

CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by LRQA. Certificate Number. 10551915

Catalogue Number	L05771
Lot Number	A0478113
Description	4-(2-Chloroethyl)morpholine hydrochloride, 99%
CAS Number	3647-69-6
Quality Test/Release Date	06/Jan/2026
Suggested retest date	06/Jan/2031
Country of Origin	India
Declaration of Origin	Synthetic
BSE/TSE	Not directly derived from or manufactured with any animal byproducts in any way (including but not limited to fermentation or nutrient broth, catalysts, enzymes).

Result Name	Units	Specifications	Test Value
Assay (Non-aqueous acid-base Titration)	%	≥98.5 % (Dry wt. basis)	100.8
Appearance (Color)		White to cream	White
Form		Crystals or powder or hygroscopic crystalline powder	Hygroscopic crystalline powder
Identification (FTIR)		Conforms	Conforms
Loss on Drying	%	≤1% (80°C)	0.06
Melting point	°C	182-185°C (On dried substance)	185



Paul Coleman
Site Quality Manager

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.