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NON-CONIFEROUS TIMBER FOR GENERAL PACKING PURPOSES					
1. GENERAL: This specification governs the quality of non-coniferous timber supplied in the form of planks, battens, beams and sleepers. 2. APPLICATION: Used for the manufacture of packing cases/crates. 3. COMPLIANCE WITH NATIONAL STANDARDS: Assistance has been derived from the following Indian Standards in preparing this specification. IS: 399 – 1963 : Classification of commercial timbers and their zonal distribution. IS: 1326 – 1992 : Specification for non-coniferous sawn timber (Baulks and Scantlings) IS: 5966 – 1993 : Specification for non-coniferous timber in converted form for general purposes. IS: 6662 – 1993 : Timber species suitable for wooden packaging - Specification. 4. TERMINOLOGY: For the purpose of this specification, the definitions given in IS: 707 (Glossary of terms applicable to timber and timber products) shall apply except for the beam which is defined as below. Beam is defined as converted timber whose cross-sectional dimensions exceed 50 mm in both directions. 5. SPECIES: The species of non-coniferous timber shall be as per annexure I.					
Revisions: Cl. No. 11 added. Cl. No. 3, 7.1 & 12 revised. Cl. No. 7.4 Deleted.		Issued : STANDARDS ENGINEERING & IPR COORDN. DEPARTMENT			
Rev. No. 01	Amd. No.	Reaffirmed:	Prepared:	Approved:	Dt of 1 st issue
Dt. NOV. 09	Dt.	Year	VNR	DGM(E&CC)	MAY. 90

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6. DIMENSIONS AND TOLERANCES:

6.1 Sizes: Width, thickness and length of timber shall be clearly stated on the order/drawing.

6.2 Tolerance:

6.2.1 Width:

Width, mm	Tolerance, mm
50, 75, 100	+ 3
125, 150, 200, 225, 250	{ + 6 - 3

6.2.2 Thickness:

Thickness, mm	Tolerance, mm
20, 25, 35, 40, 50	+ 3
75, 100, 125, 150, 175, 200, 250	{ + 6 - 3

6.2.3 Length:

Standard length:

1 to 12 metres in multiples of 0.5 metre.

Tolerance:

± 2% or ± 50 mm whichever is less.

Note: The minus tolerances for width, thickness and length shall not be permitted in more than 10% of the timber supplied.

7. SEASONING AND MOISTURE CONTENT:

7.1 Timber for packing purpose other than export orders:

The timber shall have a moisture content of 30% maximum for planks and battens and 35% maximum for beams within a depth of 15 mm from the surface excluding a length of 30 cm from each end, at the time of inspection any time in the year. The moisture content will be determined in accordance with IS:287, IS:11215. This does not apply to timber procured in sleeper form for further conversion.

7.2 Timber for packing purpose for export orders:

The moisture content shall not exceed the maximum of 18%.

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7.3 The moisture content % shall be specified in the order.

8. **FREEDOM FROM DEFECTS:**

Timber shall be free from the following defects:

Brashness, splits across the grain, shakes, cup, spring, twist insect attack, any kind of decay (rot) visible infection, open centre heart, centre heart on planks and any other defect.

The extent to which defects are permitted are given in Annexure II.

9. **END COATING:**

Timber shall be coated with any of the following effective compositions, upto a distance of 80 mm from each end or 20 mm more than the longest split, whichever is higher.

9.1 Thick coal tar or bituminous paint.

9.2 Resin and lamp black (10:1), melted, mixed and applied hot.

9.3 Hardened gloss oil.

9.4 Paraffin wax.

9.5 Molasses and lime (3:1).

10. **END STRAPPING:**

Timber above 200 mm x 200 mm cross section shall be strapped with steel clamps to prevent end splitting.

11. **TREATMENT OF WOOD:**

Supplier shall ensure the following:

All wood packaging material used in packaging of export consignments are required to be rendered free from all pests either by heat treatment or by fumigation with Methyle Bromide as per ISPM-15 (International Standards for Phytosanitary Measures) by the accredited fumigation agencies recognised by the Government. Supplier should submit certificate to that extent.

The treated wood packaging material shall carry prescribed treatment mark as per ISPM-15 in addition to standard markings of ISPM-15 on his material.

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12. CERTIFICATES:

The supplier shall furnish a certificate with each lot/consignment in support of the type of species, treatment (Fumigation/Chemical) and moisture content.

13. MARKING:

The timber shall be marked/painted in order to identify the source of supply in accordance with our instructions.

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ANNEXURE - I				
<u>SPECIES OF NON-CONFEROUS TIMBER RECOMMENDED FOR HEAVY PACKING CASES/CRATES</u>				
Sl. No.	Botanical Name	Standard Trade Name	Local Names	Abbreviated Symbol
1.	<u>Fagara burdrunga</u>	MULLILAM	MUTTILAM (Tamil), RHETSA (Telugu); BEPULI (Udu)	MUY
2.	Careya arborea	KUMBI	KUMBHI (Assam & Bengali), KAMBI (Hindi)	KUM
3.	Syzygium Cumini	JAMAN	JAMUN (Hindi & MP); JAMUK (Assam); JAM (Bengali); KUDA (Koli); JAMU (Oriya); JAMBU (Gujarati); NERLU, NERULA (Kannada); JAMBUL (Marathi); NAVAL (Malayalam & Tamil); NEREDU (Telugu)	JAM
4.	Apha – namixis Polystachya	PITRAJ	BOGA, AMARI (Assam); LOCHUNI, LOSHUNE (Bengali); RAKTATOHIDA (Marathi), MULLUMUTTAGA (Kannada); KARAGIL (Malayalam), VEKKALI, VELLAKONGU (TAMIL)	PIT
5.	Albizzia procera	SAFID-SIRIS	SAFED- SIRIS (Hindi); SIT (Andamans); KOROI (Assam & Bengali); TENTHRA (Koli); DHALASIRISH (Oriya); KINHAI, KILAI (Marathi); GURER (MP); KARANGRO (Gujarati); BELLATI, SALVAGAI (Kannada); VELLAVAKA (Malayalam); VELVAGAI (Tamil); TELLACHINDUGA (Telugu)	SSI
6.	Terminalia bellirica	BAHERA	BAHERA (Hindi & Marathi); BHAIRA (Punjabi); BHOMARA (Assam); LUMPUNG (Koli); BAHADA (Oriya); BAHETA (Gujarati); THARE, TARE, TARI (Kannada); BAHELA (Marathi); THANNI (Malayalam); TANI (Tamil & Telugu)	BAH
7.	Logerstroemia parviflora	LENDI	ASIDH, DHAURI'SIDA (Hindi); MECHI (Assam); SIDHA (Bengali & Oriya); GARASEKRE (Koli); BURI – DHAMERO (Nepali); LENDIA – SENHA (Marathi); KALIASAJA, LENDI (MP) BONDARO (Gujarati); NANAGU (Malayalam); PEIKADUKKAI (Tamil); CHENNANGI (Kannada & Telugu)	LEN

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Sl. No.	Botanical Name	Standard Trade Name	Local Names	Abbreviated Symbol
8.	Acrocarpus Fraxini folius	MUNDANI	MANDANE (Nepali); BELANJI (Kannada); KURANYAN, MALAVEPPU (Malayalam); MALAMKOMAI (Tamil)	MUN
9.	Dysoxylum Mala baricum	WHITE CEDAR	BILIDEVADARI (Kannada); VELLA – GIL (Malayalam & Tamil)	WCE
10.	Mangi fera India	MANGO	AM (Hindi & Assam); AMB (Punjabi); ULI (Koli); AMBA (Oriya & Marathi); MAVU (Kannada) MAMARAM (Tamil); MAMIDI (Telugu)	MAN
11.	Lagerstroemia Speciosa	JARUL	AJHAR (Assam); GARASEKRE (Koli); PUNIPATULI (Oriya); NIRMARUTHU (Malayalam); POOMARUTHU, PUMARUDU (Tamil)	JAR
12.	Adina Corodifolia	HALDU	HALDU, KARAM (Hindi); TARAK COPA (Assam); RANGKAT (Bengali) KUMBHA (Koli); KURUMA (Oriya); HALDU, HEDU (Marathi); KARAM (MP); HALWDWAR, HALDWAN (Gujarathi); HEDDI, YETAGAL, YETTAGA (Kannada); BIMBU (Malayalam); KADAMBERI, MANJAKADAMBAI (Tamil); HALDAWA (Urdu); BANDARU (Telugu)	HAL
13.	Dipterocarpus Indicus	GURUJAN	GARJAN (Assam); YENNEMARA (Coorg); KALPAYINI, KALPINE (Malayalam); ENNEY, VELLAYINI (Tamil); KALPINE (Kannada); GURGAL (Urdu).	GUR
14.	Lagerstroemia Lonceolata	BENTEAK	Nana (Gujarati & Marathi); NANDI, BENDEKU (Kannada); VENTEAK (Malayalam); BETHEKKU, VENTHEKHU (Tamil); BILLINANDI, BOLULTAR (Telugu)	BEN
15.	Dipterocarpus macrocarpus	HOLLONG	HOLLONG (Assam)	HON
16.	Mitragyna Parvifolia	KAIM	GURI, KALAM, PHALDU (Hindi); HAMSABETI (Koli); MITUKUNIA (Oriya)	KAM

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17.	Terminalia procera	WHITE BOMBWEE	DADAM (Andaman)	WBO
18.	Artocarpus hirsuta	AINI	HEBBALASU, HEBHULSINA (Kannada); PATHPHANAS (Marathi); AINIPILAVU (Malayalam); AINIPILA ANJILI (Tamil)	ANI
19.	Terminalia Myriocarpa	HOLLOCK	PANISAG (Nepali)	HOL
20.	Protium Serratum; Bursera Serreta	MURTENGA	ERRA KARRA (Telugu)	MUR
21.	Grewia- Ti Lifolia	DHAMAN	TADA (Telugu); DADSAL, THADSAL (Kannada); CHADACHI (Malayalam) THADACHI (Tamil); PEDDA JANA (Telugu)	DHA
22.	Albizzialebeck	KOKKO	SIRIS (Hindi & Oriya); SARIN, SHRIN (Punjabi); HIRIH (Assam); SIRISH (Bengali); CHICHOLA (Marathi); BAGE (Kannada); VAKA (Malayalam); VAGAI (Tamil); DIRISINAM (Telugu)	KOK
23.	Holoptelea- Intergrifolia	KANJU	KANJU, PAPRI (Hindi); KUMKAR, RAJAIN (Punjabi); ANJAN (Bengali); CHIBIL, DHAURANJO (Oriya); PAPARA (Marathi); CHILWAL, CHIROL, KARANJI (MP) THAPSI (Kannada); AVAL (Malayalam) AYILI (Tamil)	KAJ
24.	Schimawallichi Choisy	CHILAUNI	GOGRA, MAKRISAL (Assam)	CHL
25.	Xyliaxylcarpa	IRUL	KONGRA, TANGAN (Oriya); SURIA (Marathi); SAURIYA (MP) JAMBE (Kannada); IRUL (Tamil), KONDATANGEDU (Telugu)	IRU
26.	Hopea	HOPEA	BOGIMAR (Kannada); IRUMBOGAM (Malayalam); VELLAI - GONGU (Tamil)	HOP
27.	Teriminalia- tomentosa	LAUREL	ASNA, SAIN (Hindi); AISAN (Punjabi); HATANA (Koli); PUCCASAJ (Nepali); SAHAJA (Oriya); AIN, SADAR, SAJ (MP) KARUMARUDU (Malayalam); KARIMARUDU, MATTI (Tamil); NALLAMADDI (Telugu)	LAU

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Sl. No.	Botanical Name	Standard Trade Name	Local Names	Abbreviated Symbol
28.	Shorea robusta	SAL	SAKHU, SAL, SAKHUA (Hindi); SARJAM (Koli); RAIGAL -A SARGI (Oriya)	SAL
29.	Mesuaferrea	MESUA	GANGANE (Andaman); NAHOR(Assam); NAGESWAR, NAGKESAR (Bengali); NAGESWAR (Oriya); NAGASAMPIGI (Kannada); CHURULI (Malayalam); NANGAL, NANGU (Tamil); NAGAKESARI (Telugu)	MES
30.	Terminalia paniculata	KINDAL	HONAL, HONAGALU (Kannada); KINDAL (Marathi); PILLAMARUDU (Malayalam & Tamil); NALLAPULAGA (Telugu)	KIN
31.	Grevillea robusta	A CUNN	SILVER OAK	SOA

32. NEEM

33. MADDE

slm- species are added.

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ANNEXURE -II

PERMISSIBLE DEFECTS

Sl. No.	Defects	Extent Permissible
1.	BOW	Shall be permissible upto a maximum of 2 mm for 300 mm length of the piece.
2.	CUP	Shall not be permissible.
3.	END SPLITS	The longest end split at each end shall be measured and the lengths added together. The total length of the longest end split shall not exceed 60 mm per metre of the length of the piece.
4.	KNOTS	Live knots measuring from 20 to 35 mm in diameter and dead knots measuring upto 15 mm in diameter shall be permissible provided they are not so numerous or so grouped or located as to affect unduly the strength of the pieces.
5.	BORER HOLE	Borer holes (dead infestation) shall be permissible, on one face only provided such holes are not deeper than 10 mm and are well scattered
6.	(DAED INFE-STATION) SAP WOOD WANE	Shall be permissible.
7.	WANE	Wane shall be permissible upto 1/5 of the width on a broad face, subject to a maximum of 60 mm and upto 1/3 of the width on the narrow face provided that one broad face and one narrow face is completely free from this defect. Wane shall not be present in more than 30% of the total number of pieces accepted at any one time.
8.	CROSS GRAIN	Shall be permissible upto a maximum deviation of 1 in 10.
9.	SURFACE CRACK	Depth of the deepest crack on any one face (excluding the ends) shall be permissible upto a maximum of 2 mm in case of planks and beams upto 50 mm thick, 3 mm for beams above 50mm and upto 100mm thick and 6mm for beams above 100mm thick. A continuous crack of any depth, all along the length, is not permissible.