

Certificate of Analysis (COA)

Product: Trimesoyl Chloride (TMC)
 Chemical Name: 1,3,5-Benzene-tricarbonyl trichloride
 CAS No.: 4422-95-1
 Molecular Formula: $C_9H_3Cl_3O_3$
 Molecular Weight: 285.48 g/mol
 Grade: Laboratory Grade (High Purity)
 Batch No.: TMC-L2401
 Date of Analysis: 03 Nov 2025
 Analyst: QC Department – Hafez Varesh Co.

1. Physical & Chemical Properties

Parameter	Specification	Result	Method
Appearance	White to off-white crystalline powder	Complies	Visual
Odor	Sharp, acid-chloride odor	Complies	Sensory
Melting Point	43 – 45 °C	44.2 °C	ASTM D1519
Boiling Point	~295 °C (decomposes)	Complies	Reference
Purity (GC)	≥ 99.5 %	99.8 %	GC-FID
Moisture (Karl Fischer)	≤ 0.2 %	0.08 %	ASTM E203
Acid Chloride Content	≥ 99.0 %	99.6 %	Titrimetric
Free Acid (Trimesic Acid)	≤ 0.1 %	0.05 %	HPLC
Hydrolyzable Chloride (شدهائی کلرید)	≤ 0.1 %	0.03 %	Titrimetric
Heavy Metals (as Pb)	≤ 10 ppm	< 5 ppm	ICP-OES
Residual Solvent	Nil	Not Detected	GC
Solubility	Insoluble in water, soluble in benzene, chloroform	Complies	Visual

2. Safety & Storage

Property	Specification
UN Number	3265 (Corrosive Liquid, Acidic, Organic, n.o.s.)
HS Code	29172000
Storage Conditions	Keep tightly closed under inert atmosphere (N ₂ or Ar), in a cool and dry place (< 25 °C), away from moisture.
Shelf Life	24 months under recommended storage conditions.
Handling	Use in fume hood with protective gloves and goggles. Hydrolyzes rapidly in presence of water.

3. Certification

This product has been analyzed and found to comply with the specifications stated above.
All analytical methods are traceable to international standards.

Authorized by:
QC Manager – Hafez Varesh Co.

HAFEZ VARESH
CHEMICAL INDUSTRIES GROUP

For laboratory and R&D use only. Not for drug, household, or food applications.

مجتمع تولیدی حافظ وارث (سهامی خاص)

دانش بنیان