

HIGH TEMPERATURE USE LIMIT FOR ELASTOMERIC OR POLYOLEFIN INSULATIONS

Nomaco Insulation distributes both elastomeric and polyolefin insulation materials. Both products are closed cell insulation materials designed to retard heat flow and prevent condensation when properly installed. They share many product features and benefits. One of their differences is in the area of high temperature service. Not only are their high temperature use limits different (Elastomeric - 220° F and Polyolefin - 210° F or 180°F with PSA seams or backing for both elastomeric or polyolefin), but more importantly, their mode of failure is much different.

Elastomeric materials are termed thermoset. Thermoset materials have a gradual failure mode related to the temperature and time of exposure. These products gradually begin to lose their elasticity and become harder. Their high temperature service limit is based on past application performance. Brief temperature spikes above their recommended use temperature will not result in catastrophic failure.

Polyolefin products are termed thermoplastic and begin to soften as they reach their high temperature service limit. Their high temperature service limit is based on the melting point of polyolefin resin. When this temperature is reached, even for a very short period of time, the product melts, resulting in a catastrophic failure. Thermoplastic materials are very susceptible to brief periods or spikes of temperatures above their recommended use limit.

In applications where high temperatures (above 180° F) may occur, elastomeric insulation should be used, i.e., some hot water heating systems.