Korea PTG Co., Ltd.

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Technical Data Sheet

1,4-Butanediol

1. General Information

Formula: $C_4H_{10}O_2$
CAS No.: 110-63-4

Application: 1,4-Butanediol is a low-viscosity glycol used almost exclusively as an intermediate to synthesize other chemicals and polymers. The butanediol molecule maintains its original chemical identity only when used as a solvent. Since butanediol can undergo the typical reactions of a primary alcohol, it lends itself to a very large number of chemical modifications. As it is a difunctional molecule, most of its use is in the area of polymers, such as polyurethanes, polybutylene terephthalate (PBT), a large family of homopolymers and copolymers of N-vinyl-2-prrroidone, and copolyester-ether thermoplastic elastomer (COPE).

Uses: Polybutylene Terephthalate (PBT), Thermoplastic Polyurethanes, Castable Polyurethanes, Reaction Injection Molding, Tetrahydrofuran, N-Methyl-2-Pyrrolidone (NMP), Gamma-Butyrolactone (GBL), N-Vinyl-2-Pyrrolidone (NVP)

2. Specification

Item	Unit	Specification	Test Method
Appearance	-	Water Clear, Slightly Viscous Liquid	Visual
Purity	wt%	Min. 99.5	By GC
Color	APHA	Max. 10	ASTM D 1209
Water	wt%	Max. 0.05	ASTM D 1364
Carbonyl No.	mgKOH/g	Max. 0.5	BS 4583-7

3. Physical Properties

Item	Properties
Molecular Weight	90.12 g/mol
Boiling Point	229.2℃
Flash Point	155℃
Melting Point	20.1℃
Specific Gravity (60/4℃)	1.0125
Viscosity (70℃)	71.5 cP
Refractive Index	1.445

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4. Storage and Handling

The storage tank must be provided with external or internal heating source to maintain a temperature of about 50℃. Solidified 1,4-Butanediol can be molten by being heated in melting room about 70℃ for 24 hours. Do not heat it 80℃ over

It is very important to protect 1,4-Butanediol against to moisture because it is hygroscopic. Therefore it is recommended that 1,4-Butanediol should be stored in completely enclosed tank or container under a dry nitrogen blanket.

As 1,4-Butanediol is ignitable, water spray, foam and/or powder may be used for firefighting.

Shelf life of 1,4-Butanediol is approximate 2 years, under condition that the product is stored in unopened, tightly sealed original container at no greater than 80℃ and is not contacted with moisture under a dry nitrogen blanket.

Shelf life is only guidance and is not a guarantee because there are various possibilities in site of end users to affect the quality of 1,4-Butanediol.