

PRODUCT IDENTIFICATION



Product Name: A-A-59601E Type III ACS Grade
CAS Number: 64742-47-8
Molecular Formula: Mixture
Molecular Weight: Varies g/mol
Grade: ACS Grade
Purity / Concentration: Not Available
Synonyms: A-A-59601E Type III, Type III ACS Grade

PRODUCT OVERVIEW

A-A-59601E Type III ACS Grade is a high-purity solvent designed for precise analytical applications. With a verified assay of 100.0% and extremely low residue levels, this product serves as a reliable baseline for chromatography and spectroscopy.

Grade Significance: ACS Grade signifies that this product meets the rigorous specifications set by the American Chemical Society, ensuring the consistency and purity required for laboratory-grade analytical testing.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc Fid	%	100.0	98	100.5	GC-FID
Specific Gravity (20°C)	g/mL	0.8128	0.76	0.8534	Hydrometer @ 20°C
Viscosity	cP	2.81	0	5	Per specification
Non Volatile Residue	mg/100mL	30	0	300.0	ASTM D1353
Residue On Evaporation	ppm	5	0	10	Evaporation
Water Karl Fischer	%	ND	0	—	ASTM E203 / ISO 6296
Chloride Cl	ppm	1	0	100.0	Ion Chromatography
Acidity As Acetic	ppm	10	0	20	Titration
Aromatics	%	0.05	0	0.5	Per specification
Distillation Range	°C	216.5	177.0	295.0	Per specification
Flash Point	°C	81	60	—	Per specification

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White crystalline powder	Odor	Odorless
Form	Solid	Boiling Point	~176-210 °C (petroleum distillate range)
Melting / Freezing Point	59°C (138.2°F)	Flash Point	101 °C (213.8 °F), closed cup (ASTM D56)
Specific Gravity	0.96	Solubility	Soluble in organic solvents
Molecular Formula	Mixture	Molecular Weight	Varies g/mol
Vapor Pressure (20°C)	20 mmHg	Viscosity (25°C)	1.0 cP
Refractive Index (20°C)	1.333	Density (25°C)	1.005 g/mL

APPLICATIONS

1. **Analytical Chemistry** — Used as a high-purity mobile phase component in reversed-phase chromatography to ensure accurate separation of organic compounds.
2. **Spectroscopy** — Functions as a stable baseline solvent in UV-Vis spectroscopy, selected for its low UV cutoff wavelength and minimal background interference.
3. **Quality Control** — Utilized as a high-precision reagent in titration processes to determine the exact concentrations of various chemical analytes.
4. **Chemical Manufacturing** — Acts as a consistent chemical intermediate in the synthesis of specialized industrial compounds requiring high reagent purity.

STORAGE & HANDLING

Proper storage is essential to maintain the analytical integrity of the solvent and prevent contamination by non-volatile residues. While not classified as GHS hazardous, it should be kept in a cool, well-ventilated area to maintain its flash point stability and prevent degradation.

- Store in a cool, dry place away from direct sunlight.
- Use compatible materials for storage, such as HDPE or glass containers.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper ventilation in storage areas to minimize vapor accumulation.
- Wear appropriate personal protective equipment (PPE) when handling.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **DANGER**



Hazard Statements:

- Not classified as hazardous under GHS based on available data.

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

Disclaimer: The information contained herein is believed to be accurate and represents the best information currently available to us. However, Alliance Chemical makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.