



CHEMICALS

Benzene

Capacity: 150 KTPA

Technology Licensor: Lurgi GmbH, Germany

Benzene is an organic chemical compound. It is a colorless, highly flammable liquid with a sweet smell. Benzene is one of the most basic petrochemicals and precursor in the production of drugs, plastics, synthetic rubber, dyes, etc.

Benzene is extensively used as a chemical intermediate for the production of many important industrial compounds such as Caprolactam, Linear Alkyl Benzene (LAB), Styrene, Phenol, Cyclohexane, Nitrobenzene, Aniline, Chlorobenzene, Insecticides, Pesticides etc. Benzene is also used for production of thinners for paint industry and also as solvents.

Major Properties	Test Methods	Unit	Value*
Appearance	No method	-	Clear
Purity	ASTM D-5134	Wt%	>99.90
Color	ASTM D-1209	APHA	20 max
Solidification/ Freezing Point	ASTM D-852	°C	5.45 min
Distillation range (at 760mm Hg including 80.1 °C)	ASTM D-850	°C	1max
Density/ Specific Gravity	ASTM D-4052	Gm/ml	0.882-0.886
Moisture /water content	ASTM D-7375	Wt ppm	300 max
Total non-aromatics	ASTM D-5713	Wt ppm	1000 max
Toluene	ASTM D-5134	Wt ppm	300 max
Acid wash colour	ASTM D-848	-	1 max
Thiophene	ASTM D-4735	Wt ppm	0.6 max
Total Sulphur	ASTM D-5453	Wt ppm	1 max

Butadiene

Capacity: 115 KTPA

Technology Licensor: Lurgi GmbH, Germany

Butadiene is a colourless, noncorrosive liquefied gas with a mild aromatic or gasoline-like odour. Its low flash point makes butadiene both flammable and explosive.

Butadiene is mainly used in polymers and elastomers such as ABS, SBR and SB latex, and polybutadiene rubber. Together these applications represent 3/4th of the total butadiene demand in the world. Styrene Butadiene latex is mainly used in paper coating, such as on glossy magazines and brochures. It is also used in carpet backing, and construction such as bitumen additive and adhesive for roofing.

Major Properties	Test Methods	Unit	Value*
1:3 Butadiene	ASTM D-2593	Wt%	99.5 min
Total Acetylenes as(MA+VA+EA)	ASTM D-2593	Wt ppm	30 max
Carbonyl as acetaldehyde	BASF	Wt ppm	50 max
Peroxide as H2O2	ASTM D-5799	Wt ppm	2 max
Solvent NMP	BASF	Wt ppm	10 max
1:2 Butadiene	ASTM D-2593	Wt ppm	20 max
Other C4s	ASTM D-2593	Wt%	0.5 max
C5 hydrocarbons	ASTM D-2593	Wt ppm	10 max
BD Dimer (at the loading point)	BASF	Wt ppm	250 max
TBC inhibitor as loaded (at loading point)	ASTM D-1157	Wt ppm	75-150 max
Sulphur	ASTM D-6667	Wt ppm	5 max
Propadiene	ASTM D-2593	Wt ppm	10 max





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Pyrolysis Gasoline PyGas

Capacity: 165 KTPA

Technology Licensor: Linde, Germany

Pygas is produced in an ethylene plant that processes naphtha, butane or gasoil. Raw Pyrolysis Gasoline (RPG) is a naphtha-range product with high aromatics content used mainly as a high-octane blend stock for motor gasoline or as a feedstock for an aromatics extraction unit.

OPaL's Pygas is hydrogenated Pyrolysis Gasoline (HPG) obtained from RPG post Benzene extraction and having < 1.5 wt% benzene content. It can be used as chemical feedstock for Aromatics Extraction – mainly Toluene, mix-Xylene and low & heavy grade Fuel Oil or also can be used as gasoline blending component.

Major Properties	Test Methods	Unit	Value*
Density (at 15°C)	ASTM D-4052	gm/ml	0.870 max
Benzene Content	ASTM D-5443	Wt%	1.5 max
Sulphur	ASTM D-5453	Wt ppm	100 max
Total Aromatics	ASTM D-5443	Wt%	min 70
Styrene C5s & lighter	ASTM D-5134	Wt%	0.5 max
C9s & heavier	ASTM D-5134	Wt%	1.5 max
Water	ASTM D-4176	Free water	no
Thiophene	ASTM D-6228	Wt ppm	100 max
Diene Number	Extraction by MA		1 max

Carbon Black Feedstock (CBFS)

Capacity: 70 KTPA

Technology Licensor: Linde, Germany

CBFS is the heavy hydrocarbon mix (mostly C9 to C15 fraction and higher) bottom product of Naphtha cracker unit. CBFS is used to produce Carbon Black, which is used in tyres and road paving, tyre reinforcements, black pigments (e.g. for road markings), and conductors. CBFS is also used as heating Fuel Oil in boilers in several industrial units.

The stream also contains Piperylene, which is used to produce copolymerization elastomers, petroleum resins, curing agents, pesticides, and perfumes.

Major Properties	Test Methods	Unit	Value*
Density (at 15.56°C)	ASTM D-1298	Kg/m ³	1110
Flash Point	ASTM D-93	°C	70 min
Viscosity (at 98.9 °C)	ASTM D- 445/ D 2161	Sus	84 - 160
BMCI	Calculation		105 - 125
Water content by distillation	ASTM D-95	Vol%	0.3 max
Sulphur	ASTM D-4294	Wt%	3 max
Asphaltene	IP 143	Wt%	>5
Pour point	ASTM D-97	°C	50
Ash content	ASTM D-482	Wt%	0.05 max

