

TECHNICAL DATA SHEET

Monoethanolamine (MEA) ACS Grade

ACS Grade

CAS NUMBER	ALLIANCE CODE	GENERATED
141-43-5	monoethanolamine-mea-ac-s-grade	2026-08-31
REVISION	REVIEWED	
1.3	2026-07-17 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Monoethanolamine (MEA) ACS Grade	monoethanolamine-mea-ac-s-grade
GRADE	CONCENTRATION
ACS Grade	—
CAS NUMBER	FORMULA
141-43-5 PubChem	C2H7NO PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
61.08 PubChem	pure_substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (HOCH2CH2NH2)	min. 99.0 %	99.8 %	GC, corrected for water	ACS Reagent Chemicals
Diethanolamine	0.3 %	0.05 %	G.C.	Supplier specification
Ethanol	0.1 %	0.005 %	G.C.	Supplier specification

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Heavy Metals (as Pb)	max. 5 ppm	0.5 ppm	—	ACS Reagent Chemicals
Identity	passes test	Passes test	IR	Supplier specification
Iron (Fe)	max. 5 ppm	0.4 ppm	—	ACS Reagent Chemicals
Non-volatile matter (residue after evaporation)	0.2 %	0.005 %	—	Supplier specification
Triethanolamine	0.1 %	0.01 %	G.C.	Supplier specification
Water (H2O)	max. 0.30 %	0.06 %	coulometry	ACS Reagent Chemicals

Specification values are guaranteed limits. Typical values are representative of production lots and are not guaranteed. Lot-specific certificates of analysis ship with every order.

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

GRADE	CONCENTRATION	TYPICAL ASSAY	SKU
THIS GRADE ACS Grade	—	—	current
Technical	—	—	monoethanolamine-mea

Typical assay shown is the rolling-window mean from the sibling product's most recent lots. Grade selection drives downstream end-use — verify the sibling grade matches your specification before substitution.

PHYSICAL & CHEMICAL PROPERTIES

One or more physical-property values are temporarily suppressed pending verification against vendor COA data. For complete properties refer to the Safety Data Sheet (SDS) or contact sales@alliancechemical.com.

PROPERTY	VALUE	SOURCE
Form	Liquid	Published reference
Color	15 (maximum limit)	ACS Reagent Chemicals
Odor	Unpleasant, ammonia-like	Published reference
Density	1.016–1.020	Supplier specification
Boiling Point	168 °C – 172 °C	Interpreted
Melting Point	50.5 °F (NTP, 1992)	Published reference
Flash Point	200 °F (NTP, 1992)	Published reference
Vapor Pressure	0.4 mmHg at 68 °F ; 6 mmHg at 140 °F (NTP, 1992)	Published reference
Solubility (water)	greater than or equal to 100 mg/mL at 68 °F (NTP, 1992)	Published reference
Refractive Index (nD 20)	1.4530 – 1.4550	Interpreted

MATERIALS OF CONSTRUCTION

MATERIAL	RATING	CONDITIONS	SOURCE
Glass (packaging container)	Compatible	ACS reagent product as packaged, min. 99.0 % assay; no compatibility limit stated	mgscientific.com

Compatibility is drawn from published manufacturer and supplier documentation for this product; each rating is sourced. Confirm against your specific duty cycle before equipment selection.

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

UN2491 [Adjudicated](#)

PACKING GROUP

III [Adjudicated](#)

HAZARD CLASS

8 [Adjudicated](#)

PROPER SHIPPING NAME

Ethanolamine [Adjudicated](#)

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Danger [Adjudicated](#)

H-CODES (HAZARD STATEMENTS)

H302, H312, H314, H332, H335 [Adjudicated](#)

P-CODES (PRECAUTIONARY STATEMENTS)

P260, P261, P264, P270, P271, P280,
P301+P312, P301+P330+P331, P302+P352,
P303+P361+P353, P304+P340,
P305+P351+P338, P310, P313, P321, P330,
P362, P363, P403+P233, P405, P501

[Adjudicated](#)

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

— [no canonical](#)

ACGIH TLV

— [no canonical](#)

NIOSH REL

— [no canonical](#)

NIOSH IDLH

— [no canonical](#)

Transport descriptions reflect 49 CFR 172.101 lookup at time of publication. Sourced data: ECHA CLP Annex VI for harmonised classifications, NIOSH Pocket Guide for REL/IDLH, OSHA Z-Tables for PEL. Always verify against the latest regulatory text before shipment-critical decisions.

APPLICATIONS

Analytical laboratory reagent (ACS grade, for analysis) [itwreagents.com](#)

Reagent for testing USP/NF monographs; laboratory, research or manufacturing use [mgscientific.com](#)

Feed stock for pharmaceuticals [labdepotinc.com](#)

Feed stock for detergents, chemical intermediates and corrosion inhibitors [labdepotinc.com](#)

Sweetening natural gas and coal gas; used as soap or amides in heavy-duty detergents [nouryon.com](#)

Scrubbing acidic gases (H₂S, CO₂) [amines.com](#)

Applications are drawn from published manufacturer and supplier documentation; each is sourced. Suitability for a specific use is the buyer's to confirm.

STORAGE & HANDLING

RECOMMENDED STORAGE

Storage: Room Temperature. [itwreagents.com](https://www.itwreagents.com)

HANDLING PRECAUTIONS

Use in ventilation or with respiratory protection — vapour is the primary exposure. Chemical splash goggles and gloves. Open and transfer cool; pressure can build in warm sealed containers. Neutralization with acid is exothermic.

Class-level guidance — not product-specific; the SDS controls.

INCOMPATIBILITIES

Acids (violent neutralization), copper, brass, zinc, aluminium and their alloys, oxidizers, halogens, mercury, and many aldehydes/ketones.

Class-level guidance — not product-specific; the SDS controls.

SHELF LIFE

Consult Technical Services for product-specific shelf life

For full hazard, PPE, and emergency response guidance, refer to the Safety Data Sheet (SDS) for this product. The SDS controls in all cases where guidance differs.

PACKAGING & LOGISTICS

SHIPPING DESCRIPTION (US DOT)

UN2491, Ethanolamine, 8, PG III

Sourced from 49 CFR 172.101. Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS
65

PLACARD
Corrosive

PACKING GROUP
PG III

REVISION HISTORY

Last reviewed 2026-07-17 by Andre Taki, DOT Hazmat Specialist.

VERSION	DATE	CHANGE	TRIGGER
1.3	2026-07-22	Canonical data updated: 2 fields changed via the provenance/adjudication pipeline. - dotSubsidiaryHazardClass · canonical change (coa.data_provenance / adjudication) - dotProperShippingName · canonical change (coa.data_provenance / adjudication)	canonical_change

VERSION	DATE	CHANGE	TRIGGER
1.1	2026-07-17	Canonical data re-verified: 5 fields updated against independent vendor SDSs, CLP Annex VI, 49 CFR, and OSHA HazCom 2024 (GHS classification, hazard/precautionary codes, signal word, physical properties as applicable). - countryOfOrigin · canonical adjudication / reground (coa.data_provenance) - ghsClassification · canonical adjudication / reground (coa.data_provenance) - hazard_h_codes · canonical adjudication / reground (coa.data_provenance) - hazard_p_codes · canonical adjudication / reground (coa.data_provenance) - hsCode · canonical adjudication / reground (coa.data_provenance)	canonical_change
1.2	2026-07-17	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. - ghsClassification · canonical change (coa.data_provenance / adjudication) - hazard_h_codes · canonical change (coa.data_provenance / adjudication) - hazard_p_codes · canonical change (coa.data_provenance / adjudication)	canonical_change
1.0	2026-05-20	Initial URL—first TDS published from canonical chemistry registry.	initial

This Technical Data Sheet is provided for technical reference. The Safety Data Sheet (SDS) controls in all cases where guidance differs. Values reflect Alliance Chemical canonical data at time of generation; subsequent revisions are recorded in the Revision History above.