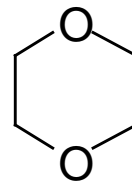




NOVOLYTE
technologies



Product Data Sheet

1,4-Dioxane (CAS: 123-91-1)

Common Names: Dioxane, 1,4-dioxacyclohexane, diethylene dioxide

A polar aprotic cyclic diether with active solvency

1,4-Dioxane is a highly polar aprotic (no hydroxyl functionality) solvent. It is a relatively inert solvent with outstanding stability at high pH. The moderate boiling point allows for easy separation and recovery from reaction mixtures. An excellent solvent for organometallic reagents.

Novolyte offers the highest purity (99.95%) and low moisture (100ppm max).

Physical Properties

Empirical Formula		C ₄ H ₈ O ₂
Molecular Weight		88.1
Boiling Point	(°C 760 mm Hg)	100-102.5
Freezing Point	(°C)	11
Specific Gravity	(20°C)	1.0329
Vapor Pressure	(mm Hg/ 20°C)	30
Volatility	(n-butylacetate = 100)	270
Viscosity	(cp 20°C)	1.2
Surface Tension	(dynes/cm 20°C)	36.9
Explosive limits	(Lower limit, v/v)	2%
	(Upper limit, v/v)	22%
Auto Ignition temp	(°C)	180
Heat of Vaporization	(cal/gram)	98.6
Heat of Combustion	(K Cal/mole)	581
Henry's Law Constant	(atm m ³ /mol)	2.8 x10 ⁻⁶
Flash Point	(°C, closed cup)	5-11
Refractive Index	(20°C)	1.4224
Appearance		Clear, Colorless
Odor		Ethereal
Solubility at 25°C		
in water		complete
water in		complete

Process solvent

- For etching of Teflon and fluoropolymers with alkali metal dispersions
- Solvent vehicle for intermediate and pharmaceutical syntheses
- Electrolyte solutions for lithium batteries

Reaction solvent

- For the manufacture of drugs and API's
- For organometallic reactions, including Grignard reactions
- For the manufacture of protease inhibitors (anti-AIDS drugs)
- Acting as a polycarbonate swelling agent
- Activator for metal borohydrides

Features

- Aprotic
- Moderate boiling point
- Water soluble
- High solvency characteristics
- Powerful diluent
- Excellent thermal and chemical stability
- Refer to MSDS for detailed handling and disposal information
- Use with proper PPE and engineering controls in enclosed applications

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