

THERMALLOY TM type

(solid lubricant dispersal bearing for use in ultrahigh temperatures)



APPLICATION

MANUFACTURE

Metallic Polymer
MATERIALS AND SIZE

PLANNING

CORPORATE PROFILE

SPECIFICATION SHEET

THERMALLOY TM type is made from a material that is highly resistant to oxidation and wear in high temperature oxidative environments.

Features

- ① Highly resistant to oxidation and corrosion in high temperature oxidative environments (700°C max).
- ② Resistant to wear.
- ③ Highly resistant to seizure at higher temperatures.
- ④ The bearing causes very little damage to the mating shaft.

Chemical Composition

FeCr + Cu + Solid lubricant

Mechanical Properties

Density (g/cm ³)	Compressive strength (MPa)	Ring compression strength (MPa)
7.4	1630	980

Strength

Temperature (°C)	Hardness (Hv)	Tensile strength (MPa)
Room temperature	230	450
300	180	410
500	170	340
700	110	150

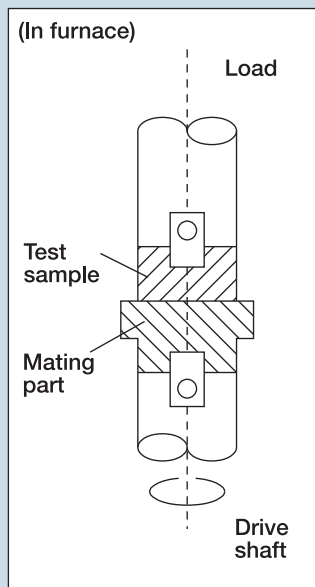
Coefficient of Linear Thermal Expansion

Temperature (°C)	Coefficient of linear thermal expansion (×10 ⁻⁶ /°C)
50 – 300	16.5
50 – 500	16.6
50 – 700	17.0

Oxidation Resistance

Heating time (hrs.)	Weight change rate (%)
5	0.01
10	0.05
25	0.05
50	0.05
100	0.06

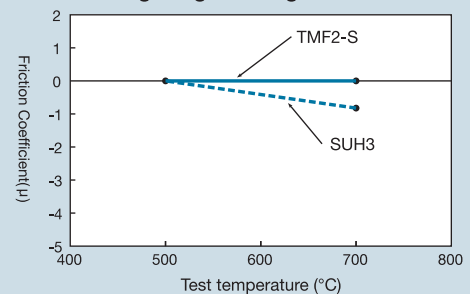
Sliding properties at higher temperatures (THERMALLOY TM type TMF2-S)



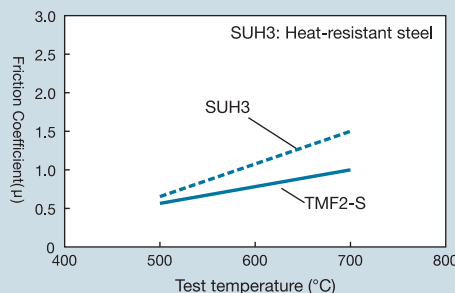
Test conditions

Specific load : 2.45MPa
 Speed : 1.2m/min
 Material of mating part : SUS303
 Duration : 30min

Bearing weight change



Friction coefficient



Material weight change of mating part

