



Quality sealing with
service and innovation.

A tradition of technical and manufacturing excellence.



Thermoseal Inc. is a leading manufacturer of fluid sealing materials for industrial and manufacturing applications. Based in Sidney, Ohio, Thermoseal is the exclusive licensee in North America of the Group of Independent Klinger Companies, a world-renowned developer, manufacturer and distributor of fluid sealing and control products, founded in 1886 by Austrian engineer Richard Klinger.

From the revolutionary development of the compressed fiber gasket in 1877 to today's advanced sealing material technology, Thermoseal continues the long-standing tradition of quality and innovation by providing a wide variety of sealing products – ranging from a complete line of compressed fiber sheet, flexible graphite and PTFE gasket materials.

Through ongoing research, development, service, distribution and support, Thermoseal is committed to technical excellence in every product, for every customer, every day.

A commitment to quality.

Thermoseal sealing materials are found virtually everywhere fluids or gases have to be safely contained and moved through pipelines and systems. We provide fluid sealing and control products to a broad range of customers, including petrochemical and chemical industries, food, paper, mining, steel, shipbuilding and a variety of both light and heavy industrial manufacturers. And *quality* is the primary reason companies across the country choose Thermoseal.

In fact, Thermoseal's commitment to quality is backed by thousands of hours of scientific development, testing and evaluation, along with a level of experience that is unmatched in the industry. Certification to the International Organization for Standardization – ISO 9001:2000, the National Accreditation Program in

the United States and the American Society for Quality – ANSI/ISO/ASQ Q9001-2000, assure customers that consistent and correct quality levels are maintained in every product in the

Thermoseal line. In addition, Thermoseal is actively involved in the American Society of Mechanical Engineers (ASME) and the American Society for Testing and Materials (ASTM).



A dedication to the customer.

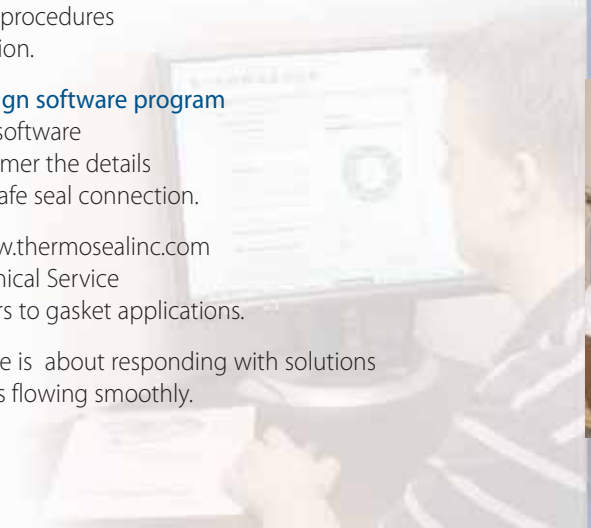
Thermoseal's focus on technical excellence and product innovation is only part of the story. Just as important is a strong dedication to the customer and their needs. Because Thermoseal is a tight-knit, communications-driven company, customers can count on responsiveness, attention to detail and quality, one-to-one service. Regular on-site visits, telephone and e-mail help Thermoseal specialists stay connected with our customers. In fact, if a customer is experiencing a problem with a gasket's performance, whether a Thermoseal product or that of a competitor, customer service specialists work quickly to resolve the situation and get that customer back in operation.

At Thermoseal, excellence in customer care includes training and education on all products and their performance in any application. Customers with questions, technical needs or in search of professional

advice turn to Thermoseal for a variety of solution-driven support services that include:

- **Thermoseal's National Factory Training Center** – where customers learn the proper materials, selection criteria, installation procedures and other technical information.
- **KLINGER®expert gasket design software program** – a Windows-based custom software package that gives the customer the details necessary for a reliable and safe seal connection.
- **Thermoseal's website** – www.thermosealinc.com – offers the customer a Technical Service Questionnaire for fast answers to gasket applications.

At Thermoseal, customer service is about responding with solutions that keep a customer's business flowing smoothly.



On-site testing for maximum quality, performance and reliability.

Thermoseal's commitment to quality and ongoing product improvement is perhaps best demonstrated in their on-site lab and scientific testing facilities, a rarity in the industry. Here, quality assurance specialists subject sealing materials to a battery of punishing tests. For example, one way to ensure the true reliability and performance of sealant material is to find out how and when the material might *fail*. So at Thermoseal, all materials endure *destructive testing* to ensure failure thresholds will meet or exceed specifications for the product. And, all testing adheres to strict ASTM, national and/or international specifications to ensure performance, reliability and continued quality.

Thermoseal's testing is also customer-driven. If a customer has an unusual application need, Thermoseal will do a "developmental formulation" and run extensive experiments in order to meet the application's particular properties. Or, if a customer is experiencing more severe conditions than typical tests can measure, Thermoseal will adjust the test to meet that specific challenge.



Thermoseal quality assurance short and temporal tests include:

KLINGER Hot Compression Test

An advanced technology developed and patented by Klinger that tests the load bearing capabilities of the gasket under constant pressure (up to 7,250 psi) and temperature (73° F up to 930° F).

DIN Sealability Test

An added measure to check gas permeability of sealing material using higher internal pressures.

- DIN 3535/6

ASTM Sealability Test

A means of evaluating the fluid sealing properties of gasket material under different compressive flange loads, fluids and internal pressures.

- ASTM F-37A/B



Compressibility and Recovery Test

Measures how much the material compresses under a 5,000 psi load and its ability to recover after the load is reduced.

- ASTM F-36J

Live Steam Line

Closely monitors gasket material subjected to real life plant conditions.

Tensile Test

Determines the strength of the material using ASTM-specified tensile bars to measure force required to break.

- ASTM F-152

Elevated Temperature Sealability

A computer-controlled Klinger exclusive test running 24/7 to assist in predicting the life of the material and the point of failure relative to gas leakage.

Stress Relaxation Test

Measures how much a material will relax at a given surface pressure and temperature.

- DIN 52913

Hydrostatic Pressure Test

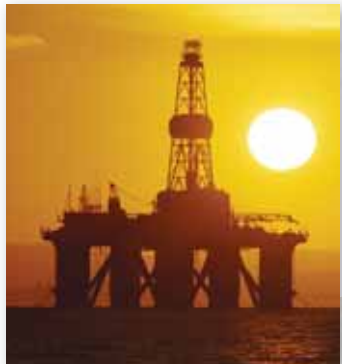
Demonstrates blow-out relative to gasket stress in standard flanges.

Density Check

A measurement of the mass to the volume of the material.

- ASTM F-1315





Thermoseal provides the perfect gasket material for any application.

There isn't a gasket application Thermoseal can't handle. With a diverse range of sealing materials designed to meet virtually any fluid sealing and control need, this broad product offering includes:

- KLINGERSIL® family of compressed non-asbestos gasket materials
- KLINGERSIL® beater addition composite gasket material
- KLINGER top-chem® reinforced PTFE products
- KLINGER® flexible graphite
- KLINGER® Milam
- KLINGER® Maxiprofile composite gaskets
- Thermoseal® soft-chem® expanded PTFE material
- Sealex® PTFE joint sealant

Now that you are more familiar with Thermoseal – its history, quality, service, development and testing – you're invited to call 1-800-990-SEAL (7325) to set up a one-on-one meeting, talk about your application needs and take a personal tour of Thermoseal's facility. For more information, just visit Thermoseal's website at www.thermosealinc.com.



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