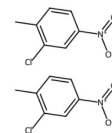


CERTIFICATE OF ANALYSIS

Standard product specification

Ortho Chloro Para Nitro Toluene (2-Chloro-4-nitrotoluene)

CAS 89-59-8 · C₁₄H₁₂Cl₂N₂O₄ · ≥98% Technical


STRUCTURAL FORMULA

1. PRODUCT IDENTITY

Product name	Ortho Chloro Para Nitro Toluene (2-Chloro-4-nitrotoluene)
C.A.S. number	89-59-8
Molecular formula	C ₁₄ H ₁₂ Cl ₂ N ₂ O ₄
Molecular weight	343.17 g/mol
Grade / standard	≥98% Technical
Description	Yellow crystalline solid
Product group	Nitro Toluene Intermediates
Category	Dyes & Dye Intermediates
Country of origin	India
Packing	Bags, drums, carboys, IBC or ISO tank as applicable — customer-specified packing available
Storage	Cool, dry, well-ventilated place in tightly closed original packing

2. ANALYTICAL SPECIFICATION

S. NO.	TEST PARAMETER	SPECIFICATION	TYPICAL RESULT	METHOD
1	Description	Yellow crystalline solid	Complies	Visual
2	Identification	Conforms to the structure of the substance	Complies	FTIR / Chemical test
3	Solubility	As per specification	Complies	Visual / Monograph
4	Assay	Not less than 98.0 % w/w	98.38	Spectrophotometry
5	Shade	Matching approved standard	Matches standard	Visual / Spectrophotometric

6	Strength vs. Standard	100 ± 3 %	99.3 %	Spectrophotometry
7	Moisture	Not more than 5.0 % w/w	3.18	Gravimetry
8	Matter Insoluble in Water	Not more than 1.0 % w/w	0.177	Gravimetry
9	Solubility in Water at 60 °C	Not less than 80 g/L	110 g/L	In-house method
10	Light Fastness (ISO 105-B02)	Grade 5 – 6 minimum	Grade 6	ISO 105-B02
11	Wash Fastness (ISO 105-C06)	Grade 4 – 5 minimum	Grade 5	ISO 105-C06

3. DECLARATION

This document sets out the standard specification for Ortho Chloro Para Nitro Toluene (2-Chloro-4-nitrotoluene) and applies to all consignments of this product and grade supplied by Scapex Exports Pvt. Ltd. It is not a lot-specific release document; a lot-specific certificate carrying the analysis of the material actually shipped is issued with, and travels with, each consignment. Scapex Exports supplies against customer-specified assay limits and pharmacopoeial standards — send your specification sheet and we confirm compliance in writing before the order is accepted.



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