

## BUTANE

BANDAR IMAM PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Ethane	mol %	G.C	0.08 max
2	Propane	mol %	G.C	2 max
3	Total – C <sub>4</sub>	mol %	G.C	97.5 min
4	Total – C <sub>5</sub>	mol %	G.C	0.82 max
5	Sp. Gr. @ (60/60°F)	--	ASTM D-2598	To Be Reported
6	Copper Corrosion	--	ASTM D-1838	No.1a max
7	Total Sulphide	Wt.ppm	(BASED ON ASTM D-3246)	30 max
8	Hydrogen Sulphide	Vol. ppm	ASTM D-2420/DRAGE	Nil
9	Vapor Pressure @ (100°F)	Psig	ASTM D-2598	70 max
10	Water Content	Vol. ppm	SHAW DEW POINT	10 max
11	Residue on Evaporation	Vol %	ASTM D-2158	0.05 max

Shipping : Bulk Carrier

## Raffinate - C4

BANDAR IMAM PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	ISO & Normal Butane	mol %	G.C	28 max
2	1- Butene	mol %	G.C	25 max
3	ISO - Butene	mol %	G.C	45 min
4	Trans & Cis butene-2	mol %	G.C	22 max
5	1,2 & 1,3 Butadiene	mol %	G.C	1 max
6	Methyl Acetylene	mol %	G.C	0.5 max
7	Vinyl Acetylene	mol %	G.C	0.2 max
8	Ethyl Acetylene	mol %	G.C	0.2 max
9	Sp. Gr @ ( 15.6°C )	--	ASTM D-2598	To Be Reported
10	Total Sulphur	Wt.ppm	Microcoulomerty	1 max
11	Copper Corrosion	--	ASTM D-1838	No.1a
12	C3 & Lighter HC	mol %	G.C	0.05 max
13	C5 & Heavier HC	mol %	G.C	0.1 max
14	R.V.P @ (100°F)	Psia	ASTM D-1267	70 max
15	Evaporated Temp, 95%	°C	ASTM D-1837	-2.5 max
16	Residue on Evaporation	Vol %	ASTM D-2158	0.05 max
17	Water Content	Wt.ppm	Evaporation Method	700 max

Shipping : Bulk Carrier

# 1- BUTENE

TABRIZ PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Purity	Vol %	--	99 min
2	Other Butenes	Wt.ppm	--	2.200 max
3	N-Butane	Wt.ppm	--	2.200 max
4	Propadienes +1,3-Butadiene	Vol. ppm	--	200 max
5	Total Acetylenics	Vol. ppm	--	10 max
6	C <sub>6</sub> 'S	Vol. ppm	--	500 max
7	Ethane	Wt.ppm	--	200 max
8	Ethylene	Wt.ppm	--	500 max

Shipping : Bulk Carrier

# PROPANE

BANDAR IMAM PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Ethane	mol %	G.C	0.4 max
2	Propane	mol %	G.C	98 min
3	Butane	mol %	G.C	1.4 max
4	Pentanes & Heavier	mol %	G.C	0.01 max
5	Copper Corrosion	--	ASTM D-1838	No.1a max
6	Hydrogen Sulphide	Vol. ppm	ASTM D-2420 / DRAGER	5 max
7	Sp. Gr @ (66/60°F)	--	ASTM D-2598	To Be Reported
8	Sulphur (Volatile)	Wt.ppm	( BASED ON ASTM D-3246 )	30 max
9	Vapor Pressure @ ( 100°F)	Psig	ASTM D-2598	200 max
10	Water Content	--	ASTM D-2713	Pass

Shipping : Bulk Carrier

# NAPHTHA (C<sub>5</sub>+)

BANDAR IMAM PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Density @ (15.6°C)	gr/cm <sup>3</sup>	ASTM D-4052	0.735 max
2	R.V.P.	Psia	ASTM D-323	12 max
3	Color Saybolt	--	ASTM D-156	16 min
4	Lead Content	Wt.ppm	ASTM D-3559	20 max
5	Total Sulphur	Wt.ppm	ASTM D-3120	300 max
6	I.B.P.	°C	ASTM D-3120	30 max
7	F.B.P.	°C	ASTM D-86	180 max
8	Paraffins	Wt %	G.C	70 max
9	Olefins	Wt %	G.C	1 max
10	Naphthenes + Aromatics	Wt %	G.C	Balance
11	Total Chlorides	Wt.ppm	IP-AK/81	10 max

Shipping : Bulk Carrier

# HEXANE

BANDAR IMAM PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Total Butane	wt %	G.C	--
2	Iso Pentane	wt %	G.C	--
3	Normal Pentane	wt %	G.C	--
4	2,2 - Dimethylbutane	wt %	G.C	--
5	2,3 - Dimethylbutane	wt %	G.C	--
6	2 - Methylpentane	wt %	G.C	--
7	3 - Methylpentane	wt %	G.C	--
8	Normal Hexane	wt %	G.C	50 min
9	Methylcyclopentane	wt %	G.C	--
10	Benzene	wt %	G.C	--
11	Cyclohexane	wt %	G.C	4.5 max
12	Total Hexane	wt %	G.C	97 min
13	Heptane Plus	wt %	G.C	--
14	Density @ (15.6°C)	gr/cm <sup>3</sup>	ASTM D-4052	To Be Reported

Shipping : Bulk Carrier

## C<sub>4</sub> - Cut

### TABRIZ PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	1,3 Butadiene	Wt %	G.C	43-60
2	Methyl Acetylene	Wt %	G.C	0.15 max
3	Ethyl Acetylene	Wt %	G.C	0.6 max
4	Vinyl Acetylene	Wt %	G.C	2.5 max
5	1,2 Butadiene	Wt %	G.C	0.8 max
6	1- Butane	Wt %	G.C	0.3 – 4
7	N-Butane	Wt %	G.C	2 – 9
8	Propadiene	Wt %	G.C	0 – 1
9	T-2-Butene	Wt %	G.C	2 – 7
10	1-Butene	Wt %	G.C	8 – 13
11	1-Butene	Wt %	G.C	15 – 26
12	C-2-Butene	Wt %	G.C	1.5 – 5
13	C5'S	Wt %	G.C	< 0.3

Shipping : Bulk Carrier

## ARGON

### SHIRAZ PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Purity	Wt %	ANALYSED BY ANALYSER	99.9995 min
2	N <sub>2</sub>	Wt.ppm	ANALYSED BY ANALYSER	3 max
3	H <sub>2</sub>	Wt.ppm	ANALYSED BY ANALYSER	1 max
4	CH <sub>4</sub>	Wt.ppm	ANALYSED BY ANALYSER	0.5 max

Shipping : Specific Cylinder

## ARGON

### FAJR PETROCHEMICAL CO.

#	PROPERTY	Units	Test Method	Value
1	Purity	Wt %	ANALYSED BY ANALYSER	99.9995 min
2	O <sub>2</sub>	Wt.ppm	ANALYSED BY ANALYSER	4 max
3	N <sub>2</sub>	Wt.ppm	ANALYSED BY ANALYSER	1 max

Shipping : Specific Cylinder

# ETHYLENE

## BANDAR IMAM PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Purity	mol %	G.C	99.95 min
2	Impurity Paraffins	Vol. ppm	G.C	500 max
3	Propylene & Higher Olefins	Vol. ppm	G.C	10 max
4	Acetylene	Vol. ppm	G.C	3 max
5	Carbon Monoxide	Vol. ppm	G.C	3 max
6	Carbon Dioxide	Vol. ppm	G.C	3 max
7	Hydrogen	Vol. ppm	G.C	5 max
8	Total Sulphur	Vol. ppm	BASED ON ASTM D-3246	2 max
9	Oxygen	Vol. ppm	G.C	2 max
10	Water Content	Vol. ppm	SHAW DEW POINT	1 max
11	Ammonium+Amin comp.	Vol. ppm	G.C	Nil

Shipping : Bulk Carrier

# ETHYLENE

## AMIR KABIR PETROCHEMICAL CO.

#	PROPERTY	Units	Test Method	Value
1	Ethylene	Vol %	Linde Instr.553	99.95 min
2	Hydrogen	Vol ppm	ASTM D-1946	5 max
3	Methane ÷ Ethane	Vol ppm	Linde Instr.553	500 max
4	Acetylene	Vol ppm	Linde Instr.553	1 max
5	Propylene ÷ Higher	Vol ppm	Linde Instr.553	10 max
6	Carbon Monoxide	Vol ppm	ISO6381	0.2 max
7	Carbon Dioxide	Vol ppm	ISO6381	1 max
8	Oxygen	Vol ppm	Oxygen Analyzer(TELEDINE)	1 max
9	Water	Vol ppm	H2O Analyzer show Dew point meter)	1 max
10	Sulphur as H2S	Vol ppm	ASTM E 840	1 max
11	Methanol	Vol ppm	Linde Instr.535	1 max
12	Oxygenated Organics	Vol ppm	Linde Instr.535	1 max
13	Carbonyl Sulphide	Vol ppm	ASTM D-6228	0.1 max

Shipping : Bulk Carrier

# NITROGEN

BANDAR IMAM PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Purity	mol %	G.C	99.998 min
2	Carbon Monoxide	Vol. ppm	G.C	1 max
3	Carbon Dioxide	Vol. ppm	G.C	1 max
4	Oxygen	Vol. ppm	G.C	5.0 max
5	Acetylene	Vol. ppm	G.C	0.05 max
6	Total Hydrocarbon	Vol. ppm	G.C	1.0 max
7	Water Content	Vol. ppm	SHAW DEW POINT	8.0 max

Shipping : specific Cylinder

# NITROGEN

FAJR PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Purity	Vol %	--	99.99 min.
2	Oxygen	ppm	--	2 max.
3	Co Content	ppm	--	10 max.
4	Co2 Content	ppm	--	1 max.
5	H2 Content	ppm	--	1 max.
6	Water Content	ppm	--	1 max.
7	Chloride	ppm	--	Nil
8	s	ppm	--	0.2 max.

Shipping : specific Cylinder

# PROPYLENE (Polymer Grade)

BANDAR IMAM PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Purity	Vol %	G.C	99.7 min
2	Propane & Heavier	Vol %	G.C	Balance
3	Ethane	Vol. ppm	G.C	30 max
4	Ethylene	Vol. ppm	G.C	2 max
5	Acetylene	Vol. ppm	G.C	1 max
6	Methyl acetylene	Vol. ppm	G.C	1 max
7	Propadiene	Vol. ppm	G.C	2 max
8	Total - C <sub>4</sub> 'S	Vol. ppm	G.C	1 max
9	Hydrogen	Vol. ppm	G.C	5 max
10	Methane	Vol. ppm	G.C	10 max
11	Carbon Monoxide	Vol. ppm	G.C	0.3 max
12	Carbon Dioxide	Vol. ppm	G.C	2 max
13	Oxygen	Vol. ppm	G.C	2 max
14	Water Content	Vol. ppm	G.C	5 max
15	Total Sulphur	Vol. ppm	G.C	2 max
16	Methanol & Ketones	Vol. ppm	G.C	5 max

Shipping : Bulk Carrier

# NITROGEN

TABRIZ PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Purity	mol %	--	99.65 min.
2	Oxygen	ppm	--	3 max.
3	Argon	mol %	--	0.05 max.

Shipping : specific Cylinder

# HEPTANE

BANDAR IMAM PETROCHEMICAL CO.

#	Property	Units	Test Method	Value
1	Total Butane	Wt %	G.C	--
2	Total Pentane	Wt %	G.C	--
3	Total Hexane	Wt %	G.C	--
4	Iso Paraffin Heptane	Wt %	G.C	--
5	Naphthane Heptane	Wt %	G.C	--
6	Normal Heptane	Wt %	G.C	38.6 min.
7	Total Heptane	Wt %	G.C	88 min.
8	Total Octane & Heavier	Wt %	G.C	--
9	Aromatic Benzene Toluene C <sub>8</sub> Aromatic	Wt %	G.C	--
10	Density @ ( 15.6°C )	gr/cm <sup>3</sup>	ASTM D-4052	To Be Reported

Shipping : Bulk Carrier

# LPG

BUALI SINA PETROCHEMICAL CO.

#	PROPERTY	Units	Test Method	Value
1	GC		(ISO 7941)	
2	H2	Mol%		MAX 1.5
3	C1	Mol%		MAX 0.5
4	C2	Mol%		MAX 9
5	C5	Mol%		MAX 2.5
6	C6+	Mol%		MAX 0.4
7	N2	Mol%		MAX 0.1

Shipping : Bulk carrier

## LIGHT END

### BUALI SINA PETROCHEMICAL CO.

#	PROPERTY	Units	Test Method	Value
1	PONA Paraffinic Olefinic Naphthenic Aromatic Others	Wt % Wt % Wt% Wt% Wt% Wt%	ASTM D – 5134	86 – 97 0 – 1.67 0.47 – 5.5 0 – 5 0 – 0.02
2	Total sulfur	ppm	ASTM D – 3120	850 - 1260
3	Water content	ppm	ASTM D - 1744	160

Shipping : Bulk carrier

## C5 - Cut

### BUALI SINA PETROCHEMICAL CO.

#	PROPERTY	Units	Test Method	Value
1	C2	Mol%	---	0.02
2	C3	Mol%	---	0.06
3	C4	Mol%	---	0.3
4	C5	Mol%	---	98.22
5	C6	Mol%	---	1.4
6	Total	Mol%	---	100

Sp.Gr	0.65-0.7
Br.NO.	100-181
M.A.V	1.3-8.6

Shipping : Bulk carrier

## HYDROGEN

### AMIR KABIR PETROCHEMICAL CO.

#	PROPERTY	Units	Test Method	Value
1	Hydrogen Content	Vol %	ASTM D-1946	99.9 min
2	CO	Vol ppm	ISO6381	5 max
3	CH4, N2	Vol ppm	ASTM D-2505	Balancc max
4	C2H4	Vol ppm	Linde Instr.553	10 max

Shipping : Bulk carrier

# PROPYLENE

AMIR KABIR PETROCHEMICAL CO.

#	PROPERTY	Units	Test Method	Value
1	Propylene	Vol %	Linde Instr.553	99.8 min
2	propane & heavier	Vol %	Linde Instr.553	Balance
3	Methane	Vol ppm	Linde Instr.553	10 max
4	Ethane	Vol ppm	Linde Instr.553	20 max
5	Hydrogen	Vol ppm	ASTM D-1946	5 max
6	Ethylene	Vol ppm	Linde Instr.553	1 max
7	Acetylene	Vol ppm	Linde Instr.553	1 max
8	C4 HC	Vol ppm	Linde Instr.553	1 max
9	Methyle acetylene	Vol ppm	Linde Instr.553	1 max
10	Propadiene	Vol ppm	Linde Instr.553	2 max
11	Carbonyl monoxide	Vol ppm	ISO6381	0.2 max
12	Carbonyl dioxide	Vol ppm	ISO6381	2 max
13	Water	Vol ppm	H2O Analyzer(show Dew point meter)	5 max
14	Total Sulphur	Vol ppm	ASTM E 840	2 max
15	Methanol ÷ Ketones	Vol ppm	Linde Instr.553	5 max

Shipping : Bulk carrier

# PROPYLENE

TABRIZ PETROCHEMICAL CO.

#	PROPERTY	Units	Test Method	Value
1	Propylene	mol %	G.C	99.7 min
2	Propane	mol ppm	G.C	2800 max
3	Ethane	mol ppm	G.C	30 max
4	Ethylene	mol ppm	G.C	2 max
5	Acetylene	mol ppm	G.C	1 max
6	Methyl Acetylene	mol ppm	G.C	1 max
7	Propadiene	mol ppm	G.C	2 max
8	C4'S	mol ppm	G.C	1 max
9	Methane	mol ppm	G.C	10 max
10	CO	mol ppm	G.C	0.3 max
11	CO2	mol ppm	G.C	2 max

Shipping : Bulk carrier

# PROPYLENE ( Chemical )

BANDAR IMAM PETROCHEMICAL CO.

#	PROPERTY	Units	Test Method	Value
1	Purity	mol %	G.C	92 min
2	Paraffins	mol %	G.C	8 max
3	Ethylene	mol - ppm	G.C	10 max
4	Acetylene	mol - ppm	G.C	1 max
5	Methyl acetylene + Propadiene	mol - ppm	G.C	10 max
6	Butadiene	mol - ppm	G.C	5 max
7	Butanes & Butenes	mol - ppm	G.C	20 max
8	Total Sulphur	Wt.ppm	MICROCOULOMETRY (BASED ON ASTM D-3246)	2 max
9	Water Content	Vol. ppm	SHAW DEW POINT	2.5 max
10	Nitrogen	mol - ppm	G.C	Nil
11	Hydrogen	mol - ppm	G.C	10 max
12	Carbon Monoxide	mol - ppm	G.C	5 max
13	Carbon Monoxide	mol - ppm	G.C	10 max
14	Oxygen	mol - ppm	G.C	5 max
15	Oxygenated Organic Compound (Methanol)	mol - ppm	G.C	5 max
16	Sp. Gr. @ ( 60 / 60°F )	---	ASTM D-2598	To Be Reported

Shipping : Bulk carrier