make NO WARRANTY, EITHER OF MERCHANTABILITY OR OTHERWISE ABOUT THE FITNESS OF OUR PRODUCTS FOR A PARTICULAR APPLICATION. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.



Prepared by Mr.ZHU Yaming,
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Tel: 0086-21-61023838

Shanghai Supercolor Chemical Technology Co.,Ltd
brightzh@supercolor.cn URL: www.supercolor.cn
Fax:0086-21-51026050 Page: 1/1

**MASCID 1801****TRIPLE PRESSED STEARIC ACID****1801-0-MM00-0****SPECIFICATIONS**

	Method	Range
Acid Value (mg KOH/g)	AOCS Te 1a-64	206 - 212
Saponification Value (mg KOH/g)	AOCS Tl 1a-64	207 - 213
Iodine Value (g/100g)	AOCS Tg 1a-64	0.5 Max
Titre °C	AOCS Tr 1a-64	54 - 57
Colour, Lovibond 5 ¼"	LICO Colorimeter	0.3R 2.0Y Max
Fatty Acids Composition, %	ISO 5509	
Lauric & Myristic	C12 & C14	3 Max
Palmitic	C16	55 - 60
Stearic	C18	39 - 45
Others		1 Max

These specifications apply to an average sample covering the goods when they leave our factory.



No.00080050640599

**PT. MUSIM MAS**

Jl. Oleo, Kawasan Industri Medan II
Saentis - Percut Sei Tuan, Deli Serdang
Medan 20371 - Indonesia

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Website: www.musimmas.com
E-Mail : oleo@musimmas.com

REVISION NO. 00

DATE OF ISSUE : 21 FEBRUARY 2013

All data including the formulations and procedures discussed herein are believed to be correct. However, this should not be accepted as a guarantee of their accuracy, and confirming tests run in your should be own plant or laboratory. No statement should be construed as a recommendation for any use which would violate any patent rights. Sales of all products are pursuant to terms and conditions included in Musim Mas sales documents. Nothing contained herein shall constitute a guarantee or warranty with respect to the products described or their use. Safety information regarding these products is contained in their Material Safety Data Sheets. Users of these products are urged to study and use this information



CORAX® N330

Product Information

PI 111

1. General Description

Carbon Black as a reinforcing filler in rubber compounds.

Physico-Chemical Properties			
Iodine adsorption	mg/g	82	ASTM D1510
STSA	m ² /g	76	ASTM D6556
OAN	ml/100 g	102	ASTM D2414
Heating loss at packing	%	≤ 1.0	ASTM D1509
Sieve residue 325 mesh	ppm	≤ 500	ASTM D1514
Individual pellet hardness avg. 1.4-1.7 mm	g	≤ 45	ASTM D5230
Pour density	g/dm ³	370	ASTM D1513

2. Chemical Description

Amorphous carbon.

3. Application

CORAX® N330 is one of the most important basic Carbon Blacks among the reinforcing Furnace Blacks. When used in rubber, it offers well balanced properties of green compounds and vulcanizates and a good compromise between rubber reinforcement and hysteresis.

Application fields are tire tread compounds, subread compounds as well as mechanical rubber goods for high severity application.

4. Storage Conditions

Carbon Black should be stored under cool and dry conditions. Please refer to our Product Safety Data Sheet.

5. Forms of Supply

Bulk delivery
FIBC - Flexible Intermediate Bulk Container (Big Bag)
Other packaging upon demand.

6. Product Safety

Information concerning the safety of this product is listed in the corresponding Safety Data Sheet, which will be sent with the first delivery or upon updating.

We recommend that information concerning the product safety of our Carbon Blacks be obtained and carefully read prior to their use.

Registration Status

Registration number CAS No 1333-86-4

Australia	AICS	registered
Canada	DSL	registered
China	IECS	registered
Europe	EINECS REACH	215-609-9 registered
Japan	ENCS	5-3328
Korea	KECI	KE-04682
New Zealand	NZIoC	HSNO approved
Philippines	PICCS	registered
USA	TSCA	registered



POLYMERS

SABIC® PVC 67S

Suspension Polyvinyl Chloride for Rigid Extruded Products

PRODUCT DESCRIPTION:

PVC 67S is designed to give an easy processing product for rigid extrusion applications. It is manufactured by suspension polymerization.

PVC 67S has following properties that makes it suitable for rigid PVC extrusion with high production rates:

- Very low dust-level (Easy handling and conveying)
- High bulk density (Good material compaction and high production rates)
- Narrow particle size distribution (Easy processing)
- High melt strength (Good for fast processes like pipe and profile extrusions)
- High tensile properties (Good end product performance)

CHARACTERISTICS:

PVC 67S is designed to give an easy processing product for extrusion rigid applications since it has moderate melt viscosity with high melt strength. It is mainly designed for pipe and profile products.

TYPICAL APPLICATIONS:

- Rigid pipes (Pressure and non-pressure)
- Corrugated tubes and conduits
- Rigid profiles

TYPICAL DATA:

PROPERTIES	Unit	Value ⁽¹⁾	Test Method
K-VALUE	-	67	DIN 53726
Apparent Bulk Density	kg/m ³	570	ASTM-D 1895
Particle Size distribution			
• Retained on mesh 60 (250 µm)	% max	15	SABIC (PVC 003)
• Passing through mesh 200 (74 µm)	% max	4	
Volatile Content	% max	0.3	ASTM-D 3030

(1) Typical values; not to be construed as specification limits.

PACKING & STORAGE:

PVC 67S is delivered in 25 kg bags. PVC resin should be stored in a manner to prevent a direct exposure to sunlight. The storage area should also be dry and preferably don't exceed 50°C. SABIC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change and inadequate product performance. It is advisable to process PVC resin within 6 months after delivery.



山东祥生新材料科技股份有限公司
 SHANDONG XIANGSHENG NEW MATERIALS TECHNOLOGY CO.,LTD.
 WANGGAO INDUSTRIAL GARDEN, SHOUGUANG CITY, WEI FANG SHANDONG PROVINCE, CHINA
 Tel: +86 532 85039257 Fax: + 86 532 85039258 Web: www.suneight.com

Technical Data Sheet

Chlorinated Polyethylene CPE 135A

1. Product Performance and Usage

CPE is made from high-density polyethylene.

It is the main PVC impact modifier with double performance of the plastic and rubber. It can effectively improve toughness and impact resistance and anti-aging of rigid PVC products, to increase the melting point of PVC.

Excellent performance as a result of the above CPE is widely used in PVC plastic profile, sheet, pipe, pipe fittings, waterproof material, wire and cable jacket, seals, and PVC plastic such as the extrusion of laminated rubber.

2. Specification

Item	Unit	Index
Chlorine Content	%	35±2
Melting Enthalpy	(J/g)	≤2.0
Volatile content	%	≤0.40
Residue on Sieve (0.9mm Sieve)	%	≤ 2.0
Impurity	Qty/100g	≤50
Ash Content	%	≤4.5
Tensile strength	MPa	≥8.0
Shore Hardness A (Shore A)	-	≤65

3. Package and Storage In two-layer bag with the interior in plastic and the exterior in woven. The weight of each bag is 25kg. The product shall be sealed and stored in the dry and ventilated place to prevent from rain, high temperature and strong sunlight.



TO WHOM IT MAY CONCERN

Subject: ACCOUNT DETAILS FOR ALL CUSTOMERS

Referring to the above subject, kindly send the NEW BANK'S DETAILS related to Alfa Al-Arabia to all customers so that they make directly transfer to Alfa Al-Arabia's active account as below:

Account Title: Alfa Al-Arabia Manufacturing Co.
Account No.

SNB Bank: A/C No. 00700001001201
(البنك الأهلي السعودي) IBAN: SA7910000000700001001201

ALINMA BANK: A/C No. 68204760007000
(مصرف الائماء) IBAN: SA9705000068204760007000

Address: Jeddah Saudi Arabia

Your cooperation will be highly appreciated.
Thanks & Regards.

Finance Department
Alfa Al-Arabia Manufacturing CO.





ALFA AL-ARABIA
Manufacturing co.
Industrial City-3 Jeddah

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Mob. + 966 59 5692094

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www.alfaalarabia.com



شركة الفا العربية للصناعة

Alfa Alarabia Manufacturing Co.
www.alfaalarabia.com