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MATERIAL DATA SHEET

MATERIAL FOR AEROSPACE INVAR TOOLS

FERRYNOX N36

Description

The Ferrynox N36 is the result of an important internal development at **FERRY CAPITAIN**. The Production of low thermal expansion alloys is enhanced through a perfect control of residual elements allowing the achievement of a low CTE.

Application

This material is mainly used in the **Aerospace** field requiring tools with a very low coefficient of expansion.

Chemical Composition

Cast Analysis			
FC Reference	%Ni	%Co	Fer
FerryNox N36	37	4	Base

Density : 7,7

Physical Properties

FC Reference	Temperature (°C)	Mean coefficient of thermal expansion (m/m.°C)
Ferrynox N36	Between 20°C and 150°C	$4{,}35.\ 10^{-6}$
	Between 20°C and 180°C	$4{,}45.\ 10^{-6}$
	Between 20°C and 200°C	$4{,}60.\ 10^{-6}$
	Between 20°C and 220°C	$4{,}65.\ 10^{-6}$
	Between 20°C and 250°C	$4{,}95.\ 10^{-6}$
	Between 20°C and 300°C	$5{,}80.\ 10^{-6}$

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Mechanical properties

Tensile Test				
FC Reference	Temperature (°C)	Tensile Strength (Mpa)	Yield Point (Mpa)	Elongation (%)
Ferrynox N36	20°C	420	260	18
	300°C	330	110	24

Weldability

Ferrynox N36 can be welded, **FERRY CAPITAIN** make available a complete welding procedure specific to this material.

We developed cold welding; it allows the welding of accessories on parts.