



NAME: BUTADIENE

Product Description:

1,3-Butadiene is a simple conjugated diene with the formula C_4H_6 . It is an important industrial chemical used as a monomer in the production of synthetic rubber. When the word butadiene is used, most of the time it refers to 1,3-butadiene.

The name butadiene can also refer to the isomer, 1,2-butadiene, which is a cumulated diene. However, this alone is difficult to prepare and has no industrial significance. This diene is also not expected to act as a diene in a Diels–Alder reaction due to its structure. To effect a Diels-Alder reaction only a conjugated diene will suffice.

Although butadiene breaks down quickly in the atmosphere, it is nevertheless found in ambient air in urban and suburban areas as a consequence of its constant emission from motor vehicles. The EPA lists it as the "mobile source air toxic" with the highest normalized risk factor, exceeding that of formaldehyde, the second riskiest air toxic emitted by motor vehicles, by a factor of more than 20.

Typical data: (Table)

COMPONENT	TEST METHOD	UNIT	RESULT
1,3 BD	ASTM D-2593	WT%	Min 99.4
Total Acetylenes	ASTM D-2593	PPM	Max 60
Total Butanes'	ASTM D-2593	WT%	Max 0.5
1,2 BD	ASTM D-2593	PPM	Max 200
Propadiene	ASTM D-2593	PPM	Max 50
C5s	ASTM D-2593	PPM	Max 20
BD Dimer	ASTM D-2426	WT%	Max 0.1
NMP	GC	PPM	Max 10
TBC	ASTM D-1157	PPM	50-200
Peroxides	ASTM D-5799	PPM	Max 10
Carbonyl	ASTM D-4423	PPM	Max 30
Water	ASTM D-1744	PPM	Max 100
Total Sulfur	ASTM D-3246	PPM	Max 10