

TECHNICAL DATA SHEET

Ammonium Hydroxide 5% Technical Grade

Technical · 5%

CAS NUMBER

1336-21-6

ALLIANCE CODE

ammonium-hydroxide-5-technical-grade

GENERATED

2026-08-31

REVISION

1.2

REVIEWED

2026-07-17 · Andre Taki

IDENTITY & COMPOSITION

PRODUCT NAME

Ammonium Hydroxide 5% Technical Grade

ALLIANCE CODE

ammonium-hydroxide-5-technical-grade

GRADE

Technical

CONCENTRATION

5%

CAS NUMBER

1336-21-6 [PubChem](#)

FORMULA

H5NO [PubChem](#)

MOLECULAR WEIGHT

35.046 [PubChem](#)

PRODUCT TYPE

solution

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (NH3)	4.7 – 5.3 %	5.0 %	Titration	Commercial practice
Heavy metals	0.00022%	0.000017 %	—	Derived by dilution
Limit of nonvolatile residue	0.0086%	0.001 %	—	Derived by dilution

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Iron (Fe)	Max 0.2 ppm	0.026 ppm	1,10-phenanthroline colorimetry / AAS	Interpreted

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 Technical	5%	—	current
ACS Grade	29%	—	ammonium-hydroxide-29-acb-grade
Technical Grade	29%	—	ammonium-hydroxide-29-technical-grade
ACS	20%	—	ammonium-hydroxide-20-acb-grade
Technical	20%	—	ammonium-hydroxide-20-technical-grade
ACS	15%	—	ammonium-hydroxide-15-acb-grade
Technical	15%	—	ammonium-hydroxide-15-technical-grade
ACS	10%	—	ammonium-hydroxide-10-acb-grade
Technical	10%	—	ammonium-hydroxide-10-technical-grade
ACS	5%	—	ammonium-hydroxide-5-acb-grade

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

PROPERTY	VALUE	SOURCE
Specific Gravity (20 °C)	0.974 – 0.980	Interpreted

MATERIALS OF CONSTRUCTION

MATERIAL	RATING	CONDITIONS	SOURCE
copper and copper alloys	Not recommended	—	tannerind.com
aluminum alloys	Not recommended	—	tannerind.com
galvanized surfaces	Not recommended	—	tannerind.com
copper, copper alloys, aluminum alloys, and galvanized surfaces	Not recommended	—	tannerind.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

Not regulated [Adjudicated](#)

PACKING GROUP

Not regulated [Adjudicated](#)

HAZARD CLASS

Not regulated [Adjudicated](#)

PROPER SHIPPING NAME

Not regulated [Adjudicated](#)

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Danger [Adjudicated](#)

H-CODES (HAZARD STATEMENTS)

H314, H335, H400 [Adjudicated](#)

P-CODES (PRECAUTIONARY STATEMENTS)

P234, P260, P261, P264, P271, P273, P280,
P301+P330+P331, P303+P361+P353,
P304+P340, P305+P351+P338, P310, P321,
P363, P391, P403+P233, P405, P501

[Adjudicated](#)

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

50 ppm TWA [OSHA 29 CFR 1910.1000](#)

NIOSH REL

25 ppm TWA / 35 ppm STEL

[NIOSH Pocket Guide](#)

ACGIH TLV

— [no canonical](#)

NIOSH IDLH

300 ppm [NIOSH Pocket Guide](#)

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

Acid neutralization [tannerind.com](#)

Used in the chemical and petroleum industries and in agriculture, resins, polymers, acid neutralization, water treatment, cogeneration NOx scrubbing and explosives

[tannerind.com](#)

Feedstock for preparing other ammonium compounds such as urea, ammonium carbonate and ammonium sulfate

[laballey.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

Store in a closed container and keep cool; otherwise ammonia gas comes out of solution and the material strength is reduced.

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INCOMPATIBILITIES

copper, copper alloys, aluminum alloys, galvanized surfaces

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HANDLING PRECAUTIONS

Use standard chemical PPE — splash goggles, gloves, lab coat. Refer to SDS for hazard-specific PPE requirements.

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)

Not regulated for transport.

Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS
55

REVISION HISTORY

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

VERSION	DATE	CHANGE	TRIGGER
1.2	2026-08-27	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. - oel_niosh_rel · canonical change (coa.data_provenance / adjudication) - oel_idlh · canonical change (coa.data_provenance / adjudication) - oel_oshape_l · canonical change (coa.data_provenance / adjudication)	canonical_change

VERSION	DATE	CHANGE	TRIGGER
1.1	2026-07-17	Canonical data re-verified: 7 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) - dotSubsidiaryHazardClass · 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) - signalWord · canonical adjudication / reground (coa.data_provenance)	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.