

EASTMAN

Synergex[™] multifunctional amine additives

Boost performance | Extend metalworking fluid life



Performance that lasts

Extend coolant life and improve the performance of most water-based metalworking fluids. Eastman's Synergex family of multifunctional amine additives can be used in combination with other amines or by themselves in a concentrate, used as tank side or used to make corrosion inhibiting salts and amides.

Unique products

Synergex T

This high-performance tertiary amine additive is capable of boosting the performance of metalworking fluids. Synergex T is a low-odor and low-VOC *N*-alkyl alkanolamine. It's ideal for use as a neutralizing agent in semi-synthetic and full-synthetic emulsion lubricants where VOC and/or secondary amine issues are a concern. With very low vapor pressure and volatility, Synergex T allows for significantly extended fluid life.

- Completely water soluble
- Enhanced emulsion stability
- Excellent HES profiles
- Low odor, low volatility and high flash point
- Outstanding corrosion inhibition properties
- Outstanding coupling agent

Synergex LA

Is a multifunctional amine for metalworking fluids that can offer enhancements to formulations that typical alkanolamines cannot. Its hydrophilic-lipophilic structure offers unique coupling ability even at relatively low percentages. This coupling ability is evident in increased concentrate stability as well as emulsion stability. Synergex LA also offers synergistic properties with conventional metalworking biocides and extends fluid life.

- Improved concentrate and emulsion stability
- Easy to incorporate into typical metalworking fluid formulations
- Cast-iron chip corrosion protection can be enhanced with Synergex LA
- Similar physical properties as DCHA; replacing secondary amine with a tertiary amine
- Improved odor and HSE profile vs. DCHA

Amietol™ M12 (MDEA)

This is the ideal, low-VOC tertiary amine for use as a bulk neutralizing agent in all types of metalworking fluids. MDEA exhibits very low odor and supports the performance benefits of typical tertiary AAAs.

Synergex

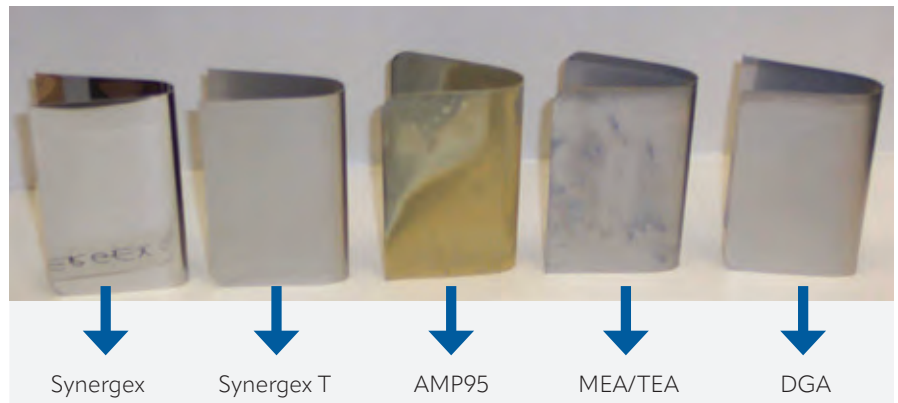
This low-odor secondary *N*-alkyl alkanolamine (AAA) is ideal for use as a neutralizing agent in semi-synthetic and full-synthetic emulsion lubricants. With excellent biological and colloid stabilizing properties, Synergex allows for exceptional extended fluid life with the best balance of cost/benefit available.



Steel — corrosion test

Visual appearance of immersed steel after 1 week (0.3 M octanoic acid, 0.2 M amine, pH to 8.5)

AMP95 = 95% 2-amino-2-methyl-1-propanol
MEA = monoethanolamine
TEA = triethanolamine
DGA = diglycolamine

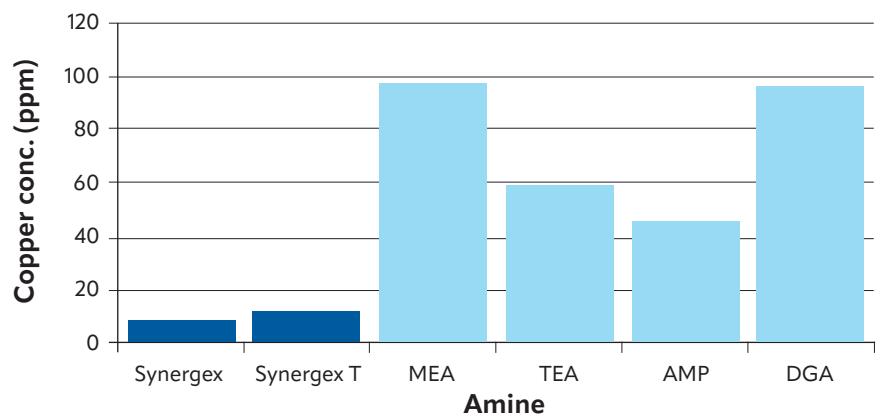


Aluminum — stain test

Fluids based on the Synergex N-alkyl alkanolamines do not stain aluminum (AL 2024 pieces dipped in the fluids shown; MDEA for reference).



Copper — passive dissolution test



Eastman

Founded in 1920, Eastman is a global specialty materials company that produces a broad range of products found in items people use every day. With the purpose of enhancing the quality of life in a material way, Eastman works with customers to deliver innovative products and solutions while maintaining a commitment to safety and sustainability.

- Fortune 500 specialty materials company
- Global team of ~14,000 employees
- Serves customers in >100 countries

Distributors

Eastman collaborates with several distributors who supply Synergex products to local markets. For product-related inquiries, please contact Eastman directly or reach out to one of the authorized distributors listed below for your specific region.

North America:

Ravago

Brasil:

Braschemical

Germany, Switzerland and Austria:

GB Chemie GmbH

United Kingdom, rest of EMEA:

Mekiro (MKR)

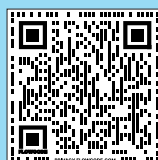
China:

Smart Oil

Your partner in metalworking fluids

Get the expertise and collaboration you need.

Scan the QR code to contact an Eastman representative for more information.



EASTMAN

Eastman Corporate Headquarters

P.O. Box 431
Kingsport, TN 37662-5280 U.S.A.

U.S.A. and Canada, 800-EASTMAN (800-327-8626)
Other locations, +(1) 423-229-2000

eastman.com/locations

Although the information and recommendations set forth herein are presented in good faith, Eastman Chemical Company ("Eastman") and its subsidiaries make no representations or warranties as to the completeness or accuracy thereof. You must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and for the health and safety of your employees and purchasers of your products. Nothing contained herein is to be construed as a recommendation to use any product, process, equipment, or formulation in conflict with any patent, and we make no representations or warranties, express or implied, that the use thereof will not infringe any patent. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND NOTHING HEREIN WAIVES ANY OF THE SELLER'S CONDITIONS OF SALE.

Safety Data Sheets providing safety precautions that should be observed when handling and storing our products are available online or by request. You should obtain and review available material safety information before handling our products. If any materials mentioned are not our products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

© 2025 Eastman. Eastman brands referenced herein are trademarks of Eastman or one of its subsidiaries or are being used under license. Non-Eastman brands referenced herein are trademarks of their respective owners.