

OXEA PRODUCT HANDLING GUIDE



1 of 2

n-Butanol – CAS # 71-36-3

n-Butanol is a clear, flammable liquid with an odor similar to rubbing alcohol. It is soluble in most organic solvents and has limited solubility in water. n-Butanol is a stable substance under recommended storage conditions.

n-Butanol is available from OXEA in the following packages:

- UN 1A1/X1.2/300 55-Gallon Carbon Steel Drums

- DOT 111A100W1 Tank Cars
- DOT MC 307 or DOT 407 Tank Trucks
- Ship Tank and Barge

Storage

| | |
|-------------------------|---|
| Recommended Blanketing | Air ^{1,2} or Dry Nitrogen ^{1,2,3} |
| Recommended Temperature | Ambient |
| 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 OXEA 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 OXEA Material Safety Data Sheet for more specific health and environmental

information and refer to the OXEA Product Descriptions for additional physical properties and general product information. Material Safety Data Sheet and Product Descriptions for n-Butanol are available through your OXEA 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.

PRODUCT HANDLING GUIDE

2 of 2

n-Butanol

Materials of Construction for Storage and Transportation

| Item | Recommended | Acceptable |
|----------------------|---|--|
| Tank | Carbon Steel (rust free) | Stainless Steel ¹ Lined Carbon Steel ² , Aluminum ³ |
| Piping | Carbon Steel | Stainless Steel ¹ , Aluminum ³ |
| Valves | Carbon Steel | Stainless Steel ¹ , Aluminum ³ |
| Pumps | Cast Iron, Carbon Steel | Stainless Steel ¹ |
| Relief Valves | Stainless Steel ¹ | - |
| Gaskets | Glass Filled PTFE ⁴ | Graphite |
| Pump Seals | Single mechanical seal: Stainless steel/Hastelloy C-276 metallic components, Kalrez O-rings | - |
| Valve Packing | PTFE ⁴ | Graphite |
| Pipe End Connections | Welded and flanged system | Threaded with PTFE ⁴ tape thread lubricant |
| Heat Exchanger | Product Side: Carbon Steel | Product Side: Stainless Steel ¹ |
| Hoses | Stainless Steel ¹ | EPDM ⁵ , Aluminum ³ |
| Tank Truck | Stainless Steel ¹ | Aluminum ³ |
| Tank Car | Carbon Steel | Stainless Steel ¹ Lined Carbon Steel ² , Aluminum ³ |
| Barge | Stainless Steel ¹ | Carbon Steel, Zinc Silicate or Epoxy Lined Carbon Steel |
| Ship Tank | Stainless Steel ¹ | Zinc Silicate or Epoxy Lined Carbon Steel |

1. Type 304 or 316 Stainless Steel.
2. Lining refers to a high baked phenolic.
3. May be used if temperature does not exceed 150°F (66°C)
4. Polytetrafluoroethylene.
5. Ethylene – Propylene – diene – monomer – (peroxide cured grade).

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.

PH-062-9 03/07

OXEA Corporation
1505 West LBJ Freeway, Suite 400
Dallas, TX 75234
Phone: +1 972-481-2700
P.O. Box 810349
Dallas, TX 75381-0349

OXEA GmbH
Otto-Roelen-Str. 3
46147 Oberhausen
Deutschland/Germany
Tel.: ++49 (0) 208-693-3100