



Resitol Industria Quimica, TLC Total Lifecycle Care® and Therminol® Heat Transfer Fluids: A “Cool” Combination

A Therminol LT Heat Transfer Fluid Case Study

TLC Total Lifecycle Care® Solutia developed the TLC Total Lifecycle Care Program to support Therminol® heat transfer fluid customers throughout their systems' lifecycle. This comprehensive program includes no cost services such as system design consultation, start up assistance, on-site training, and sample analysis, world class products such as heat transfer fluids and system flushing fluids. This extraordinary program is backed up by a team of technical industry experts in every major global region.

Resitol Industria Química Resitol is a chemical company located in Santa Catarina (SC) in the southern part of Brazil. Resitol is a major producer of two products: Crude Tall Oil (CTO) and Crude Sterol. The tall oil is extracted from by-products of pulp and paper production. Crude Sterol (Fitosterols) is contained in the tall oil, which after distillation is concentrated in tall oil pitch. To extract the Crude Sterol, Resitol has a unit of molecular distillation with high vacuum system. Resitol uses a secondary coolant fluid (SFC) to achieve -70°C. The very low temperature is required to maximize separation efficiency while reducing

product degradation that would occur if the separation were done at higher temperatures. The purified Sterol is used in the pharmaceutical and food industry. All of Resitol's products are exported to customers in the United States.

By using secondary coolant system technology rather than direct cooling, this process substantially reduces the amount of refrigerant charge in the main refrigeration loop. This reduction in primary refrigerant benefits Resitol since the use of traditional refrigerants is highly regulated and can be quite costly to own, operate, and maintain. Since 1991 Resitol used a silicone based fluid as SCF. In 2008, they experienced two major leaks from their heat transfer system. As a result of each of these unplanned failures, they were forced to shutdown their production since their fluid supplier was not able to deliver enough fluid to replenish their system in a timely manner. After the second incident, Resitol contacted the local Solutia team to help explore their options. Solutia's Therminol heat transfer fluid experts in Brazil were immediately dispatched to meet with the Resitol engineers, review their system design, and discuss their heat transfer fluid options.

Therminol Fluids

In October 2009, after in-depth consultation with Solutia, Resitol engineers decided to change their silicone based fluid to Therminol LT synthetic heat transfer fluid due to the excellent technical services and logistical support offered by the local TLC Total Lifecycle Care team in Brazil. “Our local Solutia Therminol engineers provided us with comprehensive guidance for draining our old fluid, flushing the system and refilling with the new Therminol LT. They also provided on-site support as needed throughout the process until the system was started up. We have never received this level of expert support with our previous supplier. They also have local stock in case of emergencies,” said Mr. Charles Souza, Maintenance and Production Manager for Resitol. Once the system reached stable operation, Mr. Souza added, “Because of Solutia's local support and outstanding services, I rest easier knowing that they will be here whenever I need.”

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Mr. Charles Souza
Maintenance & Production Manager

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For more information:
www.therminol.com
800-426-2463 North America
team.therminol@solutia.com

