



THERMINOL

Heat Transfer Fluids by Eastman

From garbage to green at Canada's Enerkem

Therminol provides reliability for an innovative biofuels manufacturer.

PROBLEM

An energy start-up needs reliable plant operations and processing support to fine-tune operations for an emerging technology.

ANALYSIS

Using an established heat transfer fluid from a supplier with strong processing expertise should help provide operational consistency.

SOLUTION

Eastman's engineering team brings clarity, simplicity, and a proven track record to heat transfer fluid selection with Eastman Therminol® heat transfer fluid.

RESULT

The plant is fully operational; new biorefineries are being developed based on this modular manufacturing approach.

When starting a new biofuels business, Montreal's Enerkem found that relying on tried-and-true heat transfer fluids helped simplify and ease the plant start-up process. Enerkem makes energy from nonrecyclable solid municipal waste. The Canadian company discovered a proprietary way to process waste into valuable fuels, such as methanol, ethanol, and other green chemicals. Headquartered in Montreal, Canada, Enerkem operates both a demonstration plant and a pilot facility in Quebec and is now running Enerkem Alberta Biofuels in Edmonton. The plant is the world's first full-scale commercial biorefinery that diverts municipal solid waste from landfills and recycles it into energy. In addition, the project will enable the city of Edmonton to increase its waste diversion rate from 50% to 90%.

As with emerging technology of any type, continual adjustments must be made to fine-tune success in plant operations. Transforming garbage into fuels requires finesse and creativity. With so many variables to juggle, Enerkem needed reliable partners, a tangible track record, and high performance technology. They found an answer in Eastman Therminol® 66 heat transfer fluid.

Every start-up watches their costs carefully, as did Enerkem at its Edmonton plant. Heat transfer fluids, while only a small percent of an overall plant budget, are the lifeblood of any efficient plant operation,

and selecting the wrong fluid can be costly in terms of plant shutdowns or replacing fluids entirely. The chemistry must be precise.

Tried and true: Therminol solutions

When Enerkem engineers searched for a cost-effective solution, they did their homework. They considered the newer heat transfer fluids which come on the market from time to time. They also realized that few brands have the 50-year history that Therminol enjoys in the marketplace. Since there are few industry standards to compare products side by side, Eastman technical sales manager Brad McCann was able to showcase examples of similar successful long-term Therminol projects operating at similar temperatures. Even before inking the deal, McCann provided an intensive training course to Enerkem's engineering staff, outlining in great detail how to properly select, use, maintain, and ultimately recycle heat transfer fluids.

The team settled on Therminol 66, one of Eastman's most widely used heat transfer fluids. "The unique chemistry in this product gives Enerkem the flexibility to expand the temperature range of their operations without having to incur significant costs in the future," says McCann. Enerkem engineers also appreciated the environmentally positive profile for Therminol 66, which may not be available in some competitive products.



The idea is catching on, and the company is developing additional biorefineries in North America and globally based on its modular manufacturing approach. Enerkem's technology and facilities help diversify the energy mix and make everyday products greener while offering a very nice alternative to landfilling and incineration. Less waste = more energy. That's an equation everyone can live with.

Therminol customers are taking advantage of Eastman's unique TLC Total Lifecycle Care® program, which provides guidance through the technical science of heat transfer fluids. The TLC program supports Therminol customers throughout their systems' lifecycle. This includes system design support, start-up assistance, training, sample analysis, and flush and refill fluids. Eastman's technical experts are available to help answer questions; and when it's time to replace fluids, Eastman takes the old fluids back and may provide credit on new ones.



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