

## 1,3- BUTADIENE

### **PRODUCTION:**

1,3-butadiene is produced by the extractive distillation of C4-fractions. It is a two-stage process under the Nippon Zeon (Japan) license, where the 1,3-butadiene is extracted and solved and then separated from the solvent and finally purified.

### **DESCRIPTION:**

1,3-butadiene (  $\text{CH}_2 = \text{CH} - \text{CH} = \text{CH}_2$  ) is unsaturated hydrocarbon, with two double bonds (diene). At room temperature it is a colorless gas, slightly aromatic odoured, non corrosive but very reactive and flammable.

### **SPECIFIED PROPERTIES:**

No.	PROPERTY	TEST METHOD	UNIT	VALUE
1	1,3-Butadiene	ASTM D 2593	% (m/m)	min 99.5
2	Vinylacetylene	ASTM D 2593	ppm (m/m)	max 100
3	Propadiene	ASTM D 2593	ppm (m/m)	max 5
4	1,2-Butadiene	ASTM D 2593	ppm (m/m)	max 50
5	C <sub>5</sub> Hydrocarbons	ASTM D 2593	ppm (m/m)	max 50
6	Solvent (DMF)	ASTM D 2426	ppm (m/m)	max 5
7	Butadiene Dimer*	ASTM D 2426	ppm (m/m)	max 100*
8	Carbonile Compounds (as acetaldehyde CH <sub>3</sub> CHO)	ASTM D 4423	ppm (m/m)	max 50
9	Non-volatile residue	ASTM D 1025	ppm (m/m)	max 1000
10	Inhibitor carrier (toluene)	ASTM D 2426	% (m/m)	max 0.12
11	Inhibitor (TBC)	Internal method 10.2.02	ppm (m/m)	75-120*
12	Peroxides (as hydrogen peroxide H <sub>2</sub> O <sub>2</sub> )	ASTM D 5799	ppm (m/m)	max 5
13	Sulphur	ASTM D 3246	ppm (m/m)	max 5

\*At the time of loading

The values given used only as information.



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# BASIC PRODUCTS

**APPLICATION:**

1,3-Butadiene is used as a monomer for the production of synthetic rubber, such as polybutadiene (PBR), isoprene (IR) and chloroprene (CR). During the synthesis with various comonomers are obtained styrene-butadiene rubber (SBR) and latex (SBL), acrylonitrile-butadiene-styrene (ABS) and acrylonitrile-butadiene (NBR) rubber. The main use is for SBR and PBR production, and they are followed by SBL and ABS. Less quantities of butadiene are used for synthesis of adiponitrile, which is an intermedier in nylon 6,6 production.

**STORAGE:**

1,3 butadiene is stored and kept in a standing, spherical storage tank for liquefied petroleum gas. The pressure in the tank is maintained at a defined value, and in case of increase of pressure safety valves react.

To prevent heating under the influence of solar radiation, the tank is insulated.

**REACH:**

HIP-Petrohemija with applying the existing standards ISO 9001, ISO 14001, ISO 45001 and ISO 50001 follows completely the highest standards by wich there are regulated human health and safety protection and environmental protection, and herewith expresses its intention to meet all the requirements wich are prescribed by REACH regulation.

Registration of all the substances of potential export interest has been made with European Agency for Chemicals in Helsinki, in accordance with the prescribed deadlines, therefore in this way it enables further undisturbed placement and sale of HIP-Petrohemija's products without any limits at EU Market.

As the only representative for HIP-Petrohemija in EU, pursuant to Article 8. of REACH regulation, there has been designated REACHLaw ltd., Finland.

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