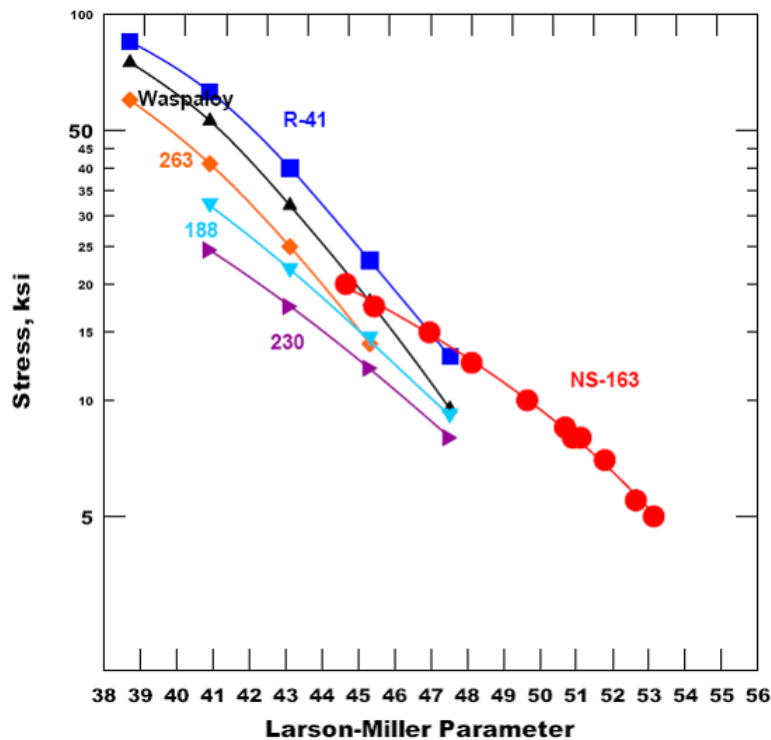


# HAYNES<sup>®</sup> NS-163<sup>®</sup> alloy

Haynes International, Inc. is pleased to announce the development of HAYNES<sup>®</sup> NS-163<sup>®</sup> alloy, an alloy that brings a new level of high-temperature alloy performance at temperatures up to 2200°F (1204°C). HAYNES NS-163 alloy is a wrought cobalt-based alloy (Co-28Cr-21Fe-9Ni-1.25Ti-1Nb) for use in sheet and wire forms. Not only is this alloy fully fabricable and weldable, it achieves a level of stress-rupture strength that approaches the capabilities of the oxide-dispersion strengthened (ODS) alloys. This capability is developed through a unique new heat treatment under nitrogen which imparts a through-thickness dispersion-strengthening phase in the final part at thicknesses up to 0.100" (2.5 mm). This fabricable alloy achieves strengths that are unparalleled in any other wrought alloy product available today.

**NS-163<sup>®</sup> alloy: Production sheet; 0.080" thick  
 Condition: NDS**



Alloy	Temperature °F (°C)	Approx. Initial Stress to Produce Rupture in			
		100 hr.		1000 hr.	
188	1800 (982)	5.4 ksi	(37 MPa)	2.4 ksi	(17 MPa)
230 <sup>®</sup>	1800 (982)	4.9 ksi	(34 MPa)	2.6 ksi	(18 MPa)
NS-163 <sup>®</sup>	1800 (982)	9.7 ksi	(67 MPa)	6.5 ksi	(45 MPa)

HAYNES NS-163 alloy will become available for commercial sale upon completion of key process developments.

A range of sheet thicknesses and wire diameters is now available for trial evaluations.

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