

## TECHNICAL DATA SHEET

### NITRIC ACID

#### Product Description

NITRIC ACID is created by oxidizing Anhydrous Ammonia over a Platinum catalyst at extreme temperatures. The resultant gases, Nitric Oxide and Nitrogen Dioxide (NO<sub>x</sub>), are cooled and absorbed into the demineralized water. Apart from the Hydrogen and Nitrate ions, NITRIC ACID will not contain any ions unless they were present in the water source used for absorbing the acid gas or in the compressed air used in the process. The product acid is clear and colorless to slightly yellow. The common yellow discoloration in NITRIC ACID is directly proportional to the level of oxides of Nitrogen dissolved in the solution. This is HNO<sub>2</sub> or Nitrous Acid. It can be minimized using various techniques from process air bleaching to inert chemical addition. The acid is miscible with water in all portions accompanied by a rise in temperature.

#### Application Recommendations

NITRIC ACID is used:

- For Nitration of organics for the production of plastics, surface coatings, dyes, pesticides, and explosives.
- In the manufacture of Ammonium Nitrate
- In the manufacture of Adipic Acid, Isocyanates, Nitrotoluene, Nitrobenzenes, and Nitrocellulose
- To pickle stainless steel
- To produce nitrate salts
- Water treatment for fertilizer irrigation water

#### Technical Specifications

Typical Chemical Analysis	
Parameter	Specification
Appearance	Colorless to yellow liquid
Nitric Acid, wt%	65%
Melting Point, °C	-22 (60%)
Boiling Point, °C	120.4 (60%)
Density at 20°C, Kg/m <sup>3</sup>	1367 (60%)
Chlorides, ppm	10 max
Iron, ppm	10 max
Sulphates, ppm	5 max
HNO <sub>2</sub>	10 max

#### Remarks

Safety Requirements: the work with Ammonium Nitrate Solution requires observance of individual protective measures in specialized clothing.

NFPA: 704

Transportation: In specialized Stainless-steel truck

Storage: Covered Stainless steel tank at atmospheric pressure