

CLIENT	BCPL	MOLECULAR SIEVES AND ADSORBENTS	JOB N°	8692Y	Rev
LOCATION	LEPETKATA - INDIA		SECTION	FPU	
UNIT	220 kta LLDPE / HDPE		ITEM	117-LZ-ADSC2	
			No. OFF	1	
			SERVICE	FEEDSTOCK PREP ADSORBENTS	
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2.2.2 CONDITIONS OF THE BUTENE-1 STREAM

2.2.2.1 Butene-1 composition

The following table gives the butene-1 feed specification before and after the 117-VV-941A treaters.

Components to remove are Water, Carbon Dioxide, Carbonyls and Peroxides.

Raw material	BUTENE-1	
Component	Required specifications at 117-VV-941A outlet	Specifications at 117-VV-941A inlet
Butene-1	99 %wt min	99 %wt min
Other Butenes	0.9 % max	0.9 % max
Butanes		
1,3 butadiene + propadiene	200 ppm v max	200 ppm v max
Total Acetylenes	10 ppm v max	10 ppm v max
Carbon Monoxide	1 ppm v max	1 ppm v max
Carbon Dioxide	2 ppm wt max	4 ppm wt max
Oxygen	1 ppm vt max	1 ppm vt max
Total combined Sulphur (as S)	1 ppm v max	1 ppm v max
Water	0.2 ppm wt max	2 ppm v max
Carbonyls (as C=O)	0.5 ppm wt max	5 ppm wt max
Chloride	1 ppm wt max	1 ppm wt max
Alcohol (as methanol)	1 ppm wt max	1 ppm wt max
MTBE	10 ppm wt max	10 ppm wt max
Peroxides	0.5 ppm wt max	0.5 ppm wt max
C5 and Heavier	50 ppm wt max	50 ppm wt max

Note:

Butene feed contains ethylene 1% wt max, ethane 600 ppm wt max, ether (as DME) 2 ppm v max.

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2.2.2.2 Butene-1 Stream conditions

The conditions at the inlet of the treaters 117-VV-941A are the following:

- Pressure:
 - Minimum : 4 kg/cm²g
 - Nominal : 4.5 kg/cm²g
 - Maximum : 4.5 kg/cm²g
 - Mech. Design : 17.2 kg/cm²g
- Temperature:
 - Normal : 30°C
 - Mech. Design : 80°C

2.2.2.3 Butene-1 Flowrates

- Flow :
 - Minimum : (1)
 - Normal : 3192 kg/h
 - Design : 4100 kg/h

Note:

(1) Vendor to indicate minimum acceptable flowrate, to achieve the required specification.

2.2.2.4 117-VV-941A Cycle length

The adsorption duration and regeneration frequency will be based on a 23.3 day cycle at design flowrate (equivalent to 30 days at normal flowrate).

2.2.2.5 117-VV-941A Regeneration

- Flowrate : by vendor
- Warm purge : by vendor
- Heat cycle : by vendor
- Cool cycle : by vendor
- Depressurisation/Repressurisation : by vendor

2.2.2.6 117-VV-941A Pressure drop

The maximum pressure drop (at specified design flowrate) is 0.1 kg/cm² max.

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