

1, 4-DIOXANE



CAS Number: 123-91-1

Other Names: Dioxán, 1, 4-Dioxane, 1, 4-Diethylene dioxide,
Diethylene ether, Glycoethylene ether,
Tetrahydro-1, 4-dioxin

Formula: $C_4H_4O_2$

PRODUCT INTRODUCTION

1, 4-Dioxane is a colorless, highly flammable hygroscopic liquid with a mild, sweet ether-like odor. It is infinitely soluble in water and most organic solvents (*i.e.*, alcohol, ether, acetone, benzene, acetic acid). It is also miscible with aromatic hydrocarbons and oils. 1, 4-Dioxane is stable, incompatible with oxidizing agents, oxygen, halogens, reducing agents, moisture.

PHYSICAL AND CHEMICAL PROPERTIES

Color (APHA)	Less than 5
Density (20°C) (g/cm ³)	1.033
Water Content (%)	0.01
Acidity (as Acetic Acid) (%)	Less than 0.001
Initial Point (°C)	101.5
Dry Point (°C)	102.5
Freezing Point (°C)	11.8
Purity (%)	More than 99.95

APPLICATIONS

SOLVENT

1, 4-Dioxane is used primarily as a solvent in paints, varnishes, lacquers, cosmetics, deodorants, cleaning and detergent preparations, and in liquid scintillation counting mediums. There is also the potential for use it as a solvent in the processing of crude petroleum, petroleum refining, petrochemicals, pulp and paper, explosives, commercial printing, electroplating/polishing, pesticides, dyes, fibers, pharmaceuticals, veterinary drugs, adhesives, semiconductors, electronic components, photographic equipment, magnetic recording media, polymers, plastics, rubber manufacture, organic and inorganic chemical manufacture.

In the laboratory, 1, 4-dioxane is useful as a cryoscopic solvent for molecular mass determinations and as a stable reaction medium solvent in chemical synthesis, research and analysis.

Because of its lower toxicity, it is sometimes substituted with tetrahydrofuran (THF) in some processes.

STABILIZER

1, 4-Dioxane often has been used with chlorinated solvents or volatile organic compounds (VOCs). It is primarily used as a stabilizer and corrosion inhibitor for 1, 1, 1-trichloroethane for storage and transport in aluminum containers.

WETTING AND DISPERSING AGENT

1, 4-Dioxane is also used as a wetting and dispersing agent in textile processing.

Other uses:

- Preparation of histological sections for microscopic examination.
- Extracting agent.
- Analytical reagent for the laboratory use.

PACKAGING OPTIONS

1. Drums

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