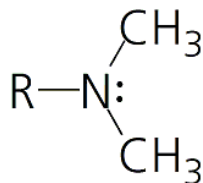


PRODUCT INFORMATION SHEET

AT-121416A, Dimethylalkyl Tertiary Amine

Description:



Lauryl/ Myristyl/ Cetyl Dimethylalkyl Tertiary Amine

CAS Number: a mixture of 112-18-5, 112-75-4 and 112-69-6.

AT-1214A is a mixture of C12 (40-43%), C14 (47.5-50.5%) and C16 (8-11%) dimethylalkylamine; 'R' in the structural diagram above represents a saturated alkyl chain of carbon atoms equal to 12, 14 or 16. It is a clear liquid under ambient conditions with a fishy alcohol odor.

PHYSICAL PROPERTIES

(all properties @ 24°C (75°F), 760mmHg unless stated)

Specific Gravity: 0.8 @ 21/21°C
Vapor Pressure: ≤ 1mmHg @ 38°C (100°F)
Melting Point: -20°C (-4°F)
Viscosity: 3cp
Boiling Point: 204°C (399.2°F)

Very slightly soluble in water under ambient conditions.

GENERAL INFORMATION

Application Uses

End-use applications for AT-121416A include surfactants (such as amine oxide and betaines), quaternaries (biocides, swimming pool and water treatment), floatation agents, gasoline detergents, corrosion inhibitors, rubber processing additives, emulsifier for herbicides, textile softeners and oilfield drilling materials.

Oil Derivation/Microbial:

All of our tertiary amine brands are manufactured entirely from naturally occurring vegetable oils.

- No preservatives or additives are present.
- At the low vacuum (12-18 mmHg) and high temperature (up to 550 degF) at which our process operates, we do not believe that microbiological activities exist.
- Bovine Spongiform Encephalopathy (BSE) and Transmissible Spongiform Encephalopathy (TSE) are not a concern with AT-121416A, Lauryl/ Myristyl/ Cetyl Dimethylalkyl Tertiary Amine.

GENERAL INFORMATION cont...

Shelf Life

Shelf life is affected by how a product is stored. We expect the shelf life of Fatty Alcohols to be about 1 year if it is kept under the recommended storage and handling conditions. We recommend testing the product for key specifications such as color, hydroxyl value, moisture, acid value, and carbonyl content every 6-12 months. **P&G CHEMICALS DOES NOT PROVIDE SHELF LIVES OR EXPIRY DATES.**

Storage and Handling (recommended)

Storage Temp Targets: Ambient to 38°C (100°F) (max)

Handling Temp Min-Max: Ambient to 38°C (100°F) (max)

Sensitive Properties: Color. Floc precipitates at lower temperatures.

Max Steam, psi: 30 (when ambient temperature is below -10°C (15°F))

Nitrogen Blanket: YES

Load out filter: 25 microns

Rail Car or Tank Truck: Stainless Steel or Phenolic Epoxy Coated, Resin Lined

Agitation/Recirculation: Agitation is recommended for amines, especially if the tank is bottom drawn or the tank will be a low levels. This will prevent slugs of floc being pumped off and plugging lines. Agitation is required when applying heat to amines.

Storage Tank: 304 Stainless minimum, glass lined or Phenolic Epoxy Coated, Resin Lined

Pumps and Lines: Stainless Steel or Lined

Notes:

- Ambient temperature is acceptable even if it is higher than the maximum temperature.
- When handling any amines or their derivatives, the maximum temperature must be 10°C (15°F) over its melting point.
- Amines change color over time even in glass at room temperature. Sunlight degrades color of samples in glass; protect samples from sunlight.

For further details, or samples of AT-121416A and other P&G Chemicals products, visit our website:
www.pgchemicals.com