



WIPBEAR

THE WESTERN INDIA PLYWOODS LIMITED

Technical Literature

Anexure No VII

WOOD BASED LAMINATED PLASTIC FOR BEARINGS, SILENT GEARS AND OTHER INDUSTRIAL APPLICATIONS

WIPBEAR is a heavy duty Industrial Laminate manufactured by WIP. It has got excellent resistance to moisture, dilute acids and alkalis, climatic variations, wear and tear etc.

WIPBEAR's density is only half that of Aluminium and one-fifth that of steel but its strength: weight ratio is more than half that of steel. These properties are acquired by adjusting the ratio of wood content to that of resin content in the finished wood based plastic laminate. We use a special type of Phenolic resin for this Bearing material. WIPBEAR is a unique and versatile engineering material which has excellent Physical & Mechanical characteristics combined with dimensional stability. It can also be machined to close tolerances with ease.

TYPES & GRADES:

WIPBEAR in general is manufactured in two types, as indicated below :

Type 2 : This represents a laminate where alternative laminations have grain directions at right angles to each other.

Type 4 : This represents 25% of the total laminations in cross grain construction.

NOMENCLATURE :

The following nomenclature system is usually used for the identification of various grades of WIPBEAR

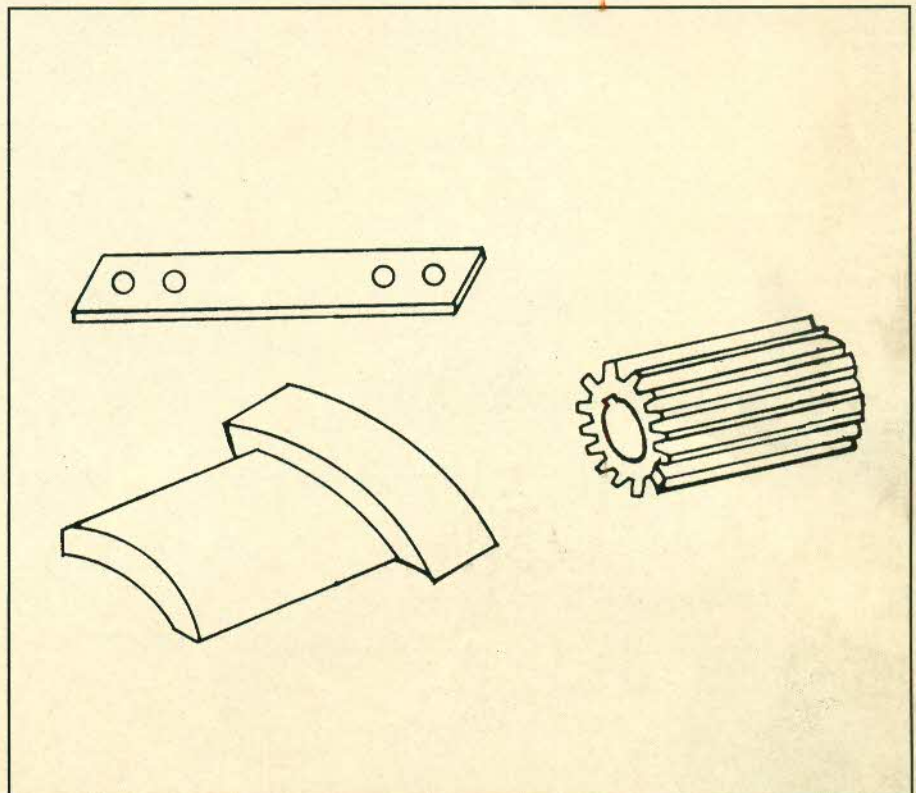
WIPBEAR is usually denoted with the letters "WBEA". This comes first in the series.

The grain direction is indicated after the "WBEA" denotation.

For example : Grade WBEA 2 represents a grade of WIPBEAR which has the grain directions of alternate laminations at right angles to each other. This is the special grade which finds applications in Industry as Bearings and silent gears etc.

STANDARD SIZES :

WIPBEAR is generally manufactured in thicknesses from 6 mm upto 100 mm in all the grades. Standard sizes are 4'X3' and 3'X3'. In special cases it is manufactured in 8'X4' size upto a



maximum thickness of 38 mm.

APPLICATIONS

WIPBEAR is a Wood Based Plastic Laminate which finds extensive application in industries where mechanical

strength and resistance against moisture and chemical degradation are required.

WIPBEAR has excellent cutting and machining characteristics with normal high-speed wood-working machines.

It has got resistance against moisture, weak acids & alkalies and finds application in mechanical, chemical and other engineering industries.

WIPBEAR has got the following typical characteristics:

Properties	Unit	Grade WBEA2	Grade WBEA4
1. Specific Gravity		1.25 - 1.30	1.25 - 1.30
2. Bending Strength: Along the grain: Minimum	Kg/Cm ²	1400	1600
3. Tensile Strength Minimum	Kg/Cm ²	700	1500
4. Compression Strength :			
(a) Flatwise: (At right angles to laminate and top surface) Minimum	Kg/Cm ²	1800	1600
(b) Endwise: (Parallel to grain) Minimum	Kg/Cm ²	1050	850
5. Shear Strength: Minimum			
(a) Perpendicular to grain & Laminate (Endwise)	Kg/Cm ²	400	300
(b) Perpendicular to grain (Edgewise) Minimum	Kg/Cm ²	300	200
Impact Strength (Un-notched Sample):			
(a) Perpendicular to Laminate and grain direction of top surfaces Minimum	KGM	0.60	0.70
(b) Perpendicular to Laminated face Minimum	KGM	0.40	0.30

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