

PRODUCT HANDLING GUIDE

1 of 2

Acetic Acid – CAS # 64-19-7

Acetic Acid is a colorless liquid with a pungent, vinegar-like odor. It is soluble in water, alcohols, ethyl ether, and other organic solvents. Acetic Acid is very corrosive and may react quickly, under certain conditions, resulting in rapid evolution of heat. Acetic Acid is stable under recommended storage conditions. Acetic Acid will burn

when heated or exposed to an ignition source.

Acetic Acid is available from Celanese Chemicals in the following packages:

- UN 1H1/Y1.9/150 55-Gallon High Density Polyethylene Drums

- DOT 111A60AL1 or 111A100W6 Insulated Tank Cars
- DOT MC 307 or DOT 407 Tank Trucks
- IMO 1 ISO Tank
- Ship Tank and Barge

Storage

Recommended Blanketing	Air ^{1,2} or Dry Nitrogen ³
Recommended Temperature	
Maximum (Glacial)	100°F (37.8°C)
Minimum (Glacial)	65°F (18.3°C)
Minimum (56%)	0°F (-17.8°C)
Minimum (70%)	10°F (-12.2°C)
Minimum (84%)	32°F (0°C)
Recommended Pressure	Atmospheric
Bulk Quantities	Outside, detached tanks
Small Containers	Cool, dry, well ventilated area

Handling

- Thoroughly review Material Safety Data Sheet before handling product.
- Keep containers closed when not in use.
- Open containers slowly to allow any excess pressure to vent.
- Keep away from heat, sparks, flame, or other sources of ignition.

- Protect small containers from physical damage.
- Use proper electrical grounding and bonding procedures when loading, unloading, and transferring.¹
- Refer to the Celanese Chemicals Material Safety Data Sheet for more information on materials to avoid.

- Use spark-resistant tools.
- Electrical equipment and circuits in all storage and handling areas must conform to requirements of national electrical code (Articles 500 and 501) for hazardous location.

See the National Fire Protection Agency (NFPA) #30 “Flammable and Combustible Liquids Code” and consult with qualified fire protection specialists to determine specific storage tank design requirements. Refer to the Celanese Chemicals Material Safety Data Sheet for more specific health and environmental

information and refer to the Celanese Chemicals Product Descriptions for additional physical properties and general product information. Material Safety Data Sheet and Product Descriptions for Acetic Acid are available through your Celanese Chemicals sales representative.

1. Refer to NFPA #77 “Static Electricity” for proper electrical grounding procedures.
2. See the National Fire Protection Agency (NFPA) #30 “Flammable and Combustible Liquids Code” and consult with qualified fire protection specialists to determine specific storage tank design requirements.
3. Blanketing may be used to retain quality in long-term storage conditions.

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2 of 2

Acetic Acid

Materials of Construction for Storage and Transportation

Item	Recommended	Acceptable
Tank	Stainless Steel ¹	Stainless Steel ²
Piping	Stainless Steel ¹	Stainless Steel ²
Valves	Stainless Steel ¹	Stainless Steel ²
Pumps	Stainless Steel ¹	Stainless Steel ²
Relief Valves	Stainless Steel ¹	Alloy 20
Gaskets	Glass Filled PTFE ⁵	Graphite
Pump Seals	Single mechanical seal: Stainless steel/Hastelloy C-276 metallic components, Kalrez O-rings	-
Valve Packing	PTFE ⁵	Graphite
Pipe End Connections	Welded and flanged system	
Heat Exchanger	Product Side: Stainless Steel ¹	Product Side: Stainless Steel ²
Hoses	Stainless Steel ¹	Stainless Steel ²
Tank Truck	Stainless Steel ^{1,2}	Aluminum ⁴
Tank Car	Stainless Steel ^{1,2}	Aluminum ⁴
ISO Tank	Stainless Steel ^{1,2}	-
Barge	Stainless Steel ^{1,2}	-
Ship Tank	Stainless Steel ^{1,2}	-

1. Type 316 Stainless Steel at a temperature less than 300°F (134.7°C).
2. Type 304 Stainless Steel at a temperature less than 140°F (60°C).
3. Use Alloy -C-276 seal components for long service life.
4. Use 3000, 5000, 6000 series Aluminum when temperature does not exceed 120°F (49°C)..
5. Polytetrafluoroethylene.

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should therefore not be construed as guaranteeing specific properties of the products described or their suitability for a particular application. Any existing industrial property rights must be observed. The quality of our products is guaranteed under our General Conditions of Sale.

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