TECHNICAL DATA SHEET

Arctic Assist

Revised: 02/20/2026

PRODUCT IDENTIFICATION

Product Name: Arctic Assist
CAS Number: 64742-47-8
Molecular Formula: $C_{12}H_{26}$
Molecular Weight: 170.33 g/mol
Grade: Laboratory Grade
Purity / Concentration: 100%
Synonyms: Arctic Aid, Cold Support

PRODUCT OVERVIEW

Arctic Assist is a Laboratory Grade coolant, characterized by its high purity, with an assay of 98.5%. This low-viscosity liquid is primarily used in refrigeration systems to improve thermal efficiency and in cryogenic experiments to maintain low temperatures. It is dyed pink for easy identification.

Grade Significance: Laboratory Grade Arctic Assist signifies that the product meets stringent quality control standards, ensuring reliability and reproducibility in laboratory experiments and analytical procedures. This grade guarantees a high level of purity and minimal interference from contaminants.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	98.5	95	—	GC-FID
Color (APHA)	APHA	10	—	20	ASTM D1209
Specific Gravity (20°C)	g/mL	0.815	0.81	0.82	ASTM D4052
Residue After Ignition	%	0.0010	—	0.0050	ASTM D482
Water Content	%	0.02	—	0.1	ASTM E203
Sulfur	ppm	1	—	5	ASTM D5453

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	pink dyed liquid, low viscosity	**Odor**	Slightly sweet odor
Form	Liquid	**Boiling Point**	165°C (329°F)
Melting / Freezing Point	-9°C (16°F)	**Flash Point**	62°C (144°F)
Specific Gravity	1.045	**Solubility**	Moderate organic solvent solubility
Molecular Formula	$C_{12}H_{26}$	**Molecular Weight**	170.33 g/mol
Vapor Pressure (20°C)	15 mmHg	**Viscosity (25°C)**	1.2 cP
Refractive Index (20°C)	1.335	**Density (25°C)**	1.025 g/mL
Decomposition Temp.	No decomposition below 200°C		

APPLICATIONS

1. **Refrigeration** — Arctic Assist is utilized as a coolant in refrigeration systems to enhance thermal efficiency. Its properties allow for effective heat transfer, improving the overall performance of cooling systems.
2. **Cryogenics** — This chemical serves as a medium for maintaining low temperatures in cryogenic experiments. Its consistent thermal properties ensure stable conditions for sensitive research.
3. **Pharmaceuticals** — Arctic Assist is used to stabilize temperature-sensitive compounds during storage and transport. Maintaining a consistent low temperature helps preserve the integrity of pharmaceutical products.
4. **Chemical Manufacturing** — It acts as a heat transfer medium in various chemical reactions requiring precise temperature control. Its stable boiling point and low residue after ignition (0.0010 %) ensure reliable performance in demanding chemical processes.
5. **Research and Development** — Arctic Assist is employed in research settings where controlled low-temperature environments are crucial for experimentation. Its high purity and consistent specific gravity of 0.815 g/mL at 20°C make it a reliable choice for sensitive applications.
6. **Aerospace** — In aerospace applications, Arctic Assist can be used for cooling electronic components and systems. Its ability to maintain low temperatures and its low water content (0.02 %) are critical for high-altitude performance.

STORAGE & HANDLING

Proper storage of Arctic Assist is crucial to maintain its purity and prevent degradation. Store in a cool, dry, and well-ventilated area away from heat sources and incompatible materials. Although classified as Not Classified, following standard chemical handling procedures is always recommended to ensure safety and product integrity.

- Store in a cool, dry place away from direct sunlight.
- Use HDPE containers for compatibility and to prevent leaching.
- Avoid contact with strong oxidizing agents.
- Ensure proper ventilation when handling to minimize inhalation risks.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.

AVAILABLE PACKAGING

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

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Warning

No GHS pictograms assigned.

Hazard Statements:

- Not Classified
- Reported as not meeting GHS hazard criteria by 6762 of 6899 companies (only 2% companies provided GHS information). For more detailed information, please visit ECHA C&L website.

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.

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