

# DuPont™ Kapton® XP

## Insulation Substrate

### General Description

Kapton® type F, a type H film coated on one or both sides with Teflon® FEP fluorocarbon resin to impart heat sealability, is commercially available from DuPont in a variety of composite constructions. Kapton® type F has a proven history of performance in the wire and cable, motor and generator, and electronic markets.

Kapton® type XP provides a type H film coated on one or both sides with Teflon® PFA which offers high temperature and adhesion levels for those demanding applications not serviceable with Kapton® type F. Teflon® PFA, the latest member of the DuPont family of high performance fluorocarbon resins, is a copolymer having a tetrafluoroethylene backbone with a fully fluorinated alkoxy side chain. The familiar PTFE molecular structure provides excellent mechanical strength and adhesive properties at elevated temperatures.

### Properties

The Teflon® PFA coating on Kapton® XP films offer a sealing medium with higher use temperature capabilities. In addition, high level bond strengths of XP to copper, itself or other materials are maintained at elevated temperatures. The four graphs included with this bulletin compare retention of bond strength of type F and type XP from room temperature to 200°C.

In addition Kapton® XP exhibits the same chemical stability, electrical properties, and mechanical strengths in high and low temperature environments as has been demonstrated with Kapton® F.

### Availability

Both 2 mil Kapton® XP (919) and 1.5 mil XP (019) are in inventory. Other constructions can be made available as market applications and needs develop.

Substrate preparation and electrical, mechanical and chemical data can be found in the Kapton® Summary of Properties booklet (H-38492).

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**Caution:** Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-50102.

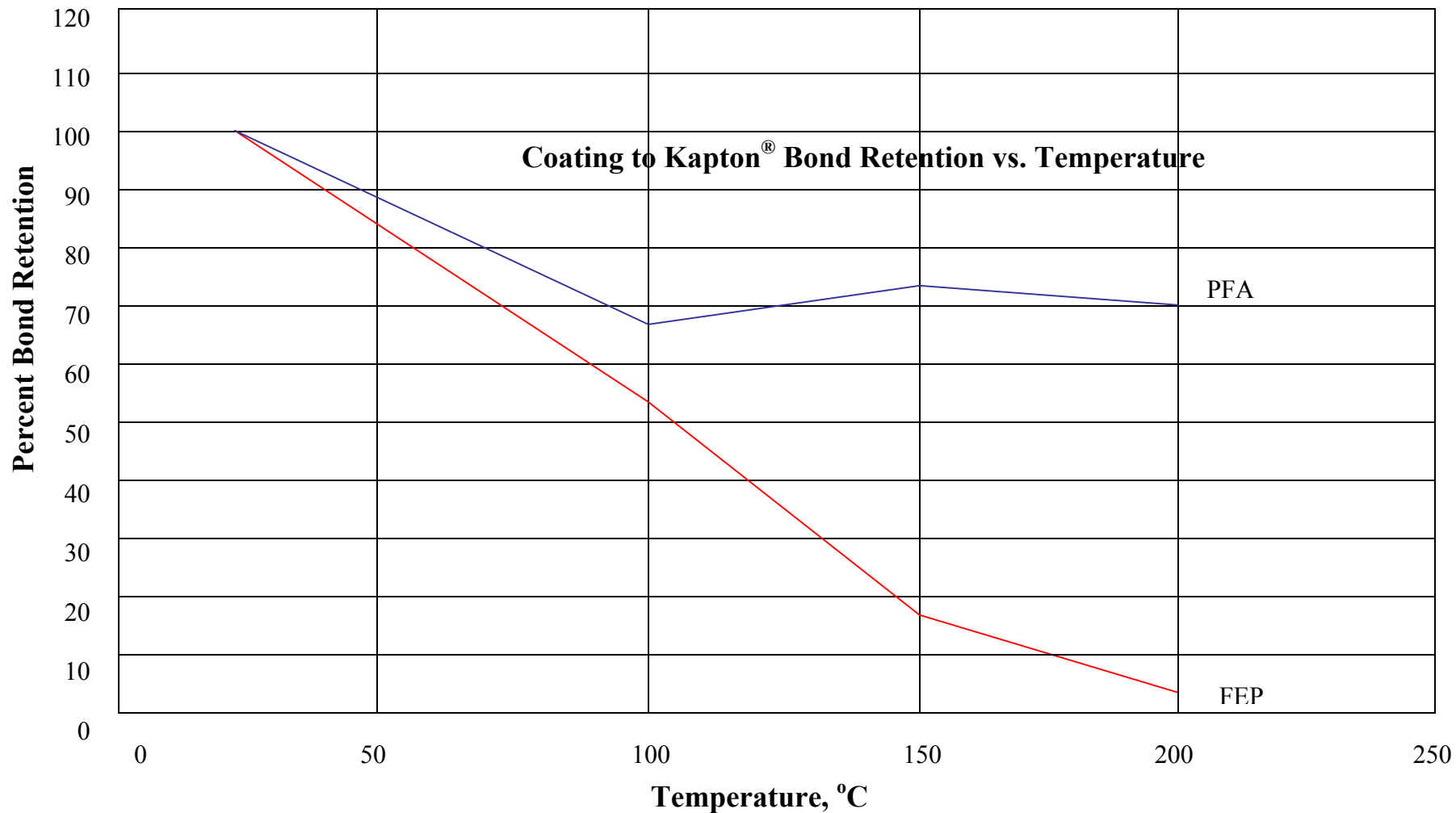
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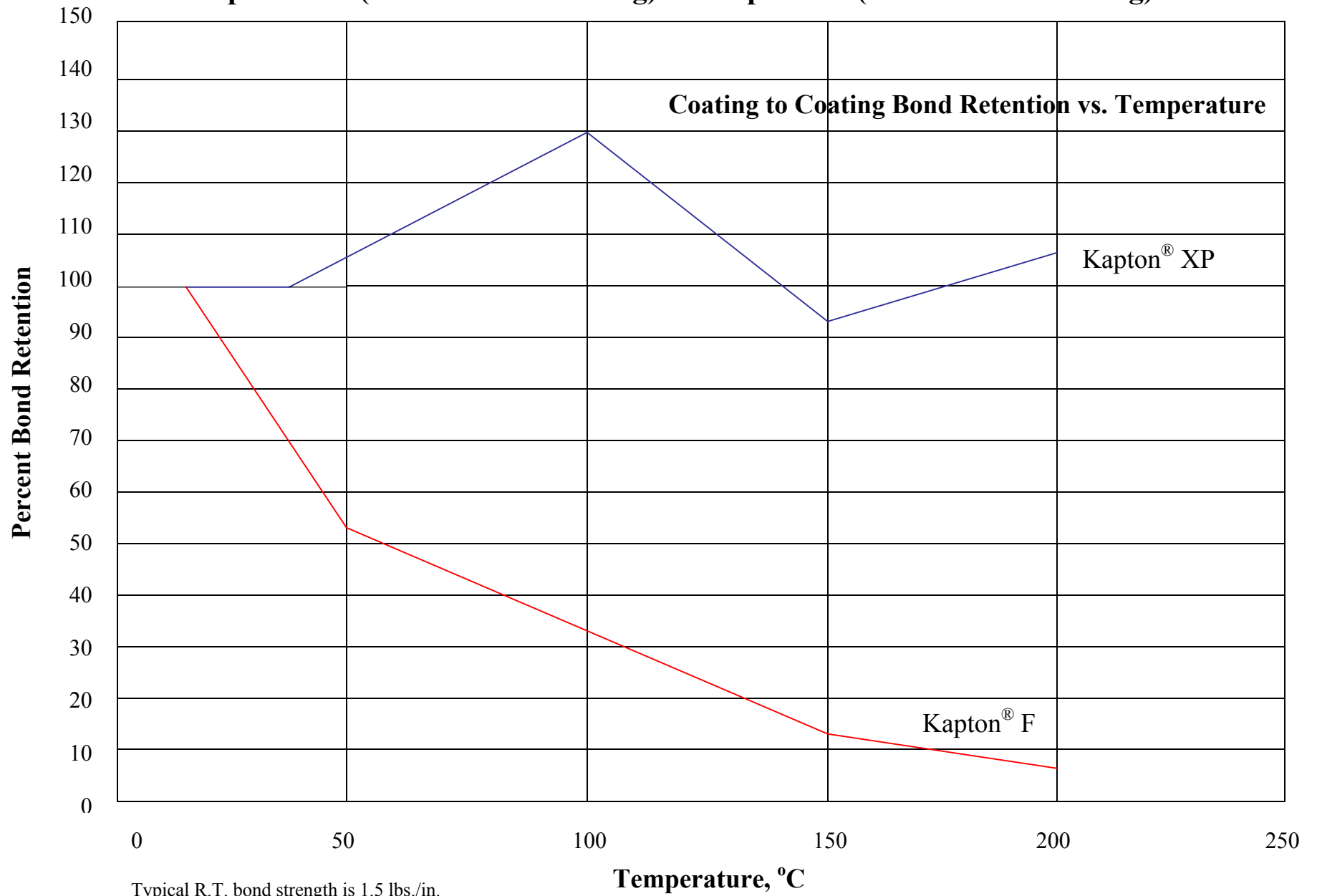
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## Kapton<sup>®</sup> XP (Teflon<sup>®</sup> PFA Coating) vs. Kapton<sup>®</sup> F (Teflon<sup>®</sup> FEP Coating)

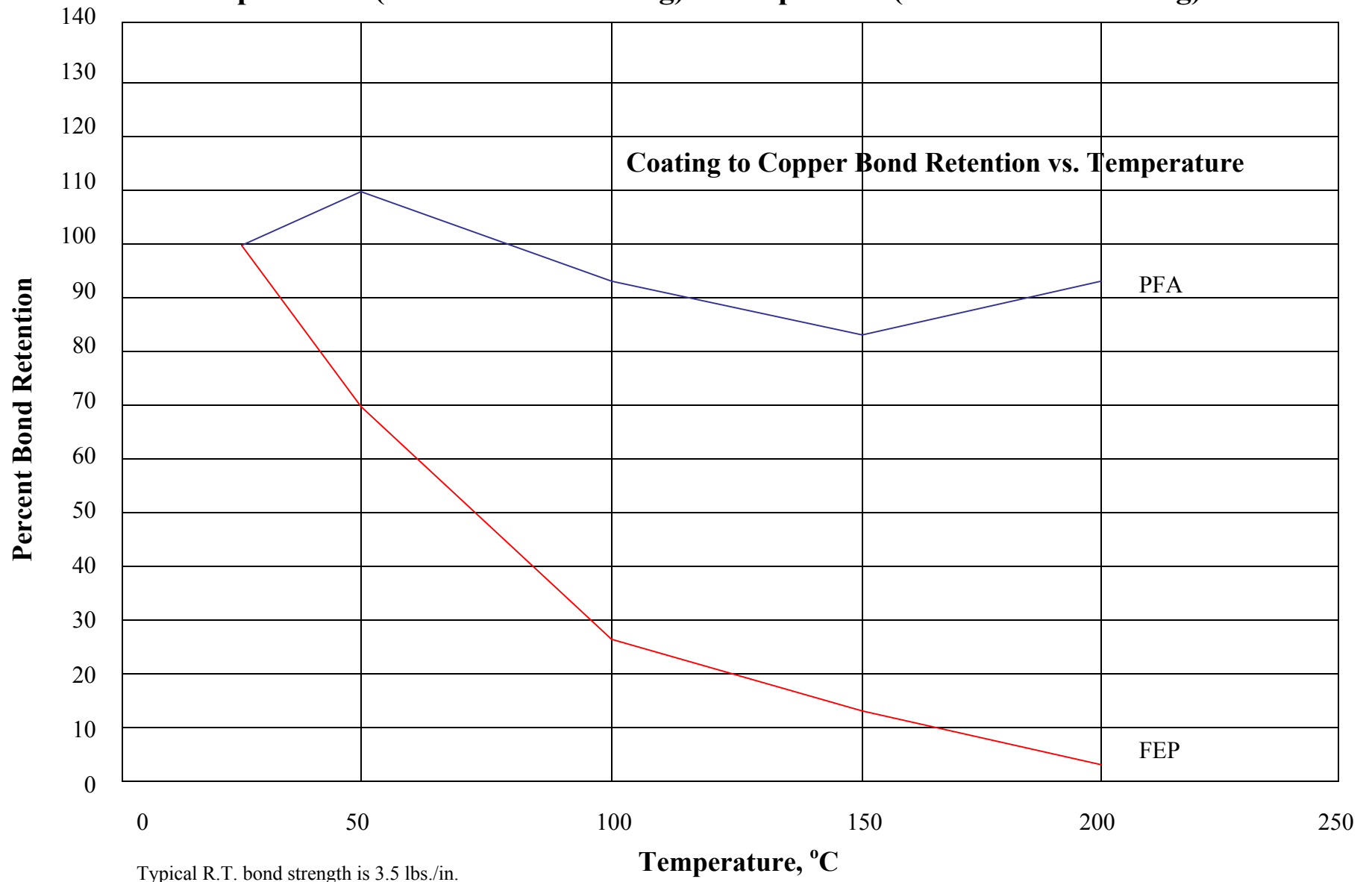


Typical R.T. bond strength is 1.5 lbs./in.

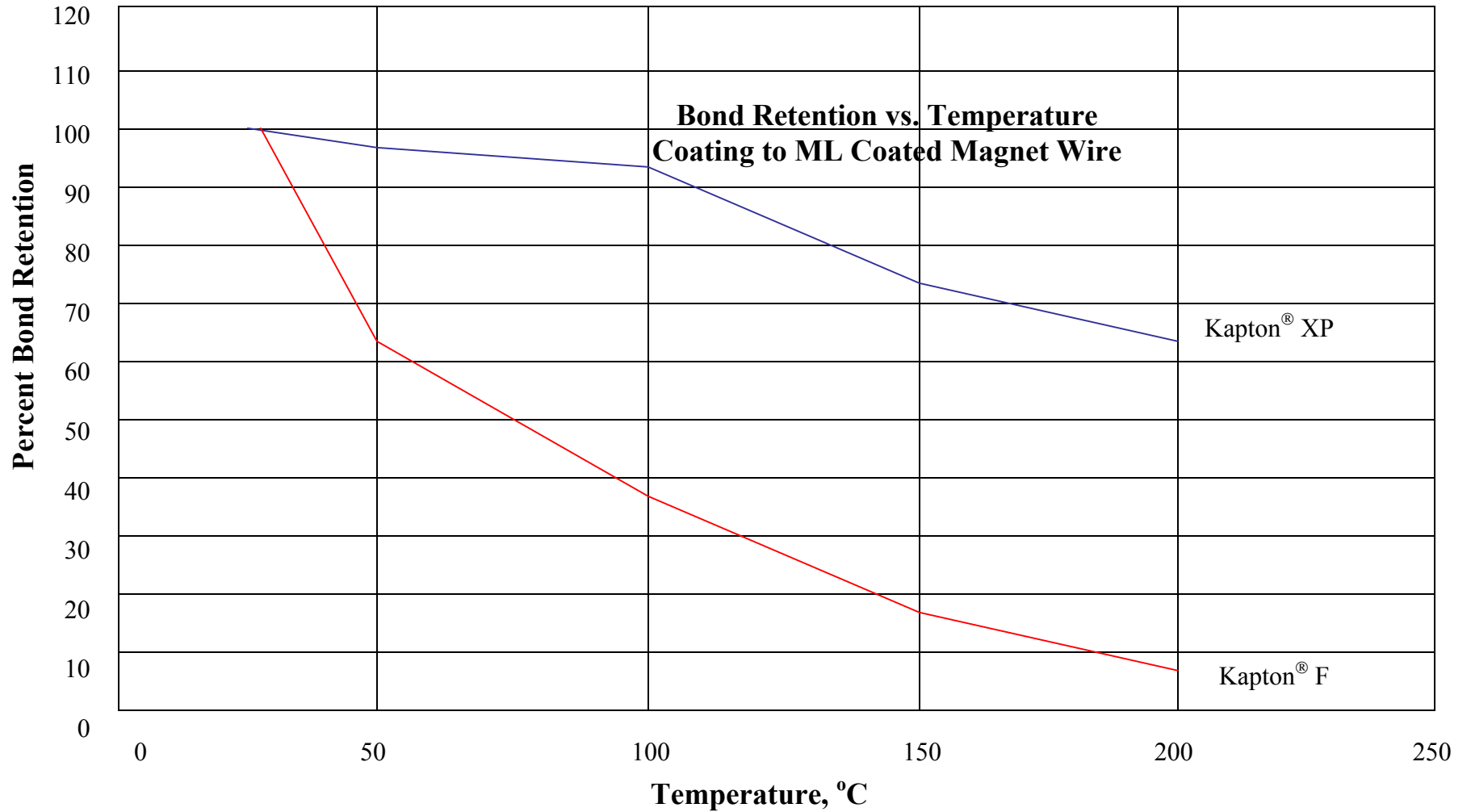
# Kapton<sup>®</sup> XP (Teflon<sup>®</sup> PFA Coating) vs. Kapton<sup>®</sup> F (Teflon<sup>®</sup> FEP Coating)



# Kapton<sup>®</sup> XP (Teflon<sup>®</sup> PFA Coating) vs. Kapton<sup>®</sup> F (Teflon<sup>®</sup> FEP Coating)



## Kapton<sup>®</sup> XP (Teflon<sup>®</sup> PFA Coating) vs. Kapton<sup>®</sup> F (Teflon<sup>®</sup> FEP Coating)



Typical R.T. bond strength is 3.5 lbs./in.