



THERMINOL

Heat Transfer Fluids by Eastman

Eastman Therminol gets green “thumbs up” from oil recyclers.

PROBLEM

Oil recycling requires an extremely high-temperature heat transfer fluid (HTF) that must be well operated and well maintained to avoid shutdowns.

ANALYSIS

Oil recyclers need a heat transfer fluid that can operate continuously in a high-temperature, low-pressure liquid-phase HTF system.

SOLUTION

Support customers with decades of experience in system design, operations and maintenance of HTF systems, and fluid monitoring to ensure optimum functionality of these unique, high-temperature heat transfer fluids.

RESULT

Two North American oil recyclers are bringing recycled oil to the marketplace, conserving energy and crude oil, while reducing pollution.

When it seeps into water systems, oil can be one of the most destructive pollutants and threats to wildlife. Just one gallon of spilled oil can contaminate one million gallons of water.

Proper stewardship of our planet requires careful handling of used oil and responsible recycling. Recycled oil is a versatile resource that can be used repeatedly for the same function or repurposed for a completely new application. This “closed loop” system creates less dependence on new oil sources and lessens the environmental impact of oil drilling. Four liters of waste motor oil are enough to produce three liters of new engine oil. Plus, engine oil never wears out, making it an ideal renewable resource for recyclers.

Therminol acts as lifeblood in HTF systems for oil recyclers.

Turning dirty, used oil into new products is a complex process. Oil recycling requires an extremely high-temperature heat transfer fluid (HTF) in excess of 350°C (650°F); the preference is for a low-pressure, liquid-phase process. Only very specialized HTFs can meet these demanding requirements. Therminol is one of the only HTF brands to perfect the chemistry for these highly specialized products. It is the lifeblood of the system and works at the core of the oil refinery operations described in the following.

Many companies have mastered the art of oil recycling, including North America’s Safety-Kleen and Terrapure oil-recycling companies. They opt for Eastman’s specialty heat transfer fluids: Therminol 66, Therminol 72, or Therminol 75. These super performing fluids are

ultrahigh-temperature liquid-phase heat transfer fluids with excellent thermal stability. With these highly engineered products and the Therminol Total Lifecycle Care (TLC®) program, oil refineries can have safer HTF systems, faster start-ups, better onstream time, and reduced energy use.

Proprietary Eastman tools save customers money and time.

Eastman understands this niche market. With unique services and products, Eastman helps specialized customers get the most out of their heat transfer fluid investments. Plant engineers have access to a specialized website, mytherminol.com, where they can benchmark six key indicators that can help identify where fine-tuning their HTF system operation may be needed.

When pushed to their limits, heat transfer fluids can degrade, resulting in reduced performance, increased operating costs, or undesirable end results. “The key performance indicators that we monitor can help flag problems before they occur, avoiding costly shutdowns,” says Brad McCann, technical sales manager at Eastman. “We look for oxidation and thermal degradation. A single-performance indicator or a combination of results helps customers determine whether the fluid is degrading by one of these processes. In some cases, the results indicate that perhaps the fluid may be fine, and in other cases, it can be the way the sample was taken that resulted in the warning signals. Our goal is to help the customer maximize the lifetime of their HTF fluid.”



Terrapure and Therminol: A winning combination

Terrapure in Vancouver, formerly Newalta Corporation, provides advanced oil-recycling services. Through the company's coast-to-coast network, they collect, process, and recycle used motor oils and related wastes from automotive and other industrial applications.

At its North Vancouver, BC, facility, Terrapure uses a patented recycling process that transforms 70 million liters of waste oil each year into premium quality base oils and industrial and automotive lubricants. "We use Therminol for two reasons," says Dan Cantafio, operations manager at Terrapure. "One, it works. Two, it's the only product on the market that meets our technical needs." Cantafio credits the usage of a reliable heat transfer fluid to the overall success of the re-refining process. "Most people don't realize oil can be recycled over and over, and we're especially proud of our unique chemistry that enables us to recycle oil and make it better than crude oil itself."

Safety-Kleen means green.

Every year, Safety-Kleen returns more than 200 million gallons of used oil to the marketplace as clean motor oil and/or associated products. Eastman's Therminol heat transfer fluid helps Safety-Kleen produce a wide range of consumer and industrial oils with equal or improved quality relative to lubricants made from virgin crude oil.

The total impact of Safety-Kleen's closed-loop used oil recycling will prevent more than one million metric tons of greenhouse gas emissions in the next year. Eastman's ability to formulate and service the most effective grade of Therminol to meet Safety-Kleen's high-temperature/low-pressure requirements contributes to Safety-Kleen's success." The company has used Therminol products for more than two decades, a reflection of the product's reliability and performance as well as the support services provided by Eastman. Oil recycling is exceptionally demanding on HTFs, but Therminol has proven to be the longest lasting over the years.

Therminol at the forefront of oil recycling technology

In North America, more than 21 million barrels of oil are consumed daily, yet only a fraction of that is recycled today, according to the Canadian Fuels Association. As interest in oil recycling grows, the team at Eastman stands ready to provide state-of-the-art guidance and heat transfer fluids to support these emerging environmental technologies and demanding high-temperature performance in a low-pressure liquid-phase HTF system. Eastman's ability to deliver exceptional service after the sale with its proprietary TLC program, as well as its sophisticated high-temperature products for low-pressure liquid-phase systems, promises to support the growing oil-recycling industry for years to come.

For more information visit our website: Therminol.com.



North America
Solutia Inc.
A subsidiary of Eastman Chemical Company
575 Maryville Centre Drive
St. Louis, MO 63141 U.S.A.
Telephone:
Customer Service, 800-426-2463
Technical Service, 800-433-6997
Fax: Customer Service, (1) 314-674-7433

Latin America
Solutia Brasil Ltda.
A subsidiary of Eastman Chemical Company
Rua Alexandre Dumas, 1711—Birmann 12—
7º Andar 04717-004
São Paulo, SP, Brazil
Telephone:
Brazil, 0800 55 9989
Other Locations, +55 11 3579 1800
Fax: +55 11 3579 1833

Europe/Middle East/Africa
Solutia Europe SPRL/BVBA
A subsidiary of Eastman Chemical Company
Corporate Village—Aramis Building
Leonardo Da Vinciiaan 1
1935 Zaventem, Belgium
Telephone: +32 2 746 5000
Fax: +32 2 746 5700

Asia Pacific
Eastman (Shanghai) Chemical
Commercial Company Ltd.
Building 3, Yaxin Science & Technology Park
Lane 399 Shengxia Road
Pudong New District
201210, Shanghai, P.R. China
Telephone: +86 21 6120 8700
Fax: +86 21 5027 9229

EASTMAN

The results of insight™

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

www.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.

© 2018 Eastman. Eastman brands referenced herein are trademarks of Eastman or one of its subsidiaries or are being used under license. The ® symbol denotes registered trademark status in the U.S.; marks may also be registered internationally. Non-Eastman brands referenced herein are trademarks of their respective owners.