۱ –مشخصات کیفی محصولات شرکت پتروشیمی بندر امام

a. S-PVC
b. LDPE
c. HDPE
d. SBR
e. BENZENE
f. ETHANE RECOVERY
g. HYDROCHLORIC ACID
h. MIXED- XYLENE
i. MTBE
j. OLEFINE
k. PARA-XYLENE
l. SODIUM HYPOCHOLORITE
m. VCM

S-PVC

S-PVC	GRADE			test method			
	S-6058	S-6558	S-7054	DIN	ISO	ASTM	HULS
K-Value	59-61	64-66	69-71	53726			
Viscosity number (cm3/gr)	85-92	101-109	120-129	53726			
Bulk density (g/l)	550-610	540-600	445-505	53466			
Sieve analysis							
> 63 µm (%)	90 min	90 min	85 min	53734			
> 250 µm (%)	5 max	5 max	0.5 max	53734			
Porosity (plasticiser absorption)(gr DOP/100gr PVC)	10 min	30 min	30 min			D-3367	
Volatile matter (%)	0.2 max	0.2 max	0.2 max		1269		
Flowability (S/150 g) (10 mm nozzle)	4 max	4 max	4 max				6.1
Dark resin particles	30 max	30 max	30 max				6.7
Fish eyes	5 max	5 max	5 max				6.9
Sulfate ash (wt%)	0.05 max	0.05 max	0.05 max	53568/2			

کاربردهای S-PVC

Applications	با نرم کننده			بدون نرم کننده		
	EXTRUSION	INJECTION	CALENDERING	EXTRUSION	INJECTION	CALENDERING
Grade S-6058			تهیه کامپاندهای پلیمری	فیلمهای شفاف، ورق روکش سیم	تزریقی ، اتصالات، کابینت، برقی، قطعات ساختمان	فیلم و کف پوش
Grade S-6558				لوله های سخت، فیلمهای شفاف	تزریقی ، اتصالات	
Grade S-7054	شیلنگ، اتصالات، کابل ارتجاعی، روکش کابل ، ورق و سیم و فیلم	قطعات تزریقی	فیلم و کف پوش			

TYPE	PRODUCT	PROPERTIES	MFI (190°C/2.16 KG)	DENSITY	SOFTENING POINT	HAZE	GLOSS@60°C	Elongation @Break(MD)	Elongation @Break(TD)	tensile @Break(MD)	dart impact
LDPE (film grade)	(LDPE)LF0200	Test Method	ASTM D-1238	TSTM 209 B	ASTM D-1525	ASTM D-1003	ASTM D-523	ASTM D-882	ASTM D-882	ASTM D-882	ASTM D-1709
		Value	1.8-2.2	0.9190-0.9225	92-96	15 MAX	60 min	330 min	600 min	160 min	100 min
		Unit	gr/10 min	gr/ml	°C	%	gu	%	%	kg/cm2	gr
	(LDPE)LF0450	PROPERTIES	MFI (190°C/2.16 KG)	DENSITY	HAZE	GLOSS@60°C	Vicat SOFTENING Temp	Tensile on film	Film Elongation	tensile on sheet	Sheet Elongation
		Test Method	ASTM D-1238	TSTM 209 B	ASTM D-1003	ASTM D-523	ASTM D-1525	ASTM D-882	ASTM D-882	ASTM D-638	ASTM D-638
		Value	4-5	0.9190-0.9225	12 MAX	70 min	92-94	170 min	250 min	80 min	350 min
		Unit	gr/10 min	gr/ml	%	gu	°C	kg/cm2	%	kg/cm2	%
	(LDPE)LH0050	PROPERTIES	MFI (190°C/2.16 KG)	DENSITY	Vicat SOFTENING Temp	Elongation @Break(MD)	Elongation @Break(TD)	tensile @Break	HDT	dart impact	
		Test Method	ASTM D-1238	TSTM 209 B	ASTM D-1525	ASTM D-882	ASTM D-882	ASTM D-882	ASTM D-648	ASTM D-1709	
		Value	0.43-0.57	0.9170-0.922	93-97	280 min	550 min	230 min	52-64	130 min	
		Unit	gr/10 min	gr/ml	°C	%	%	kg/cm2	°C	gr	
	(LDPE)LH0075	PROPERTIES	MFI (190°C/2.16 KG)	DENSITY	Vicat SOFTENING Temp	Elongation @Break(MD)	Elongation @Break(TD)	tensile @Break	HDT	dart impact	
		Test Method	ASTM D-1238	TSTM 209 B	ASTM D-1525	ASTM D-882	ASTM D-882	ASTM D-882	ASTM D-648	ASTM D-1709	
		Value	0.68-0.58	0.9190-0.9225	93-97	300 min	450 min	170 min	30-36	120 min	
		Unit	gr/10 min	gr/ml	°C	%	%	kg/cm2	°C	gr	
	(LDPE)LH0030	Test Name	MFI	DENSITY	Vicat SOFTENING Temp	Tensile @Break(TD) min	Tensile @Break(MD) min	Elongation @Break(TD) min	Elongation @Break(MD) min	Brittlness Temp.max	Dielectrik Constant
		Test Method	ASTM D-1238	TSTM 209 B	ASTM D-1525	ASTM D-882	ASTM D-882	ASTM D-882	ASTM D-882	ASTM D-748	ASTM D-150
		Unit	gr/10 min	gr/ml	°C	kg/cm2	kg/cm2	%	%	°C	KV
		Quantity	0.25-0.35	0.9190-0.9225	93-97	150	250	500	290	<-90	65-100

کاربردهای LDPE

TYPE	PRODUCT	Application
film	(LDPE)LF0200	فیلم و یا لایه مورد استفاده برای تولید کیسه های کوچک با قابلیت عبور دادن نور در حد مطلوب
	(LDPE)LF0450	بسته بندی مواد خوراکی
	(LDPE)LH0050	استفاده پوششی برای مصارف سنگین از قبیل استفاده در کارهای صنعتی و زراعتی
	(LDPE)LH0075	فیلم و یا لایه برای بسته بندی مصارف خانگی و کیسه های کوچک
	(LDPE)LH0030	روکش کابلهای مخابراتی

HDPE

type	PRODUCT	PROPERTIES	MFI (190°C/2.16KG)	DENSITY	IZOD Impact Strenght	Tensile Strenght @Break	Elongation	Yellow Index	Ash Content	Volatile Matter
BLOW MOLDING	HDPE(HB 0035)	Test Method	ASTM D-1238	ASTM D-1505	ASTM D-256	ASTM D-638	ASTM D-638	ASTM D-1925	ASTM D-1063	ASTM D-1960
		Value	0.28-0.43	0.959±0.003	25 min	290 min	900 min	-5 max	0.06 max	0.05 max
		Unit	gr/10 min	gr/ml	kg.cm/cm	kg/cm2	%	-	wt.%	wt.%

Application
لوازم خانگی، اسباب بازی و لوازم بهداشتی

SBR

PRODUCT	PROPERTIES	Volatile Matter	Ash	Organic Acid	Soap	Bound Styrene	Raw Viscosity (ML 1+4 @ 100°C	Compound Viscosity (ML 1+4 @ 100°C	tensileensile Viscosil	Ultimate Elogation (35 Minutes Cure)	300% Modulus (35 Minutes Cure)
SBR 1500	Test Method	ASTM D-1416	ASTM D-1416	ASTM D-1416	ASTM D-1416	ASTM D-1416	ASTM D-1646	ASTM D-1646	ASTM D-412	ASTM D-412	ASTM D-412
	Value	0.75 max	1.5 max	5-7.25	0.5 max	22.5-24.5	46-58	84 max	250 min	470 min	119-159
	Unit	%wt	%wt	%wt	%wt	%wt	-	-	kg/cm2	%	kg/cm2
SBR 1502	PROPERTIES	Volatile Matter	Ash	Organic Acid	Soap	Bound Styrene	Raw Viscosity (ML 1+4 @ 100°C	Compound Viscosity (ML 1+4 @ 100°C	tensileensile Viscosil	Ultimate Elogation (35 Minutes Cure)	300% Modulus (35 Minutes Cure)
	Test Method	ASTM D-1416	ASTM D-1416	ASTM D-1416	ASTM D-1416	ASTM D-1416	ASTM D-1646	ASTM D-1646	ASTM D-412	ASTM D-412	ASTM D-412
	Value	0.75 max	1.5 max	4.75-7	0.5 max	22.5-24.5	46-58	84 max	250 min	350 min	167-207
	Unit	%wt	%wt	%wt	%wt	%wt	-	-	kg/cm2	%	kg/cm2
SBR 1712	PROPERTIES	Volatile Matter	Ash	Organic Acid	Soap	Bound Styrene	Raw Viscosity (ML 1+4 @	Compound Viscosity (ML 1+4 @ 100°C	tensileensile Viscosil	Ultimate Elogation (35 Minutes Cure)	300% Modulus (35 Minutes Cure)
	Test Method	ASTM D-1416	ASTM D-1416	ASTM D-1416	ASTM D-1416	ASTM D-1416	ASTM D-1646	ASTM D-1646	ASTM D-412	ASTM D-412	ASTM D-412
	Value	0.75 max	1.5 max	3.9-5.7	0.5 max	22.5-24.5	42-52	62 max	200 min	530 min	79-109
	Unit	%wt	%wt	%wt	%wt	%wt	-	-	kg/cm2	%	kg/cm2

Application	
SBR 1500	تایر وتیوب، روکش لاستیک، تسمه نقاله، انواع تسمه صنایع مکانیکی و کابل
SBR 1502	پوشش کف ساختمان، صنایع کفش، تایر دوچرخه، اسباب بازی، تایر، قابل مصرف در صنایع مکانیک و کابل
SBR 1712	تایر ، روکش تایر، تسمه نقاله، صنایع کفش، لاستیک صنعتی، انواع شیلنگ

BENZENE

products	properties	Benzene	Toluene	Non Aromatics	Density at 15.6 C	appearance	Color Pt-Co Scale	Acid Wash Color	Acidity	
Benzene	Test Method	D-4492	D-4492	D-4492	D-4052	Visual	D-1209	D-848	D-847	
	value	99.9 min	150 max	700 max	0.882 0.886	clear free of haze/sediment	10 max	1 max	no free acid	
	unit	wt.%	wt.ppm	wt.ppm	gr/cm3				mgr NaOH/100ml	
	Copper Corrosion	**Total Sulfur**	**Total Chlor**	**Br. Index**	**H2S & SO2 Content**	**Distillation Range**	**Solidification Point**	**Water Content**	**Thiophene**	**Methyl Cyclo hexane**
Test Method	D-849	UOP 727	IPAC/81	IP-129	D-853	D-850	D-852	D-1064	D-1085	D-4452
value	No.1a	1 max	2 max	10 max	free of h2s/so2	1 max	5.45 min	200 max	1 max	200 max
unit		wt.ppm	wt.ppm	mgr/100gr		C	C	WT.PPM	WT.PPM	WT.PPM

ETHANE RECOVERY

TYPICAL TEST	UNIT	SPECIFICATION	TEST METHOD
METHANE	MOL%	.0499 max	G.C
CO2	MOL%	0.17 max	G.C
ETHANE	MOL%	98.9891 min	G.C
PROPANE	MOL%	.75 max	G.C
H2O	MOL%	0.0585	SHAW DEW POINT
COS	MOL%	0.0001	

Hydrochloric Acid

Product	Properties	HCL Purity	Iron,Fe	Free Chlorine, Cl2
Hydrochloric Acid	Test Method	روش کارخانه ای	STD Method Vol.2	DE NORA
	Value	30 min	7 max	20 max
	Units	wt.%	wt.ppm	wt.ppm
APPLICATION				
تولید جوهر نمک				
صنایع حفاری				

mixed-xylene

products	properties	Density at 15.6 C	appearance	Color Pt-Co Scale	Acid Wash Color	Acidity	Copper Corrosion	H2S & SO2 Content	Distillation Range at 760 mmhg	I.B.P	D.P
mixed-xylene	Test Method	D-4052	Visual	D-1209	D-848	D-847	D-849	D-853	D-850	D-850	D-850
	value	TO BE REPORTED	clear free of haze/sediment	10 max	2 max	no free acid	No.1a	free of h2s/so2	5 max	137 min	143 MAX
	unit	gr/cm3				mgr NaOH/100ml			C	C	C
	PARA-XYLENE	**ORTHO-XYLENE**	**ETHYL BENZENE**	**METHA XYLENE**	**BENZENE**	**TOLUENE**	**C9 AROMATICS**	**NON Aromatics**	**TOTAL SULFUR**	**TOTAL CHLORIDES**	**BROMINE INDEX**
Test Method	D-2306	D-2306	D-2306	D-2306	D-2306	D-2306	D-2306	D-2306	UOP 727	IP-AK/81	IP-129(MODIFIED)
value	16 MIN	16 MIN	18.5 max	49 max	.005 max	.04 max	.5 max	.1 max	1 max	1 max	20 max
unit	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.ppm	wt.ppm	mgr/100 gr

MTBE

COMPOSITION	M.T.B.E	C4	C5+	MEOH	TBA	WATER
Test Method	ASTM D-5441 (UOP -900)	ASTM D-5441 (UOP -900)	ASTM D-5441 (UOP -900)	ASTM D-5441 (UOP -900)	ASTM D-5441 (UOP -900)	ASTM D-1364
value	98 min	.5max	1 max	.7 max	.6 max	500 max
unit	wt.%	wt.%	wt.%	wt.%	wt.%	ppm(wt)

OLEFINE PRODUCT

products	properties	Density at 15.6 C	Copper Corrosion	Total Sulfur	lead content	5% vol.rec.	95% vol. rec.	paraffins	olefins	naphthenes	aromatics	doctor test	R.V.P	color saybolt
Dripoline Pyrolysis Gasoline (D.P.G)	Test Method	D-4052	D-130	D-3120	D-3559	D-86	D-86	G.C.	G.C.	G.C.	G.C.	D-4952	D-323	D-156
	value	0.76 0.805	No.1a	220 max	10 max	37 min	190max	–	–	–	39 min	POSITIVE	10 max	12 min
	unit	gr/cm3	–	wt.ppm	wt.ppm	C	C	wt.%	wt.%	wt.%	wt.%	WT.PPM	psig	–

products	properties	ETHYLENE	IMPURITY PARAFFINS	PROPYLENE &HIGHER OLEFINS	ACETYLENE	CARBON MONOXIDE	CARBON DIOXIDE	HYDROGEN	TOTAL SULFUR	OXYGENE	WATER CONTENT	Ammonium+Amine comp
ETHYLENE	Test Method	G.C	G.C	G.C	G.C	G.C	G.C	G.C	D-3246	G.C	SHADEW POINT	G.C
	value	99.95 min	500 max	10 max	3 max	3 max	3 max	5 max	2 max	2 max	1 max	nil
	unit	mol%	vol.ppm	vol.ppm	vol.ppm	vol.ppm	vol.ppm	vol.ppm	wt.ppm	vol.ppm	vol.ppm	vol.ppm

PARA-xylene

products	properties	purity	non-AR	distillation range	T-sulfur	T-chloride	Sp.Gr at 60 F/60 F	H2S & SO2 Content
PARA-xylene	Test Method	D-3798	D-3798	D-850	UOP-727	EP/AK-81	D-4052	D-853
	value	99.7 min	.2 max	138.4±2 max	1 max	1 max	0.865 0.8661	free
	unit	wt.%	wt.%	°C	vol.ppm	vol.ppm	gr/cm3	–

products	Appearance	TOL+BZ	Ethylbenzene	color (pt-co scale)	M-XYLENE	O-XYLENE	acid wash color
PARA-xylene	VISUAL	UOP 720	D-3798	D-1209	D-3798	D-3798	ASTM 848
	colorness clear	300 max	0.3 max	20 max	0.25 max	0.1 max	1 max
	–	wt.ppm	wt.%	–	wt.%	wt.%	–

SODIUM HYPOCHOLORITE

typical test	free chlorine,cl2	total alkalinity
Test Method	روش کارخانه ای	روش کارخانه ای
value	10% min	4% max
unit	wt.%	wt.%
APPLICATION		
صنایع تصفیه شکر		
کاغذ سازی		
گند زدایی از استخرها		
رنگ بری		

VCM

TYPICAL TEST	PURITY	METHYL CHLORIDE		ACETYLENE	1,3 BUTADIENE	VINYL ACETYLENE	ETHYL CHLORIDE	EDC	PROPYLENE
		FOR SHIPPING	FOR PVC						
Test Method	GC	GC	GC	GC	GC	GC	GC	GC	GC
value	99.98 min	60 max	70 max	1 max	5 max	1 max	5 max	1 max	1 max
unit	wt.%	wt.ppm	wt.ppm	wt.ppm	wt.ppm	wt.ppm	wt.ppm	wt.ppm	wt.ppm

TYPICAL TEST	ETHYLENE	CHLOROFORM	CARBON TETRA CHLORIDE	WATER CONTENT	IRON	NON VOLATILE RESIDUE	ACIDITY AS HCL		INHIBITORS HYDROQUINON		APPEARANCE
							FOR SHIPPING	FOR PVC	FOR SHIPPING	FOR PVC	
Test Method	GC	GC	GC	ASTM D-1744	ASTM D-1068	T.S.K	ASTM D-2790	ASTM D-2790	روش کارخانه ای	روش کارخانه ای	VISUAL
value	1 max	1 max	1 max	200max	0.5 max	10 max	0.5 max	1 max	15±5	7 max	CLEAR
unit	wt.ppm	wt.ppm	wt.ppm	wt.ppm	wt.ppm	wt.ppm	wt.ppm	wt.ppm	wt.ppm	wt.ppm	

APPLICATION
تولید pvc

۲ –مشخصات کیفی محصولات شرکت پتروشیمی بوعلی سینا

a. BENZENE
b. PARA-XYLENE
c. O-XYLENE
d. LIGHT END
e. RAFFINATE
f. HEAVYAROMATIC
g. LPG
h. C5+
i. REFORMATE 2
j. TOLUENE +C9 AROMATIC
k. NAPHTHA HEAVY END

BENZENE SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
Benzene	WT%	99.9 min	ASTM D-4492
Non-Aromatic	WT%	0.08wt% max.	ASTM D-4492
Toluene	WT%	0.02 wt% max.	ASTM D-4492
Specific Gravity	-	0.882-0.886	ASTM D-3505
Methyl cyclo hexane	WT%	0.02 max	ASTM D-4492
chlorine	ppm	1 max	ASTM D-4929
Acidity	mg NaOH/100mg	No free acid	ASTM D-847
solidification point	Centigrade	6	ASTM D-852
distillation range	Centigrade	2 max	ASTM D-850
total nitrogen	ppm	1 max	ASTM D-4629
total solfur	ppm	1 max	ASTM D-4045
color (pt-co) scale	-	10 max	ASTM D-1209
SO2/ H2S content	-	Free of H2s/SO2	ASTM D-853
Acid wash color	-	1 max	ASTM D-848
copper corrosion	-	No.1a	ASTM D-849
thiophene	ppm	1 max	ASTM D-1685
Br.Index	mg/100 gr	10 max	ASTM D-1744
water content	ppm	Saturated	ASTM D-1744

P-XYLENE SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
P-xylene	WT%	99.7 min	ASTM D-3798
Non-Aromatic	WT%	0.01 max.	ASTM D-3798
BZ+TOL	WT%	0.01 max.	ASTM D-3798
Ethylbenzene	WT%	0.15 max.	ASTM D-3798
O-xylene	WT%	0.09 max	ASTM D-3798
M-xylene	WT%	0.16 max	ASTM D-3798
total solfur	ppm	1 max	ASTM D-4045
Total Chloride	ppm	1 max	ASTM D-4929
Acid wash color	-	1 max	ASTM D-848
SO2/ H2S content	-	Free of H2s/SO2	ASTM D-853
distillation range	Centigrade	1 max	ASTM D-850
color (pt-co) scale	-	10 max	ASTM D-1209
Sp-Gr	-	0.858-0.875	ASTM D-3505
Appearance	-	clear	Visual

O-XYLENE SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
O-xylene	WT%	98.5 min	ASTM D-3797
Non-Aromatic	WT%	0.3 max.	ASTM D-3797
C9 & Heavier Aromatics	WT%	1 max	ASTM D-3797
total C8	WT%	98.5 min.	ASTM D-3797
distillation range	Centigrade	2 max	ASTM D-850
total solfur	ppm	1 max	ASTM D-4045
color (pt-co) scale	-	20 max	ASTM D-1209
Acidity	-	None detected	ASTM D-847
SO2/ H2S content	-	None detected	ASTM D-853

LIGHT END SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
PONA			ASTM D-5134
PARAFFINIC	WT%	86-97	
OLEFINIC	WT%	0 - 1.67	
NAPHTHENIC	WT%	0.47-5.5	
AROMATIC	WT%	0-5	
OTHERS	WT%	0-0.02	
TOTAL SULFUR	ppm	850-1260	ASTM D-3120
WATER CONTENT	ppm	160	ASTM D-1744

RAFFINATE SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
RVP	psia	Max 11	ASTM D-323
IBP	°C	Min 30	ASTM D-86
FBP	°C	Max 130	ASTM D-86
PARAFFINIC	wt%	Min 70	
OLEFINIC	wt%	Max 14	
DENSITY@ 15.6 °C	kg/m3	650-740	ASTM D-4052
TOTAL SULFUR	ppm	Max 1.5	ASTM D-4045
COLOR SAYBOLT		Min +18	ASTM D-156
LEAD	ppb	Max 5	GFAAS

HEAVYAROMATIC SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
GC COMPOSITION			ASTM D-5134
TOTAL C8A	wt%	Max. 1	
C9 AROMATIC	wt%	Max. 6	
C10+ AROMATICS	wt%	Min. 93	
FLASH POINT	centigrade	Min. 65	ASTM D-93
DENSITY	gr/cm3	0.89-0.95	ASTM D-4052
SO2/ H2S content	ppm	Free of H2s/SO2	ASTM D-853

LPG SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
GC			ISO 7941
H2	mol%	Max. 1.5	
C1	mol%	Max. 0.5	
C2	mol%	Max. 9	
C5	mol%	Max. 2.5	
C6+	mol%	Max. 0.4	
N2	mol%	Max. 0.1	

C5 SPESIFICATION

	UNIT	P	O	N	A	TOTAL
C2	WT%	0.02				0.02
C3	WT%	0.06				0.06
C4	WT%	0.3				0.3
C5	WT%	8.16	77.6	12.46		98.22
C6	WT%	0.01	1.37		0.01	1.39
TOTAL	WT%	8.55	78.98	12.46	0.01	100

SP.Gr		0.65-0.7
Br.No		100-181
M.A.V		1.3-8.6

REFORMATE SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
RVP	psia	Max 11	ASTM D-323
AROMATIC	wt%	Min 70	GC
BENZENE	wt%	Max 1	GC
DENSITY@ 15.6 °C	kg/m3	740-840	ASTM D-4052
TOTAL SULFUR	ppm	Max 2	ASTM D-4045
RON		Min 95	ASTM D-2699

Note: Predicted octane number is minimum 95

TOLUENE +C9 AROMATIC SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
RVP	psia	Max 5	ASTM D-323
TOLUENE	wt%	55-85	GC
C9 AROMATIC	wt%	10-40	GC
C8 AROMATIC	wt%	Max 3	GC
BENZENE	wt%	Max 1	GC
NON AROMATIC (C6-C9)	wt%	Max 2	GC
DENSITY@ 15.6 °C	kg/m3	850-900	ASTM D-4052
TOTAL SULFUR	ppm	Max 1	ASTM D-4045

NAPHTHA HEAVY END SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
IBP	°C	165-179	ASTM D-86
10%		177-186	
30%		182-194	
50%		190-205	
90%		250-280	
FBP		297-330	
Total Sulfur	ppm	1800 Max.	ASTM D-3120
color	ASTM color	2 Max	ASTM D-1500
Flash point	Centigrade	55 Min.	ASTM D-93
Density at 15 °C	g/nl	0.78-0.84	ASTM D-4052

۳ -مشخصات کیفی محصولات شرکت پتروشیمی اروند

a. NaOH
b. EDC
c. VCM
d. S-PVC
e. E-PVC

NaOH PRODUCTION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
NaOH	WT%	Min 48.5	Uhde A59.01.04/2.4.5.02
NaCl	ppm by wt	Max.100	Uhde A59.02.01/2.4.5.04
Fe	ppm by wt	Max.3	Uhde A59.09.01/2.4.5.06
Sp.Gr@15.6°C		1.515 Min.	Uhde A59.01.03/2.4.5.03
APPEARANCE		clear	VISUAL
NaClO3	ppm by wt	Max.50	Uhde A59.10.02

EDC PRODUCTION

1,2 DI CHLORO ETHANE (EDC) Ethylene Dichloride

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
EDC PURITY	WT%	Min 99.9	Uhde GC No:39
DENSITY @ 15.6 °C	kg/m3	1253	
LOW BOLL (<83.5°C)	ppm by wt	Max.300	Uhde GC No:39
HIGH BOLL (>83.5°C)	ppm by wt	Max.600	Uhde GC No:39
TOTAL ORGANIC IMPURILES	WT%	0.1	Uhde GC No:39
NON VOLATILE MATTER	ppm by wt	15	Uhde GC No:18(ASTM D2109)
HYDROGEN CHLORIDE	ppm by wt	Max.5	Uhde No:4
WATER	ppm by wt	Max.15	Uhde No:13
TOTAL IRON	ppm by wt	Max.0.5	Uhde No:25
FREE CHLORINE	ppm by wt	Max.2	Uhde No:10
COLOR(APHA)	ppm by wt	Max.10	Uhde GC No:10(ASTM D2108)

APPLICATION

تهیه حلالها و تهیه VCM

VC PRODUCTION

VINILE CHLORIDE MONOMER

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
vinil chloride (water, free basis)	WT%	Min 99.98	Uhde GC No:45
methyl chloride (CH3CL)	ppm by wt	Max 80	Uhde GC No:45
ACETYLENE	ppm by wt	Max.1	Uhde GC No:45
1,3 BUTADIENE	ppm by wt	Max.10	Uhde GC No:45
ethane& ethene	ppm by wt	Max.2	Uhde GC No:45
propene	ppm by wt	Max.4	Uhde GC No:45
1,2 EDC	ppm by wt	Max.2	Uhde GC No:45
ethyl chloride(C2H5CL)	ppm by wt	Max.50	Uhde GC No:45
Monovinylacethylene (C4H4)	ppm by wt	Max.5	Uhde GC No:45
HYDROGEN CHLORIDE	ppm by wt	Max.1	Uhde GC No:45
ccl4	ppm by wt	trace	Uhde GC No:45
hydroqulune	ppm by wt	Max.1	GC
iron	ppm by wt	Max.0.5	Uhde No:27
water	ppm by wt	Max.30	Uhde No:12
non volatlles	ppm by wt	Max.15	Uhde No:16
nitrogen	free of N2		Uhde No:33
color	COLORLESS		Uhde No:19 , ASTM D2108
appearance	clear and free of suspended matter		

APPLICATION

PVC تولید

S-PVC	GRADE								test method	
	A	B	C	D	E	F	G	H	DIN	ISO
	S-5831	S-6031	S-6532	S-6732	S-6542	S-7042	S-7242	S-8040		
K-Value	58±1	60±1	65±1	67±1	65±1	70±1	72±1	80±1		1628-2
Viscosity number	82	87	105	113	105	125	128-136	164-172		1682-2
Bulk density (g/l)	540-600	520-580	550-610	550-610	460-520	450-510	430-490	420-480	60	60
Sieve analysis										
> 63 µm (%)	95-100	95-100	95-100	95-100	95-100	95-100	95-100	95-100		4610
> 250 µm (%)	0-1	0-1	0-5	0-5	0-1	0-1	0-1	0-1		4610
Retained on 0.4 mm sieve (%)	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		4610
Porosity (plasticiser absorption)	14-20	16-22	19-25	18-24	24-30	29-35	30-35	30-35		4608
Volatile matter (%)	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3		1269
Flowability (S/150 g) (10 mm nozzle)	≤ 25	≤ 25	≤ 25	≤ 25	≤ 35	≤ 35	≤ 35	≤ 35		6186
Residual VCM(ppm)	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	53743	6401
Dark resin particles	≤ 20	≤ 20	≤ 20	≤ 20	≤ 20	≤ 20	≤ 10	≤ 10	vinnolit F5	in powder
Fish eyes	≤ 5	≤ 5	≤ 20	≤ 20	≤2	≤ 2	≤2	≤2	vinnolit H1	felttest per 25 cm2
Sulfate ash (wt%)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		3451-1
Designed Production capacity(T/Y)	45000	45000	35000	55000	35000	60000	10000	15000		

Applications	
Grade A	rigid film,bottles,fitting,injection moulded parts
GradeB	rigid & semi rigidprofile and sheets
Grade C/D	rigid & semi rigid and plasticized PVC, pipe, profiles, tubes,sheet, film
Grade E	rigid & semi rigid and plasticized PVC, film,flexible articles
Grade G	plasticized film and profile, cable insulation, injection moulded parts, shoe soles
Grade F	plasticized film and profile,injection moulded parts, medical tubes,medical gloves
Grade H	plasticized film and profile, sealing, blood bag and medical tubes

E-PVC	GRADE					test method	
	A	B	C	D	E	DIN	ISO
K-Value	59-61	64-66	67-69	71-73	74-76	53726	1628/2
Sieve analysis							
> 63 µm (%)	≤ 1.5	≤ 1.5	≤ 2	≤ 1.5	≤ 1.5	53724	565
Volatile matter (%)	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	7764/2	1269
Methanol extract %	≤ 2.5	≤ 2.5	≤ 2.5	≤ 2.5	≤ 2.5	53738	6427
Thermostability (min) Mathiss drying oven	> 15	> 15	> 15	> 20	> 20	vinnolit THMA 180	
Paste viscosity After 1 h (pas)	≤ 13	≤ 7	≤ 6	≤ 5	≤ 5	EN 11468	
						EN 3219	
						PVC/DOP=100/60 23°C 16 sec	
Part of A-Quality (%)	≥ 98	≥ 98	≥ 98	≥ 98	≥ 98		
Residual VCM(ppm)	≤ 1	≤ 1	≤2	≤ 1	≤ 1	53743	6401
Designed Production capacity(T/Y)	6000	6000	8000	10000	10000		

Applications	
Grade A	wall covering
GradeB	leather foam, wall covering,cushion floor
Grade C	rigid foam for flooring, leather cloth, sealing compounds, coating and laminating
Grade D	wall covering, gloves, toys,cushion floor, leather cloth ,book binding
Grade E	leather skin,metal coating, molding, wall covering, gloves, marking films

۴ –مشخصات کیفی محصولات شرکت پتروشیمی خوزستان

a. POLYCARBONATE PGPC- 710
b. POLYCARBONATE PGPC- 1012
c. POLYCARBONATE PGPC- 1215
d. POLYCARBONATE PGPC- 1518
e. POLYCARBONATE PGPC- 1822
f. POLYCARBONATE PGPC- 2230
g. EPIRAN-05(SPL)
h. EPIRAN-06(SPL)
i. EPIRAN-06
j. EPIRAN-01 X-75 LC
k. EPIRAN-01 X-75
l. BISPHENOL-A

polycarbonate	PGPC-0710			
Analysis	**unit**	**value**	**condition**	**test method**
MFI (300C)	g/10 min	7.1-12	1.2 Kg load	ASTM D 1238
Density	g/cm3	1.2	25C	ASTM D 792
tensile Strength	Mpa	≥ 60	at yield	ASTM D 638
Modulus of Elasticity	Mpa	2000-2400	-	ASTM D 638
Elongation	%	≥ 90	at Break	ASTM D 638
Dielectric Strength	Kv/mm	≥ 20	at 50 Hz	ASTM D 149
Charpy Impact Strength	Kj/m2	≥ 20	Notched	ASTM D 6110
Vicat soft. Temp.	C	142-146	50 N, 50 C/h	ASTM D 1525
Transmitance	%	≥ 80	Thickness 2 mm	ASTM D 1003
Solvent Content	ppm	Max.3000	-	GC (int-st)

Application

suitable for injection molding and extrusion, optical, business machines, packaging, sports, appliances, electrical, lighting, wire& cable, automotive, sheets

polycarbonate	PGPC-1012			
Analysis	**unit**	**value**	**condition**	**test method**
MFI (300C)	g/10 min	10.1-12	1.2 Kg load	ASTM D 1238
Density	g/cm3	1.2	25C	ASTM D 792
tensile Strength	Mpa	≥ 60	at yield	ASTM D 638
Modulus of Elasticity	Mpa	2000-2400	-	ASTM D 638
Elongation	%	≥ 90	at Break	ASTM D 638
Dielectric Strength	Kv/mm	≥ 20	at 50 Hz	ASTM D 149
Charpy Impact Strength	Kj/m2	≥ 20	Notched	ASTM D 6110
Vicat soft. Temp.	C	142-146	50 N, 50 C/h	ASTM D 1525
Transmitance	%	≥ 80	Thickness 2 mm	ASTM D 1003
Solvent Content	ppm	Max.3000	-	GC (int-st)

Application

suitable for injection molding and extrusion, optical, business machines, packaging, sports, appliances, electrical, lighting, wire& cable, automotive, sheets

polycarbonate	PGPC-1215			
Analysis	**unit**	**value**	**condition**	**test method**
MFI (300C)	g/10 min	12.1-15	1.2 Kg load	ASTM D 1238
Density	g/cm3	1.2	25C	ASTM D 792
tensile Strength	Mpa	≥ 60	at yield	ASTM D 638
Modulus of Elasticity	Mpa	2000-2400	-	ASTM D 638
Elongation	%	≥ 80	at Break	ASTM D 638
Dielectric Strength	Kv/mm	≥ 20	at 50 Hz	ASTM D 149
Charpy Impact Strength	Kj/m2	≥ 20	Notched	ASTM D 6110
Vicat soft. Temp.	C	141-145	50 N, 50 C/h	ASTM D 1525
Transmitance	%	≥ 80	Thickness 2 mm	ASTM D 1003
Solvent Content	ppm	Max.3000	-	GC (int-st)
Application				
suitable for injection molding, optical, sports, electrical, wire& cable, sheets				

polycarbonate	PGPC-1518			
Analysis	**unit**	**value**	**condition**	**test method**
MFI (300C)	g/10 min	15.1-18	1.2 Kg load	ASTM D 1238
Density	g/cm3	1.2	25C	ASTM D 792
tensile Strength	Mpa	≥ 60	at yield	ASTM D 638
Modulus of Elasticity	Mpa	2000-2400	-	ASTM D 638
Elongation	%	≥ 80	at Break	ASTM D 638
Dielectric Strength	Kv/mm	≥ 20	at 50 Hz	ASTM D 149
Charpy Impact Strength	Kj/m2	≥ 20	Notched	ASTM D 6110
Vicat soft. Temp.	C	141-145	50 N, 50 C/h	ASTM D 1525
Transmitance	%	≥ 80	Thickness 2 mm	ASTM D 1003
Solvent Content	ppm	Max.3000	-	GC (int-st)

Application

suitable for injection molding, optical, sports, electrical, wire& cable, sheets

polycarbonate	PGPC-1822			
Analysis	**unit**	**value**	**condition**	**test method**
MFI (300C)	g/10 min	18.1-22	1.2 Kg load	ASTM D 1238
Density	g/cm3	1.2	25C	ASTM D 792
tensile Strength	Mpa	≥ 60	at yield	ASTM D 638
Modulus of Elasticity	Mpa	2000-2400	-	ASTM D 638
Elongation	%	≥ 80	at Break	ASTM D 638
Dielectric Strength	Kv/mm	≥ 20	at 50 Hz	ASTM D 149
Charpy Impact Strength	Kj/m2	≥ 20	Notched	ASTM D 6110
Vicat soft. Temp.	C	140-144	50 N, 50 C/h	ASTM D 1525
Transmitance	%	≥ 80	Thickness 2 mm	ASTM D 1003
Solvent Content	ppm	Max.3000	-	GC (int-st)
Application				
suitable for injection molding,sports,Automotive, electrical, Construction & housing				

polycarbonate	PGPC-2230			
Analysis	**unit**	**value**	**condition**	**test method**
MFI (300C)	g/10 min	22.1-30	1.2 Kg load	ASTM D 1238
Density	g/cm3	1.2	25C	ASTM D 792
tensile Strength	Mpa	≥ 60	at yield	ASTM D 638
Modulus of Elasticity	Mpa	2000-2400	-	ASTM D 638
Elongation	%	≥ 50	at Break	ASTM D 638
Dielectric Strength	Kv/mm	≥ 20	at 50 Hz	ASTM D 149
Charpy Impact Strength	Kj/m2	≥ 20	Notched	ASTM D 6110
Vicat soft. Temp.	C	139-143	50 N, 50 C/h	ASTM D 1525
Transmitance	%	≥ 80	Thickness 2 mm	ASTM D 1003
Solvent Content	ppm	Max.3000	-	GC (int-st)
Application				
suitable for injection molding,Automotive,Appliances,electrical, Construction & housing				

EPIRAN-05(SPL)

LIQUID EPOXY RESIN SPECIAL

PRODUCT DATA SHEET

PROPERTY	TEST METHOD	UNIT	GUARANTEE VALUES
Appearance	Visual	Visual	Clear Light Yellow Liquid
Epoxy Equivalent	ASTM D1652	g/eq	192-204
Epoxy Value	ASTM D1652	mol/100gr	0.49-0.521
Color	ASTM 1209 (APHA)	Pt-Co (APHA)	Max.100
Viscosity at 25 °C	DIN 53015	mpas	15000-20000
Hydrolysable Chlorine	ASTM 1726	% wt	Max. 0.2
Non-Volatile	DIN EN ISO 3251	% wt	Min 99

Application

for civil Engineering Coating, flooring, Adhesives, Mortars, Grouts, Industrial Maintenance & Marine Coating

EPIRAN-06(SPL)

LIQUID EPOXY RESIN SPECIAL

PRODUCT DATA SHEET

PROPERTY	TEST METHOD	UNIT	GUARANTEE VALUES
Appearance	Visual	Visual	Clear Light Yellow Liquid
Epoxy Equivalent	ASTM D1652	g/eq	185-192
Epoxy Value	ASTM D1652	mol/100gr	0.52-0.54
Color	ASTM 1209	Pt-Co (APHA)	Max. 50
Viscosity at 25 °C	DIN 53015	mpas	10000-14000
Hydrolysable Chlorine	ASTM 1726	% wt	Max. 0.1
Non-Volatile	DIN EN ISO 3251	% wt	Min 99.3

Application

adhesives, casting, tooling, civil eng. Composites, Automotive, can and coatings, marine and protective coating, electrical and electronic use . Potting and encapsulation

EPIRAN-06

LIQUID EPOXY RESIN

PRODUCT DATA SHEET

PROPERTY	TEST METHOD	UNIT	GUARANTEE VALUES
Appearance	Visual	Visual	Clear Light Yellow Liquid
Epoxy Equivalent	ASTM D1652	g/eq	185-196
Epoxy Value	ASTM D1652	mol/100gr	0.51-0.54
Color	ASTM 1209 (APHA)	Pt-Co (APHA)	Max. 100
Viscosity	DIN 53015 (at 25 C)	Mpas	<15000
Hydrolysable Chlorine	ASTM 1726	% wt	Max. 0.2
Non-Volatile	DIN EN ISO 3251	% wt	Min 99

Application

adhesives, casting, tooling, civil eng. Composites, Automotive, can and coatings, marine and protective coating, electrical and electronic use . Potting and encapsulation

EPIRAN-01 X-75 LC

SOID EPOXY RESIN IN MIXED XYLENE

PRODUCT DATA SHEET

PROPERTY	TEST METHOD	UNIT	GUARANTEE VALUES
Appearance	Visual	Visual	Clear Light Yellow Liquid
Epoxy Equivalent	ASTM D1652	g/eq	434-555
Epoxy Value	ASTM D1652	mol/100gr	0.18-0.23
Color	ASTM 1209 (APHA)	Pt-Co (APHA)	Max. 40
Viscosity	DIN 53015 (at 25 C)	Mpas	6000-12000
Hydrolysable Chlorine	ASTM 1726	% wt	Max. 0.1
%Non-Volatile	DIN EN ISO 3251	% wt	74-76

Application

is used for cold cured varnished, solvent based 2-pack coatings for metals, as modifier in stoving enamel based on acrylics, alkyd-melamin resin systems and hot cured adhsives manufacture

EPIRAN-01 X-75

SOID EPOXY RESIN IN MIXED XYLENE

PRODUCT DATA SHEET

PROPERTY	TEST METHOD	UNIT	GUARANTEE VALUES
Appearance	Visual	Visual	Clear Light Yellow Liquid
Epoxy Equivalent	ASTM D1652	g/eq	434-555
Epoxy Value	ASTM D1652	mol/100gr	0.18-0.23
Color	ASTM 1209 (APHA)	Pt-Co (APHA)	Max.100
Viscosity	DIN 53015 (at 25 C)	Mpas	6000-12000
Hydrolysable Chlorine	ASTM 1726	% wt	Max. 0.1
%Non-Volatile	DIN EN ISO 3251	% wt	74-76

Application

is used for cold cured varnished, solvent based 2-pack coatings for metals, as modifier in stoving enamel based on acrylics, alkyd-melamin resin systems and hot cured adhsives manufacture

BISPHENOL - A

PRODUCT DATA SHEET			
PROPERTY	**TEST METHOD**	**UNIT**	**GUARANTEE VALUES**
COLOR	ASTM D 1209	APHA	< 10
H2O	Karl Fischer	%wt	< 0.15
p,p-BPA	GC (internal standard)	%wt	> 99.5
Phenol	GC (internal standard)	ppm	< 50
By product	GC (internal standard)	%wt	< 0.15

۵ –مشخصات کیفی محصولات شرکت پتروشیمی شهید تندگویان

a. PET(semi dull)-TG641

b. PET(super bright)-TG641

c. PET-BG841

d. PET-BG821

e. PET-BG781

Polyethylene Terephthalate (semi dull)

Grade	PARS PET-TG641 (Textile Grade)		
Item	**Unit**	**value**	**test method**
Intrinsic Viscosity	dl/g	0.64 ± 0.015	ISO 1628-5
			in combination with NVPET05
DEG Content	wt%	0.9 - 1.3	ASTM E2409-4
			in combination with WN-B010-9008E
Color (CIE Lab)	L*	≥90	ASTM D6290-5
	b*	≤4.5	in combination with WN-B010-7110E
Carboxyl End Group	meq / Kg	≤32	ASTM D7409-7
			in combination with WN-B010-7013E
Melting Point	°C	255±3	ASTM D3418-3
			in combination with WN-B010-7089E
TiO2 Content	wt%	0.3 ± 0.05	WN-B010-7061E
Water Content	wt%	≤0.3	ASTM D6869-3
			in combination with WN-B010-7159E
Chips Weight	g/100EA	2.5±0.1	----

APPLICATION

تولید منسوجات قابل استفاده در صنایع ایمنی و نظامی و مکانهای عمومی و صنعت حمل و نقل، تولید انواع پتو، ملافه، رومبلی، روکش صندلی، پرده، فرش و کفپوش

Polyethylene Terephthalate (super bright)

Grade	PARS PET-TG641 (Textile Grade)		
Item	**Unit**	**value**	**test method**
Intrinsic Viscosity	dl/g	0.64 ± 0.015	ISO 1628-5 in combination with NVPET05
DEG Content	wt%	0.9 - 1.3	ASTM E2409-4 in combination with WN-B010-9008E
Color (CIE Lab)	L*	≥75	ASTM D6290-5 in combination with WN-B010-7110E
	b*	≤4.5	
Carboxyl End Group	meq / Kg	≤32	ASTM D7409-7 in combination with WN-B010-7013E
Melting Point	°C	255±3	ASTM D3418-3 in combination with WN-B010-7089E
Water Content	wt%	≤0.3	ASTM D6869-3 in combination with WN-B010-7159E
Chips Weight	g/100EA	2.5±0.1	----

APPLICATION

تولید منسوجات با شفافیت بالا

Polyethylene Terephthalate (Copolymer)

Grade	PARS PET-BG841 (Bottle Grade)		
Item	**Unit**	**value**	**test method**
Intrinsic Viscosity	dl/g	>0.84	ISO 1628-5 in combination with NVPET05
DEG Content	wt%	≤1.5	ASTM E2409-4 in combination with WN-B010-9008E
Color (CIE Lab)	L*	≥90	ASTM D6290-5 in combination with WN-B010-7110E
	b*	≤2.0	
Carboxyl End Group	meq / Kg	≤32	ASTM D7409-7 in combination with WN-B010-7013E
Melting Point	°C	249±3	ASTM D3418-3 in combination with WN-B010-7089E
Acetaldehyde	ppm	≤1.0	ASTM F2013-5 in combination with WN-B010-9013E
Water Content	wt%	≤0.3	ASTM D6869-3 in combination with WN-B010-7159E

APPLICATION

بسته بندی انواع مایعات شوینده، بهداشتی و آرایشی

Polyethylene Terephthalate (Copolymer)

Grade	PARS PET-BG821 (Bottle Grade)		
Item	**Unit**	**value**	**test method**
Intrinsic Viscosity	dl/g	0.82 ± 0.02	ISO 1628-5 in combination with NVPET05
DEG Content	wt%	≤1.5	ASTM E2409-4 in combination with WN-B010-9008E
Color (CIE Lab)	L*	≥90	ASTM D6290-5 in combination with WN-B010-7110E
	b*	≤2.0	
Carboxyl End Group	meq / Kg	≤32	ASTM D7409-7 in combination with WN-B010-7013E
Melting Point	°C	249±3	ASTM D3418-3 in combination with WN-B010-7089E
Acetaldehyde	ppm	≤1.0	ASTM F2013-5 in combination with WN-B010-9013E
Water Content	wt%	≤0.3	ASTM D6869-3 in combination with WN-B010-7159E

APPLICATION

بسته بندی انواع نوشیدنی های گازدار، بسته بندی مواد غذایی فاسد شدنی ، مخازن آب با حجم 4 لیتر و بالاتر

Polyethylene Terephthalate (Copolymer)

Grade	PARS PET-BG781 (Bottle Grade)		
Item	**Unit**	**value**	**test method**
Intrinsic Viscosity	dl/g	0.78 ± 0.02	ISO 1628-5 in combination with NVPET05
DEG Content	wt%	≤1.5	ASTM E2409-4 in combination with WN-B010-9008E
Color (CIE Lab)	L* b*	≥90 ≤2.0	ASTM D6290-5 in combination with WN-B010-7110E
Carboxyl End Group	meq / Kg	≤32	ASTM D7409-7 in combination with WN-B010-7013E
Melting Point	°C	249±3	ASTM D3418-3 in combination with WN-B010-7089E
Acetaldehyde	ppm	≤1.0	ASTM F2013-5 in combination with WN-B010-9013E
Water Content	wt%	≤0.3	ASTM D6869-3 in combination with WN-B010-7159E

APPLICATION

بسته بندی انواع آبهای نوشیدنی بدون گاز(آب تصفیه شده، آب معدنی) در بطریهای کوچک 1،1.5 0.5 لیتری،
بسته بندی مواد غذایی جامد و روغنهای خوراکی غیر معطر ، بسته بندی کالاهای لوکی و فانتزی

۶ –مشخصات کیفی محصولات شرکت پتروشیمی کارون

a. TOLUENE DI-ISOCYANATE

b. NaOCl

c. NITRIC ACID(HNO3)

d. MDI(Phase2)

e. HYDROCHLORIC ACID (HCL)

TOLUENE DI-ISOCYANATE (TDI)			
No.	**Parameter**	**test method**	**Specification**
1	**Appearance**	visual	Clear Liq.
2	**purity (% by wt)**	H900.6500S	Min. 99.5
3	**Colour (APHA)**	H900.1700S	Max.25
4	**Hydrolyzable Chlorine (ppm by wt)**	H900.3500S	Max.60
5	**Total Acidity (ppm by wt)**	H900.0500S	Max.40
6	**Isomer ratio 2,4 TDI (%wt)**	H900.4100	80±1
7	**Isomer ratio 2,6 TDI (%wt)**	H900.4100	20±1
8	**Sp.gr at 25/4 °C**	s690.3000	1.22±0.02
9	**NIC (ppm)**	H900.5800	Max.30
APPLICATION			
تولید روکشها و پوششها، درزگیر، چسبها و الاستومرها			

NaOCl			
No.	**Property**	**test method**	**Specification**
1	**Available Clorine (gr/lit)**	DENORA CH13	120-150
2	**Excess Caustic (wt%)**	DENORA CH13	0.8-2
3	**Color**	Visual	Light Yellow
4	**Fe (ppm)**	ASTM D2790	<10

Nitric Acid (HNO3)				
No.	**Parameter**	**test method**	**Specification**	**Value**
1	**Purity (by wt%)**	ASTM E 1584	62±2	62.8
2	**Appearance**	Visual Check	Clear	Clear
3	**HNO2 (ppm by weight)**	PTM 1785	< 150	6.5
4	**Residue on Ignition (wt%)**	ASTM D 7348	< 0.03	Trace
5	**T-Fe (ppm by weight)**	D-2790	< 10	2.7

MDI (Phase 2)		
Typical composition , no guarantee data		
No.	**Parameter**	**Specification**
1	**Appearance**	dark colored liquid , or crystals Musty smell, volatile
2	**Melting point**	42-44 °C min
3	**Specific Gravity at 18 ° C**	1.18
4	**NCO**	Min. 33.4 % wt
5	**Isocyanate equivalent wheight**	Max. 125.8
6	**2,4 MDI content**	1.7-2.3 % wt
7	**Hydrochloric acid**	Max. 30 ppm wt
8	**Ortho- dichlorobenzene**	Max. 20 ppm wt
9	**Phenyl isocyanate**	Max. 20 ppm wt
10	**Color APHA Y INDEX**	Max. 20
APPLICATION		
تولید فومهای پلی یورتان سخت جهت استفاده در عایقهای حرارتی (یخچالها، فریزرها و عایقهای ساختمانی) و تولید چسبهای محکم صنعتی		

HYDROCHLORIC ACID (HCL)			
No.	**Parameter**	**Result**	**Specification**
1	**Appearance**	Colourless	Conforms
2	**Purity (% by wt)**	31	min. 30
3	**ODCB (PPM BY WEIGHT)**	0.8	<3
4	**Fe (ppm by weight)**	0.46	<3
5	**water**		Balance

۷ -مشخصات کیفی محصولات شرکت پتروشیمی نوری

a. BENZENE

b. P-XYLENE

c. O-XYLENE

d. MIN-XYLENE

e. LIGHT END

f. C3+

g. HEAVY END

h. RAFFINATE

BENZEN SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
Purity	WT%	99.9 Min	ASTM D4492
Toluene	WT%	0.015 Max	ASTM D4492
Non Aromatics	WT%	0.07 Max	ASTM D4492
Density @ 15.6 °C	Gr/cm3	0.882-0.886	ASTM D4052
Appearance	-	Clear ,Free of haze/sediment	Visual
Color (Pt-Co) Scale	-	15 Max	ASTM D1209
Acid Wash Color	-	1 Max	ASTM D848
Acidity	mg NaOH/100mg	No free acid	ASTM D847
Copper Corrosion	-	Pass 1A	ASTM D849
Total sulfur	Wt ppm	1 Max	ASTM D5453
H2S and SO2 content	-	Free of H2S and SO2	ASTM D853
Distillation	°C	1 Max (Including 80.1)	ASTM D850
Solidification point	°C	5.45 Min	ASTM D852
Water content	Wt ppm	200 Max	ASTM D1744
Thiophene	Wt ppm	1 Max	IFP9421
Total Chloride	Wt ppm	2 Max	ASTM D4929
Br.Index	mg/100g	10 Max	ASTM 1492
Total nitrogen	Wt ppm	1 Max	ASTM D4629
Methylcyclohexane	Wt ppm	400 Max	ASTM D4492

P-XYLENE SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD	توضیحات
Purity	WT%	99.7 Min	ASTM D3798	جهت فروش داخل از این تست استفاده می شود
Non Aromatics	WT%	0.2 Max	ASTM D3798	جهت فروش داخل از این تست استفاده می شود
Distillation Range	°C	2 Max (Including 138.3)	ASTM D850	
Total sulfur	Wt ppm	1 Max	ASTM D5453	
Total Chloride	Wt ppm	1 Max	ASTM D4929	
Sp.gr @ 15.6/15.6°C	-	0.8650-0.8661	ASTM D4052	
H2S and SO2 content	-	Free	ASTM D853	
Appearance	-	Colorless,Clear	Visual	
Tol+Bz	Wt ppm	300 Max	ASTM D3798	جهت فروش داخل از این تست استفاده می شود
Ethyle Benzene	WT%	0.3 Max	ASTM D3798	جهت فروش داخل از این تست استفاده می شود
Color (Pt-Co) Scale	-	20 Max	ASTM D1209	
M-xylene	WT%	0.25 Max	ASTM D3798	جهت فروش داخل از این تست استفاده می شود
O-xylene	WT%	0.1 Max	ASTM D3798	جهت فروش داخل از این تست استفاده می شود
Acid Wash Color	-	1 Max	ASTM D848	

O-XYLENE SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD	توضیحات
Purity	WT%	98.5 Min	ASTM D2306 **	جهت فروش داخل **
Non Aromatics	WT%	1 Max*	ASTM D2306 **	* این میزان جهت صادرات 0.5 میباشد.
Bzn+C9 & Heavier Aromatics	WT%	1 Max	ASTM D2306 **	
Total C8 Aromatics + Toluene+ Ethyl Benzene	WT%	98.5 Min	ASTM D2306 **	
Distillation Range at 760 mmhg	°C	2 Max (Including 144.4)	ASTM D850	
Total sulfur	Wt ppm	1 Max	ASTM D5453	
Color (Pt-Co) Scale	-	20 Max	ASTM D1209	
Acidity	-	None detected	ASTM D847	
Hydrocarbon residue after evaporation	Wt ppm	20 Max	ASTM D1353	
H2S and SO2 content	-	None detected	ASTM D853	
Sp.gr @ 15.6/15.6°C	-	0.86-0.89	ASTM D4052	

MIN-XYLENE SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD	توضیحات
Distillation Range	°C		ASTM D850	
IBP		MIN 137		
FBP		MAX 143		
RANGE		MAX 5		
Density	gr/cm3	to be reported	ASTM D4052	
P-xylene	Wt%	Min 16	ASTM D2306	جهت فروش داخل از این تست استفاده می شود
O-xylene	Wt%	Min 16	ASTM D2306	جهت فروش داخل از این تست استفاده می شود
Ethyl Benzene	Wt%	max 18.5	ASTM D2306	جهت فروش داخل از این تست استفاده می شود
M-xylene	Wt%	max 49	ASTM D2306	جهت فروش داخل از این تست استفاده می شود
Benzene	Wt%	max 0.01	ASTM D2306	جهت فروش داخل از این تست استفاده می شود
Toluene	Wt%	max 0.5	ASTM D2306	جهت فروش داخل از این تست استفاده می شود
C9 Aromatic	Wt%	max 1.5	ASTM D2306	جهت فروش داخل از این تست استفاده می شود
Non Aromatic	Wt%	max 5	ASTM D2306	جهت فروش داخل از این تست استفاده می شود
Bromin Index	mgr/100 gr	max 20	ASTM D1492	

LIGHT END SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
PONA	Wt%		IFP 9301
P		86-97	
O		0-3	
N		0.47-5.5	
A		0-5	
OTHER		0-0.02	
TOTAL sulfur	ppm	MAX 500	ASTM D 5453

Total sulfur minimum 3000 ppm for TK-8102 A/B

Composition Wt%	P	O	N	A
C3	MAX 1	-	-	-
C4	2-18	-	-	-
C5	36-90	MAX 1	1-4	-
C6	2-38	MAX 0.5	MAX 3.5	MAX 5
C7	MAX 1.2	-	MAX 0.5	-

Heavy Gasoline

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
Specific Gravity	-	0.75-0.8	ASTM D 1298
poNA	Wt%		IFP 9420
P		12	
O		0	
N		0	
A		88	

paraffin break down is as follow : C11+:12%

Aromatics break down is as follow : C9 A:10-13% C10 A:75-78%

C3+ SPECIFICATION		
component	**design**	**actual**
ethan	13%	17.20%
propylen	25%	22.50%
propane	2.40%	3%
1,3 butadine	30%	29%
C4	12.40%	11.20%
Gasoline	16.20%	15.50%

HEAVY END SPESIFICATION			
TYPICAL TEST	**UNIT**	**SPESIFICATION**	**TEST METHOD**
Distillation Range	°C		ASTM D-86
IBP		160-180	
10%		175-193	
30%		187-209	
50%		206-230	
90%		286-330	
FBP		333-370	
Total Recovery	%	96	
Total Sulfur	ppm	2000 Max.	ASTM D-5453
color	-	2 Max	ASTM D-1500
Flash point	Centigrade	59 Min.	ASTM D-93
Specific Gravity	-	0.77-0.83	ASTM D-4052

HEAVYAROMATIC SPESIFICATION			
TYPICAL TEST	**UNIT**	**SPESIFICATION**	**TEST METHOD**
DENSITY @ 15.6 ° C	Gr /cm3	0.8-0.95	ASTM D-4052

RAFFINATE SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD	توضیحات
RVP	psia	Max 9.5	ASTM D-323	جهت فروش داخل از این تست استفاده می شود
IBP	°C	32-52	ASTM D-86	
10%		53-63		
50%		64-78		
90%		87-100		
FBP		101-130		
Total Recovery	%	Min 97		
Paraffins	Wt%	Max 92	IFP 9302	
Olefins	Wt%	Max 5	IFP 9302	
Naphthenics	Wt%	4.5-10	IFP 9302	
Aromatics	Wt%	Max 6	IFP 9302	
DenSITY @ 15.6 ° C	gr /cm3	0.65-0.7	ASTM D4052	
Total Sulfur	ppm	Max 5	ASTM D-5453	
color	-	15 Max	ASTM D-1209	

LPG SPESIFICATION

TYPICAL TEST	UNIT	SPESIFICATION	TEST METHOD
C6+	Wt%	Max 2%	ISO 7941

۸ -مشخصات کیفی محصولات شرکت پتروشیمی پارس

a. ETHANE

b. PROPANE

c. BUTANE

d. C5+

e. SALES GAS

f. ETHYLBENZENE

g. STYRENE MONOMER

h. BENZENE

i. TOLUENE

j. STYRENE TAR

Ethane Product

COMPONENT		SPECIFICATION	
CO2	max	50	wt ppm
CH4	max	1	wt%
C2H6	min	98	wt%
C3H8 AND HEAVIER	max	1	wt%
TOTAL SULPHUR	max	10	wt ppm
H2O		sat.	wt%
CONDITION			
Temperature	max	50	°C
Pressure	min	17	bar a
Phase		gaseous	
density		21	kg/m3
FLOW RATE (guaranteed figure)			
Summer Case, 5.5 mol% C2H6 in feed		207.4	t/h

Remark: the ethane product will have an ethane purity of minimum 98 wt% on dry basis.

propane Product			
COMPONENT		**SPECIFICATION**	
C2H6 and lighter	max	1	wt%
C3H8	min	98	wt%
C4H10 and heavier	max	1	wt%
TOTAL SULPHUR	max	30	wt ppm
CONDITION			
Temperature		2)	°C
Pressure		2)	bar a
Phase		liquid	
FLOW RATE upstream of Sulphur (guaranteed figure)			
Summer Case		123.9	t/h
Remark: the propane product will have an propane purity of minimum 98 wt% on dry basis.			
2) Suitable for refrigerated storage at almost atmospheric pressure			

Butane Product			
COMPONENT		**SPECIFICATION**	
C3H8 and lighter	max	1	wt%
C4H10	min	98	wt%
C5H12 and heavier	max	1	wt%
TOTAL SULPHUR	max	30	wt ppm
CONDITION			
Temperature		3)	°C
Pressure		3)	bar a
Phase		liquid	
FLOW RATE upstream of Sulphur (guaranteed figure)			
Summer Case		71.8	t/h
Remark: the butane product will have an butane purity of minimum 98 wt% on dry basis.			
2) Suitable for refrigerated storage at almost atmospheric pressure			

C5+ Product			
COMPONENT		**SPECIFICATION**	
C4H10 and lighter	max	1-5	wt%
C5H12		5-63	wt%
C6 and heavier		36-85	wt%
TOTAL SULPHUR	max	530-1800	wt ppm
CONDITION			
Temperature		50	°C
Pressure		4)	bar a
Phase		liquid	
FLOW RATE (guaranteed figure)			
Summer Case		10.9	t/h
Remark: the C5+ product will have an butane Content of not more than 5 wt%			
4) Storage pressure is approx 1.7 bara at 50 °C. injection pump discharge pressure is approx 70 bara			

SALES GAS			
COMPONENT		**SPECIFICATION**	
N2 5)		3.7-4	mol %
CO2 5)		0.5-0.7	mol %
CH4 5)		94.7-95.5	mol %
C2H6 and heavier	max	0.60	mol %
TOTAL SULPHUR	max	15.00	mol ppm
CONDITION			
Temperature	max	40	°C
Pressure	min	same presure as normal operating pressure of natural gas FEED at BL plus 6 bar	
Phase		gaseous	
FLOW RATE (guaranteed figure)			
Summer Case		2032.2 to 2028.9	t/h
Remark: the sulphur content at turndown may be higher due to limitations in sulfure treater cycle times and regeneration gas flow rates.			
5)Concentrations vary depending on summer case and winter case Natural Gas FEED and are not subject to guarantee			

ETHYLBENZENE

COMPONENT	UNIT	SPECIFICATION	TEST METHOD
ethylbenzene	% wt	> 99.7	ASTM D 5060.95
			ME 31023
non Aromatics	ppm wt	< 500	ASTM D 5060.95
			ME 31023
benzene	ppm wt	< 1500	ASTM D 5060.95
			ME 31023
toluene	ppm wt	< 500	ASTM D 5060.95
			ME 31023
xylenes	ppm wt	< 100	ASTM D 5060.95
			ME 31023
cumene	ppm wt	< 200	ASTM D 5060.95
			ME 31023
buthylbenzene	ppm wt	< 200	ASTM D 5060.95
			ME 31023
diethylbenzene	ppm wt	< 10	ASTM D 5060.95
			ME 31023
other aromatics	ppm wt	< 100	ASTM D 5060.95
			ME 31023
appearance		Color less	
			ME 11001
color (APHA)	Mg Pt/l	< 15	ASTM D 1209
			ME 11003
water	ppm wt	< 50	ASTM D 890
			ME 72001
chlorine (as Cl^{-1})	ppm wt	< 1	ASTM D 4929
			ME 64007
sulfur (as S)	ppm wt	< 1	ASTM D 3961
			ME 64006

STYRENE MONOMER

COMPONENT	UNIT	COMPOSITION	TEST METHOD
styrene monomer	WT%,min	99.85	ASTM D 5135
polymers	ppm wt, max	10	ASTM D 2121
colour	APHA, max	10	ASTM D 1209
aldehydes (as benzaldehyde)	ppm wt, max	50	ASTM D 2119
inhibitor	ppm wt	15	ASTM D 4590
peroxides (as H2O2)	ppm wt, max	30	ASTM D 2340
TOTAL SULPHUR (as S)	ppm wt, max	1	ASTM D 3120
total chlorides (as Cl)	ppm wt, max	1	ASTM D 4929
C8 (EB +Xylenes)	ppm wt, max	600	ASTM D 5135
phenyl acetylene)	ppm wt, max	180	ASTM D 5135
C9 aromatics	ppm wt, max	800	ASTM D 5135
within C9 Alphamethylstyrene	ppm wt, max	400	
CONDITION			
		NORMAL	**Mechanical Design**
pressure at BL, bar g		12	to be confirmed
Temperature at BL,°C		15	100

BENZENE		
COMPONENT	**UNIT**	**COMPOSITION**
BENZENE	wt % min	98
NON aromatics	wt % min	1.5
Toluene	wt % min	0.5
Ethylbenzene	wt % min	0.01
CONDITION		
	NORMAL	**Mechanical Design**
pressure at BL, bar g	12	to be confirmed
Temperature at BL,°C	25	100

TOLUENE		
COMPONENT	**UNIT**	**COMPOSITION**
Toluene	wt % min	98.8
NON aromatics	wt % mix	0.6
BENZENE	wt % mix	0.2
Ethylbenzene	wt % mix	0.4
CONDITION		
	NORMAL	**Mechanical Design**
pressure at BL, bar g	12	to be confirmed
Temperature at BL,°C	25	100

STYRENE TAR		
COMPONENT	**UNIT**	**COMPOSITION**
Toluene	wt % TYPICAL	35
NON aromatics	wt % TYPICAL	15
BENZENE	wt % TYPICAL	10
Ethylbenzene	wt % TYPICAL	40
CONDITION		
	NORMAL	**Mechanical Design**
pressure at BL, bar g	2.5	7
Temperature at BL,°C	133	150

HDPE 2100J(injection grade)

Property	Test Method	Unit	Value
Melt flow rate	ISO 1133	g/10 min.	5.8
Density	ISO 1183	kg/m3	953
Tensile Strength at yield	ISO 527-1, -2	MPa	21
Tensile Strength at break	ISO 527-1, -2	MPa	13
Elongation at Break	ISO 527-1, -2	%	370
Charpy Impact strength	ISO 179-1	kJ/m2	4.2
Shore hardness	ISO 868	D scale	63
Stress cracking resistance	ASTM 1693	hr	8
Melting temperature	ISO 11357	ºC	131
Vicat softening temperature	ISO 306	ºC	121

APPLICATION

Excellent environmental stress cracking resistance and good impact strength. General purpose and particularly suitable for enclosure materials Fenders of motorcycle, front cover of motorcycle, caps for mayonnaise bottles, caps for sauce bottles, casks for pickles, etc.

HDPE 2200J(injection grade)

Property	Test Method	Unit	Value
Melt flow rate	ISO 1133	g/10 min.	5.2
Density	ISO 1183	kg/m3	964
Tensile Strength at yield	ISO 527-1, -2	MPa	28
Tensile Strength at break	ISO 527-1, -2	MPa	>17
Elongation at Break	ISO 527-1, -2	%	>500
Charpy Impact strength	ISO 179-1	kJ/m2	7.2
Shore hardness	ISO 868	D scale	65
Stress cracking resistance	ASTM 1693	hr	4
Melting temperature	ISO 11357	ºC	135
Vicat softening temperature	ISO 306	ºC	130

APPLICATION

Excellent rigidity and impact strength, general purpose and industrial uses Vegetable containers, milk bottle crates, beverage crates, vegetable containers, fruit containers, casks for pickles, package for tablets, tool boxes, pellets shipping crates, bread trays, etc.

HDPE 3000B(Blow molding grade)

Property	Test Method	Unit	Value
Melt flow rate	ISO 1133	g/10 min.	0.63
Density	ISO 1183	kg/m3	961
Tensile Strength at yield	ISO 527-1, -2	MPa	31
Tensile Strength at break	ISO 527-1, -2	MPa	>18
Elongation at Break	ISO 527-1, -2	%	>500
Charpy Impact strength	ISO 179-1	kJ/m2	5.5
Shore hardness	ISO 868	D scale	65
Stress cracking resistance	ASTM 1693	hr	24
Melting temperature	ISO 11357	ºC	134
Vicat softening temperature	ISO 306	ºC	128

APPLICATION

Excellent rigidity and good processability Small-sized bottle, toys, milk bottles, bottles for food, packaging, waste packaging containers, fridge bottles

HDPE 5200B(Blow molding grade)

Property	Test Method	Unit	Value
Melt flow rate	ISO 1133	g/10 min.	0.32
Density	ISO 1183	kg/m3	960
Tensile Strength at yield	ISO 527-1, -2	MPa	31
Tensile Strength at break	ISO 527-1, -2	MPa	>21
Elongation at Break	ISO 527-1, -2	%	>500
Charpy Impact strength	ISO 179-1	kJ/m2	NB
Shore hardness	ISO 868	D scale	64
Stress cracking resistance	ASTM 1693	hr	40
Melting temperature	ISO 11357	ºC	134
Vicat softening temperature	ISO 306	ºC	128

APPLICATION

Excellent rigidity and impact strength Large containers and industrial uses Kerosene containers, chemical containers, food containers, automobile oil containers, large toys, milk bottles, bottles for pesticides, water packaging containers, water tanks, petrol cans, floats and etc.

HDPE 5300B(Blow molding grade)

Property	Test Method	Unit	Value
Melt flow rate	ISO 1133	g/10 min.	0.4
Density	ISO 1183	kg/m3	949
Tensile Strength at yield	ISO 527-1, -2	MPa	24
Tensile Strength at break	ISO 527-1, -2	MPa	>14
Elongation at Break	ISO 527-1, -2	%	>500
Charpy Impact strength	ISO 179-1	kJ/m2	8.5
Shore hardness	ISO 868	D scale	64
Stress cracking resistance	ASTM 1693	hr	>600
Melting temperature	ISO 11357	ºC	130
Vicat softening temperature	ISO 306	ºC	121

APPLICATION

Good external appearance, excellent environmental stress cracking resistance Shampoo bottles, cosmetic bottles

HDPE 6008B(Blow molding grade)

Property	Test Method	Unit	Value
Melt flow rate	ISO 1133	g/10 min.	0.36
Density	ISO 1183	kg/m3	956
Tensile Strength at yield	ISO 527-1, -2	MPa	26
Tensile Strength at break	ISO 527-1, -2	MPa	>17
Elongation at Break	ISO 527-1, -2	%	>500
Charpy Impact strength	ISO 179-1	kJ/m2	8.6
Shore hardness	ISO 868	D scale	64
Stress cracking resistance	ASTM 1693	hr	300
Melting temperature	ISO 11357	ºC	132
Vicat softening temperature	ISO 306	ºC	123

APPLICATION

Different in stabilizer recipe from 6200BX Anti-static electricity Detergent bottles, cosmetic bottles

MDPE 5100E(Extrusion grade)

Property	Test Method	Unit	Value
Melt flow rate	ISO 1133	g/10 min.	0.24
Density	ISO 1183	kg/m3	944
Tensile Strength at yield	ISO 527-1, -2	MPa	20
Tensile Strength at break	ISO 527-1, -2	MPa	>17
Elongation at Break	ISO 527-1, -2	%	>500
Charpy Impact strength	ISO 179-1	kJ/m2	NB
Shore hardness	ISO 868	D scale	60
Stress cracking resistance	ASTM 1693	hr	>600
Melting temperature	ISO 11357	ºC	127
Vicat softening temperature	ISO 306	ºC	120

APPLICATION

Characteristics and Uses: Excellent environmental stress cracking resistance and good processability
Steel pipe lining and submarine cables