

DU[®] Bearing Material

STRUCTURE

Metal-Polymer Composite Material

CHARACTERISTICS

- Very good wear and low friction performance over a wide range of loads, speeds and temperatures in dry running conditions
- Suitable for lubricated applications
- Suitable for linear, oscillating and rotating movements

AVAILABILITY

Bearing forms available in standard dimensions

-  Cylindrical bushes
-  Flanged bushes
-  Thrust washers
-  Flanged washers
-  Sliding plates

Bearing forms made to order: standard forms in special dimensions, half-bearings, special shapes obtained by stamping or deep drawing, customized bearing designs

APPLICATIONS

Industrial: Aerospace, agricultural equipment, construction equipment, food and beverage, material handling equipment, forming machines: metal, plastic and rubber; office equipment, medical and scientific equipment, packaging equipment, pneumatic and hydraulic cylinders, pumps and motors, railroad and tramways, textile machinery, valves, etc.



DU® Technical Data

Bearing Properties		Imperial Units	Imperial Value	Metric Units	Metric Value
General					
Maximum load, p	Static	psi	36 000	N/mm ²	250
	Dynamic	psi	20 000	N/mm ²	140
Operating temperature	Min	°F	- 328	°C	- 200
	Max	°F	536	°C	280
Coefficient of linear thermal expansion	Parallel to the surface	10 ⁻⁶ /F	6	10 ⁻⁶ /K	11
	Normal to the surface	10 ⁻⁶ /F	17	10 ⁻⁶ /K	30
Dry					
Maximum sliding speed, U		fpm	500	m/s	2.5
Maximum pU factor		psi x fpm	50 000	N/mm ² x m/s	1.8
Coefficient of friction			0.02 - 0.25 *		0.02 - 0.25 *
Oil Lubricated					
Maximum sliding speed, U			1 000	m/s	5.0
Maximum pU factor			143 000	N/mm ² x m/s	5.0
Coefficient of friction			0.02 - 0.12		0.02 - 0.12

Recommendations

Shaft surface roughness, Ra	Dry	µin	12 - 20 *	µm	0.3 - 0.5
	Lubricated	µin	≤ 2 - 16 *	µm	≤ 0.05 - 0.4 *

Shaft surface hardness Unhardened acceptable, improved bearing life > 200HB

* Depending on operating conditions

Operating Performance

Dry	Very Good
Oil lubricated	Good
Grease lubricated	Fair
Water lubricated	Fair
Process fluid lubricated	Fair

For Superior / Lead-free Performance

Dry	DP4 / DP11
Oil lubricated	DP4 / DP31
Grease lubricated	DP4 / DX
Water lubricated	DP4-B
Process fluid lubricated	DP4 / DP31

Microsection

