

**Technical Bulletin****JEFFADD™ MW-781 amine**

**JEFFADD™ MW-781** amine is a low molecular weight, strong primary amine useful in metalworking applications. This product combines surfactant activity with low foaming tendency. The amine has low viscosity and does not cause viscosity increase in most formulations. JEFFADD™ MW-781 amine tends to act as a coupling agent, reducing the need for other coupling agents to make a clear formulation. Due to its vapor pressure, JEFFADD™ MW-781 amine may be used in vapor phase corrosion inhibitor formulations.

**APPLICATIONS**

- Coupling agent
- Formulation aid in synthetic metalworking fluids
- Reserve alkalinity source for metalworking
- Corrosion inhibitor in water-miscible metalworking fluids

**SALES SPECIFICATIONS**

<u>Property</u>	<u>Specifications</u>	<u>Test Method*</u>
Appearance	Clear and substantially free of suspended matter	ST-30.1
JEFFADD™ MW-781, wt%	99 min	ST-35.251
Color, Pt-Co	70 max.	ST-30.12
Water, wt%	0.4 max.	ST-31.53, 6

\*Methods of Test are available from Huntsman Corporation upon request.

**ADDITIONAL INFORMATION****Regulatory Information**

CAS Number 16499-88-0

See SDS for all regulatory information.

**Typical Properties**

Flash point, CC, °C (°F)	64 (147.2)
Freeze Point, °C (°F)	-47 (-52.6)
Molecular weight (approximate)	131
Odor	Amine like
pH, 1% Aqueous	11.2
Specific gravity, 20/20°C	0.8466
Density, lbs/US gal, 20°C (68°F)	7.058
Total Amine, meq/g	7.589
Vapor Pressure, mm Hg at 34°C (93.2°F)	1.8
Viscosity, kinematic, cst at 38°C (100°F)	1

**TOXICITY AND SAFETY**

For information on the toxicity and safe handling of this product, consult the Safety Data Sheet prior to use of this product.

## HANDLING AND STORAGE

Storage tanks constructed to a recognized code, using carbon steel as a material of construction, generally are satisfactory. However, prolonged storage in carbon steel may cause the color of the product to increase. In those cases where color needs to be preserved, stainless steel or aluminum should be used.

Copper, zinc, lead, or alloys containing any of these materials should not be used since they will be attacked by the amine. In addition, complex salts will be formed which will result in product discoloration.

The amine will discolor when exposed to air. It is also hygroscopic and will pick up moisture. If either of these characteristics is not acceptable, it will be necessary to pad the storage tank. We recommend a dry nitrogen which is low in carbon dioxide content.

Carbon steel is acceptable for transfer lines. They should be blown or drained clean after each use. Otherwise, the product will discolor when it is left in the lines. Transfer lines should be joined by welds or flanges. Screwed joints are subject to failure because the amine will leach conventional pipe dopes. Satisfactory gasketing materials are Garlock 7021, U.S. Rubber 899, John Crane 333, and Johns-Manville 70 or equivalent. For flexible connections, stainless steel hose is preferred to rubber, since rubber will eventually deteriorate in amine service.

Centrifugal pumps constructed of carbon steel are satisfactory. Either pump packing or a mechanical seal may be used. Braided TEFLON<sup>®</sup> is a satisfactory packing material. Seals may be John Crane Type 9, Durametallic Type RO-TT, or equivalent, with either stellite-carbon or tungsten faces and TEFLON<sup>®</sup> V-rings. If rotary pumps are used, they should be equipped with externally lubricated bearings.

Although it is not recommended that tanks and transfer lines be cleaned, it is sometimes necessary as the result of contamination or accumulation of foreign material in the system. For such cleaning, a water wash is generally satisfactory. Tank cleaning is accomplished by thoroughly sluicing the interior of the tank with a water jet and following this with cloth or chamois drying. Once clean and dry, the tank should be sealed and purged with dry inert gas to avoid undue condensation and rust formation.

JEFFADD<sup>®</sup> MW-781 amine has a low viscosity and a freezing point of -52.6°F; therefore, it will not freeze or become viscous during normal handling.

## AVAILABILITY

Small evaluation samples of JEFFADD<sup>™</sup> MW-781 amine can be obtained in the Americas region by contacting our sample department at 1-800-662-0924 and in other regions by contacting any Huntsman Performance Products sales office.

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