JIANGSU KHONOR CHEMICALS CO.,LIMITED

TECHNICAL DATA SHEET

1.Product Identification

Product Name: Phosphatidylinositol
Abbreviation: PI
Synonym: L-α-Phosphatidylinositol
CAS No.: 97281-52-2
Chemical Class: Glycerophospholipid
Grade: Research / Biochemical / Pharmaceutical R&D
Appearance: Off-white to light yellow powder or solid

2.Chemical Structure & Description

Phosphatidylinositol (PI) is a naturally occurring **phospholipid** consisting of a glycerol backbone esterified with two fatty acid chains and a phosphorylated inositol head group.
It is an essential component of eukaryotic cell membranes and serves as a **precursor for phosphoinositides**, which are key regulators in intracellular signal transduction pathways.

3.Typical Technical Properties

Property	Typical Value
Molecular Formula	$C_{45}H_{87}O_{13}P$*
Molecular Weight	~867–896 g/mol*
Physical State	Solid / Powder
Polarity	Amphiphilic
Solubility	Soluble in chloroform, methanol; insoluble in water
Lipid Class	Glycerophospholipid
Stability	Stable under dry, low-temperature conditions

* *Values may vary depending on fatty acid composition.*

4.Typical Specifications

Parameter	Specification
Purity (HPLC / TLC)	≥ 98.0 %
Moisture Content	≤ 2.0 %
Residual Solvents	Complies with internal standards
Heavy Metals	≤ 10 ppm
Identification	Conforms (TLC / MS)

Detailed batch data are provided in the corresponding COA.

5.Applications

Phosphatidylinositol (PI) is widely used in:

- Cell membrane and liposome research
- Phosphoinositide signaling pathway studies
- Protein–lipid interaction analysis
- Enzymatic assays (PI kinases, phospholipases)
- Biochemical and molecular biology research
- Pharmaceutical and preclinical R&D

6.Advantages

- High purity and batch-to-batch consistency
- Endogenous lipid with strong biological relevance
- Suitable for sensitive biochemical and signaling studies
- Compatible with liposome and membrane model systems
- Available in multiple forms upon request

7.Packaging & Storage

Packaging:

Sealed glass bottles or vials

Moisture-proof, light-protected containers

Storage Conditions:

Store at **-20 °C** or below

Protect from light, moisture, and oxygen

Avoid repeated freeze–thaw cycles

Shelf Life:

≥ 12 months under recommended storage conditions

8.Safety & Regulatory Information

Intended Use:
For Research Use Only (RUO)

Regulatory Status:

Not approved for food, feed, human, or veterinary use

No food-grade or feed-grade registration

Safety Documentation:

Safety Data Sheet (SDS) available upon request

Handle according to laboratory chemical safety guidelines