



Hot Compression Test

Klinger Hot Compression Test Method For Gasket Material

Scope: Provides for the determination of the behavior of gaskets under varying loads and temperature.

History: This test was developed by the Klinger Group in the early 1970's. It has been adopted by British Standards and was used to develop the DIN 28090 Test. This test is recognized and performed by most gasket manufacturers.

Summary: Typical load is 100kN (7250 psi) and typical temperature is 300°C (572°F). Heating rate is 10°C (50°F) per minute. A high temperature test can be performed up to 450°C (842°F). No conditioning of the material is required.

A ring is compressed between the heated platens of a hydraulic press. The load is maintained constant as the gasket relaxes and the temperature is increased at an incremental rate of 10°C (50°F) per minute. The decrease of thickness is measured during the test.

Calculations - Hot Compression Tests:

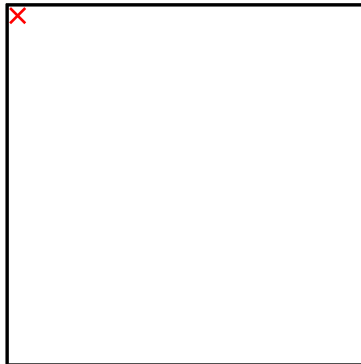
Percent thickness decrease cold: $((d1 / d0) \times 100)$

Percent thickness decrease hot: $((d2 - d1) / (d0 - d1)) \times 100)$

Percent thickness decrease total: $((d2 / d0) \times 100)$

Usage: This procedure provides a measure of the gasket under load and/or temperature. The hot compression test serves as a "real world" type test.

Disclaimer: *This test was developed by the Klinger group and is not currently an ASTM standard (Is being looked at by the ASTM Gasket Committee, as becoming an ASTM Test Standard). The test equipment is manufactured and maintained by the Klinger group.*



Many Materials are Green, Only One is Thermoseal's KLINGERSIL®.

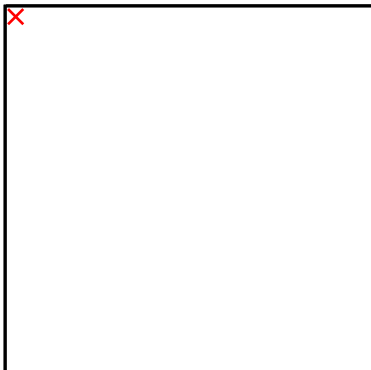
A 75 mm OD / 55 mm ID test ring was cut from each green sample and tested.

Click the images below to view test data comparing other 'Green Gasket' materials to The Original Green Gasket material KLINGERSIL® C-4401.

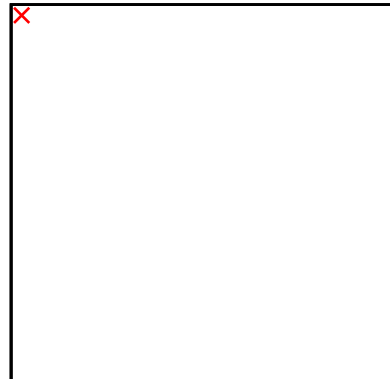
Please [contact us](#) with any questions concerning your gasketing needs.

KLINGERSIL® C-4401

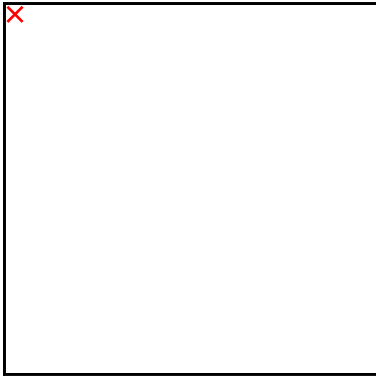
(after Hot Compression Test)



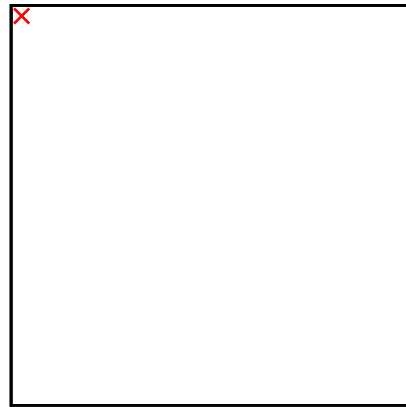
Sample A-1



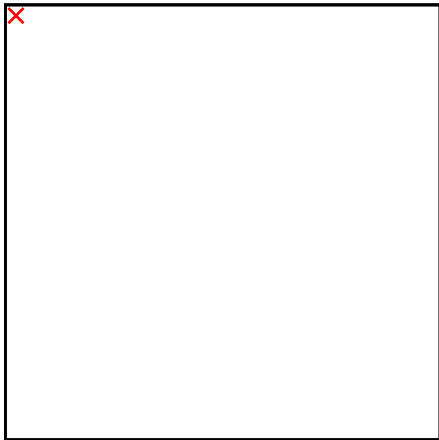
Sample A-2



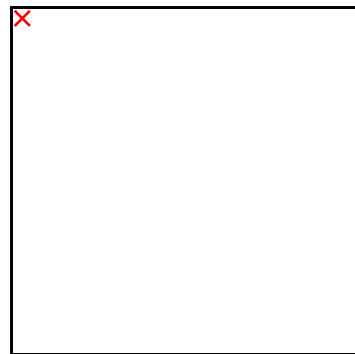
Sample B



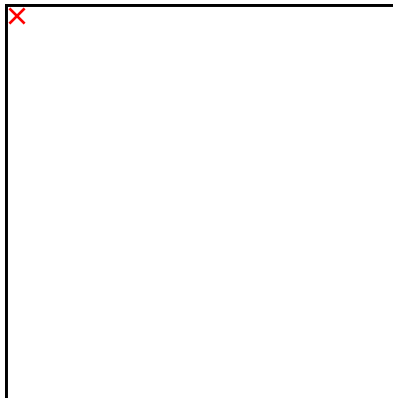
Sample C



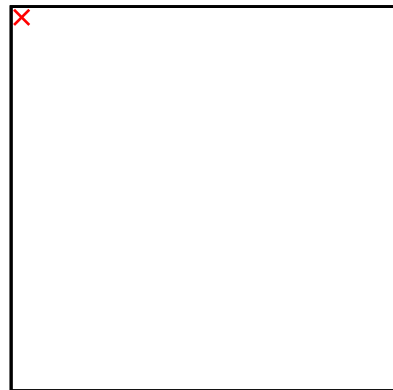
Sample D-1



Sample D-2



Sample E



Sample G