



Technical Data Sheet

DOW Diisopropanolamine (DIPA)

DIPA Commercial Grade, DIPA Low Freeze Grade 90, and DIPA Low Freeze Grade 85

Product Description

DOW Diisopropanolamine (DIPA) is a basic chemical used in many applications serving as emulsifiers, stabilizers, chemical intermediates and neutralizers that achieve basicity, buffering and alkalinity objectives. Because DIPA is a good solubilizer of oil and fat, it is frequently used to neutralize fatty acids and sulfonic acid-based surfactants.

Sustainability Attribute:



Major applications include metalworking products. DIPA is also used in coatings, pesticides, paint strippers, paper, photographic intermediates, plastics, polyurethane additives, reaction intermediates, surfactants, textiles and urethanes.

DOW Diisopropanolamine is available as DIPA Commercial Grade, DIPA Low Freeze Grade 90, & DIPA Low Freeze Grade 85.

- DIPA Commercial Grade—This commercial grade diisopropanolamine is a secondary amine.
- DIPA LFG 90—This diisopropanolamine is a low freeze grade variation of DIPA for easier handling in colder ambient temperatures (freezing point: 23°C/73.4°F). It is a blend of 90% DIPA and 10% deionized water.
- DIPA LFG 85—This diisopropanolamine is a low freeze grade variation of DIPA for easier handling in colder ambient temperatures (freezing point: 13°C/55.4°F). It is a blend of 85% DIPA and 15% deionized water.

Features and Benefits

Metalworking

As tall oil amides for water-based metalworking fluids, offers some corrosion protection, improved lubricity, foam suppression, and also reduces friction in buffing, cutting and cleaning fluids.

Typical Physical Properties¹

| Properties | Unit | DIPA | DIPA LFG 90 | DIPA LFG 85 |
|---|----------|--|------------------------------------|------------------------------------|
| Formula | | [CH ₃ CH(OH)CH ₂] ₂ NH | | |
| Molecular Weight | | 133.19 | | |
| CAS Number | | 110-97-4 | 110-97-4 7732-18-5 ² | 110-97-4 7732-18-5 ² |
| Physical Form | | Solid | Liquid | Liquid |
| Vapor Pressure at 50°C | mm Hg | 0.035 | | |
| Boiling Point, at 760 mm Hg | °C (°F) | 249 (480) | 116 (241) | 111 (232) |
| Freezing Point | °C (°F) | 44 (111.2) ³ | 23 (73.4) ³ | 13 (55.4) ³ |
| Flash Point, H.T. Setaflash | °C (°F) | 135.5 (276) | None ⁴ | None ⁴ |
| Specific Gravity at 40/°4C At 25/4°C | | 0.992 | 1.015 | 1.019 |
| Pounds per Gallon at 40°C At 25°C | | 8.27 | 8.46 | 8.50 |
| Viscosity At 30°C/54°C At 25°C/54°C | cps | 870/86 | 790/50 | 450/38 |
| Solubility at 25°C | gm/100gm | | | |
| ACE | | 810 | | |
| MEOH | | 670 | | |
| ETH | | 9 | | |
| H ₂ O | | 1200 | | |

1. Data represent typical physical properties only and should not be construed as product specifications.

2. H₂O.

3. Supercools: freezing point results show variation.

4. L.T. Setaflash; no flashpoint observed up to the boiling point. See flashpoint of DIPA.

Customer Notice

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