

TECHNICAL DATA SHEET

Talc Powder ACS

ACS

CAS NUMBER	ALLIANCE CODE	GENERATED
14807-96-6	talc-powder-acs	2026-08-31
REVISION	REVIEWED	
1.1	2026-06-17 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Talc Powder ACS	talc-powder-acs
GRADE	CONCENTRATION
ACS	—
CAS NUMBER	FORMULA
14807-96-6 PubChem	H2Mg3O12Si4 PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
379.27 PubChem	pure_substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Content of magnesium	17.0 % to 19.5 %	19.0 %	Atomic absorption spectrophotometry, magnesium emission line 285.2 nm, air-acetylene flame	USP monograph
Absence of asbestos	Absence of asbestos; certificate of analysis states the absence of asbestos and the method used	Passes test	IR absorption (test A) or X-ray diffraction (test B); if either is positive, optical microscopy per USP <776> (test C)	USP monograph

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Acid-soluble substances (as SO ₄)	2.5 % max	0.5 %	—	FCC
Acidity and alkalinity	Not more than 0.4 mL of 0.01 N hydrochloric acid; not more than 0.3 mL of 0.01 N sodium hydroxide	Passes test	Boil 2.5 g with 50 mL carbon dioxide-free water under reflux; titrate filtrate with bromothymol blue TS and with phenolphthalein TS	USP monograph
Free alkali (as NaOH)	1 % max	0.02 %	—	FCC
Arsenic	3 mg/kg max	0.3 mg/kg	—	FCC
Limit of calcium	0.9 % max	0.15 %	Atomic absorption spectrophotometry, calcium emission line 422.7 nm, nitrous oxide-acetylene flame	USP monograph
Heavy metals	0.004 % max	0.0005 %	—	Supplier specification
Identification A (infrared absorption)	Maxima at 3677 +/- 2 cm ⁻¹ , 1018 +/- 2 cm ⁻¹ and 669 +/- 2 cm ⁻¹	Passes test	IR spectrum of a potassium bromide dispersion	USP monograph
Limit of iron	0.25 % max	0.08 %	Atomic absorption spectrophotometry, iron emission line 248.3 nm, air-acetylene flame	USP monograph

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Limit of lead	0.001 % max	0.00005 %	Atomic absorption spectrophotometry, lead emission line 217.0 nm, air-acetylene flame	USP monograph
Limit of aluminum	2.0 % max	0.15 %	Atomic absorption spectrophotometry, aluminum emission line 309.3 nm, nitrous oxide-acetylene flame	USP monograph
Loss on drying	0.5 % max	0.1 %	—	FCC
Loss on ignition	7.0 % max	5.0 %	USP <733>; ignite about 1 g at 1075 +/- 25 C to constant weight	USP monograph
Microbial enumeration (topical use)	Total aerobic microbial count 100 cfu per g max; total combined molds and yeasts 50 cfu per g max	Passes test	USP <61> Microbial enumeration tests / <62> Tests for specified microorganisms	USP monograph
Soluble salts	0.2 % max	0.04 %	—	FCC
Water-soluble substances	5 mg (0.1 %) max	1 mg	Reflux 10.0 g with 50 mL carbon dioxide-free water 30 min; evaporate 25.0 mL of filtrate, dry at 105 C for 1 hour	USP monograph
Identification B (X-ray diffraction)	Diffraction pattern corresponds to that of the talc reference standard	Passes test	XRD, Cu K-alpha, compared to talc reference standard	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Fineness (residue on 75-um / No. 200 sieve)	99.0 % min passing	99.9 %	Dry sieve analysis, 75-um woven-wire sieve	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.

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	Powder	Published reference
Odor	Odorless.	Published reference
Density	2.7 to 2.8 (NTP, 1992)	Published reference
Boiling Point	1800°C	Published reference
Melting Point	1700 to 1800 °F (NTP, 1992)	Published reference
Flash Point	Not applicable	Published reference
Vapor Pressure	0 mmHg at 68 °F Essentially (NTP, 1992)	Published reference
Solubility (water)	less than 1 mg/mL at 70 °F (NTP, 1992)	Published reference

MATERIALS OF CONSTRUCTION

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
Buna-N (NBR) Elastomer	Good	60	Acceptable	Cole-Parmer Chemical Compatibility
EPDM Elastomer	Excellent	100	Standard for brine gaskets.	Parker O-ring Chemical Compatibility
Viton (FKM) Elastomer	Excellent	100	Preferred elastomer	Cole-Parmer Chemical Compatibility
Borosilicate Glass Glass Ceramic	Excellent	100	Universally inert to salt solutions.	Cole-Parmer Chemical Compatibility
Concrete (sealed) Glass Ceramic	Good	—	Acceptable with epoxy coating	Cole-Parmer Chemical Compatibility
304 stainless steel Metal	Fair	25	Pitting in chloride-rich service	Cole-Parmer Chemical Compatibility
316L Stainless Steel Metal	Good	60	Watch for chloride pitting above 60 °C in chloride salts.	NACE Chloride Pitting Guidelines
Aluminium Metal	Poor	—	Pitting; not recommended for brine	Cole-Parmer Chemical Compatibility
Carbon steel Metal	Poor	—	Rapid rust in brine	Cole-Parmer Chemical Compatibility
FRP Thermoplastic	Excellent	60	Common bulk-storage	Cole-Parmer Chemical Compatibility
HDPE Thermoplastic	Excellent	60	Universal salt brine compatibility.	Cole-Parmer Chemical Compatibility
PP Thermoplastic	Excellent	80	Acceptable for hot brine	Cole-Parmer Chemical Compatibility

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
PVC Thermoplastic	Excellent	60	Standard for brine piping.	Cole-Parmer Chemical Compatibility

Ratings reflect the service envelope (concentration × temperature) shown. Always confirm against your specific duty cycle and contact-time before equipment selection. The most cautious rating across overlapping references is shown.

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

Not regulated **Adjudicated**

HAZARD CLASS

Not regulated **Adjudicated**

PACKING GROUP

Not regulated **Adjudicated**

PROPER SHIPPING NAME

Not regulated **Adjudicated**

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Not regulated **Adjudicated**

H-CODES (HAZARD STATEMENTS)

— **no canonical**

P-CODES (PRECAUTIONARY STATEMENTS)

— **no canonical**

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

Talc is used as a lubricant, filler, reinforcement, electric and heat insulator, anti-stick and anti-cake agent, carrier, thickener and adsorbent.

ranjanaminerals.com

Used as a filler in plastic compounds including polypropylene, polyamides and cable PVC.

ranjanaminerals.com

Used in decorative paints, industrial coatings, pigment pastes, primers, enamels, adhesives and putties.

[ranjanaminerals.com](https://www.ranjanaminerals.com)

Used in papermaking as a filler, to control pitch and stickies, and in paper coating.

[ranjanaminerals.com](https://www.ranjanaminerals.com)

Used in detergent manufacturing, textiles, printing ink and the rubber industry, and as a filler raw material in chemical industries.

[ranjanaminerals.com](https://www.ranjanaminerals.com)

Natural hydrous magnesium silicate is processed into paint pigment (magnesium silicate pigment) quality, per ASTM D 605.

[pdfcoffee.com](https://www.pdfcoffee.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

Preserve in well-closed containers; the monograph states no storage requirements.

[drugfuture.com](https://www.drugfuture.com)

INCOMPATIBILITIES

Specific incompatibilities depend on the salt — consult the SDS. Many salts react with strong acids to release gases.

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

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.

HANDLING PRECAUTIONS

Standard chemical PPE — dust mask and goggles for handling of fine grades. Avoid generating airborne dust.

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

SHELF LIFE

Consult Technical Services for product-specific shelf life

PACKAGING & LOGISTICS

SHIPPING DESCRIPTION (US DOT)

Not regulated for transport.

Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS
70

REVISION HISTORY

Last reviewed 2026-06-17 by Andre Taki, DOT Hazmat Specialist.

VERSION	DATE	CHANGE	TRIGGER
1.1	2026-06-17	Canonical data re-verified: 3 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) - hsCode · 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.