

# PLYWOOD

## DEFINITION:

- PANELS COMPRISING OF AT LEAST THREE LAYERS OF THIN WOOD BONDED TOGETHER WITH AN ADHESIVE.
- EACH PLY IS USUALLY ORIENTATED AT A RIGHT ANGLE TO THE ADJACENT LAYER IN ORDER TO IMPROVE STRENGTH AND REDUCE THE PROBABILITY OF SHRINKAGE.
- PLYWOOD IS A MANUFACTURED WOOD EQUALLY PANEL FROM THIN SHEET OF WOOD VENEER. IT IS ONE OF THE MOSTLY USED WOOD PROUDUCTS.

- "FACE & BACK" ARE COMMANLY PREFERRED FOR OUTER LAYER OF PLY AND GRADED ACCORDING TO THEIR QUALITY THE INNER OR INTERMEDIATE LAYER ARE COLLECTIVE KNOWN AS "CORE".
- IT IS FLEXIBLE, INEXPENSIVE, WORKABLE & RE-USABLE AND USUALLY CAN BE MANUFACTURED LOCALLY.
- PLYWOOD IS RESISTANCE TO CRACKING, SPLITTING, SHRINKAGE, TWISTING AND HAS HIGH STRENGTH.

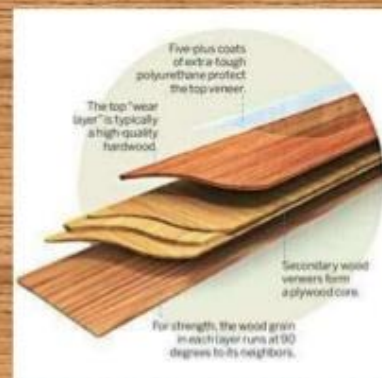
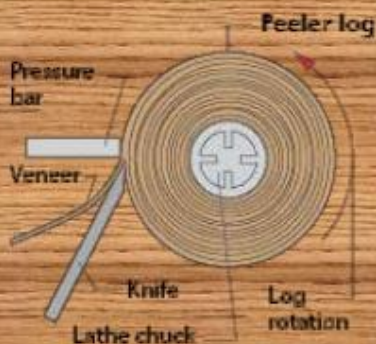


# PROCESS

- FIRST LOG IS SELECTED.
- THEN FROM 1 " THK WOOD 32 CHIPS ARE REMOVED.
- LAYERS ARE STACK.
- FIRSTLY FACE IS PLACED THAN CORE IS KEPT ON IT AND ON IT FALI IS KEPT THEN AGAIN CORE AND FACE IS KEPT THIS THINGS ARE GLUED WITH THE HELP OF PHENOLIC RESIN AND UREA.
- THEY ARE PRESSED AT 1200 ° C .
- WHITE PART IS MADE OF SILVER OAK AND DARK PART IS MADE OF POPLAR.
- IF ONLY POPLAR IS USED PLYWOOD GETS SPLIT BY USING SILVER OAK IT HELP IT GET PROTECTED WHILE NAILING.
- GURJAN AND HOLLONG WOOD ARE USED IN MAKING PLYWOOD.



PEELER LOG





## SEASONING

- FIRST ALL PLYWOOD ARE PLACED ON PALLETE.
- THEN THEY ARE TAKEN TO A ROOM WHERE THEY ARE DRIED.
- THEY ARE DRIED THERE FOR 7 DAYS.
- BEFORE MAKING PLYWOOD WOOD IS SEASONED SO PLYWOOD SEASONING IS RARE.
- TEMPERATURE IS 500 °- 600 ° F



# TYPES OF PLYWOOD

- COMMERCIAL PLYWOOD
- WATERPROOF PLYWOOD
- FLEXO PLYWOOD
- MARINE PLYWOOD
- SOFTWOOD PLYWOOD
- HARDWOOD PLYWOOD
- TROPICAL PLYWOOD
- AIRCRAFT PLYWOOD
- DECORATIVE PLYWOOD

## COMMERCIAL PLYWOOD

- GURJAN, HOLLOCK, SILVER OAK WOOD ARE USE IN COMMERCIAL PLYWOOD.
- IT IS AN INTERIOR GRADE PLYWOOD FOR INDOOR USE.
- IT HAS LIGHT COLOR SHADES.



# WATERPROOF PLYWOOD

- WATERPROOF PLY IS MOSTLY USED IN MR GRADE
- (MOISTURE RESISTANT).IT REACTS WITH BOTH ALUMINIUM AND MARINE PLYWOOD.
- IT HAS BLACK COLORED SHADES.
- DUE TO CHEMICAL USED IN IT , IT DON' T GET AFFECTED BY TERMITE.
- BLACK COLOR IS ALSO DUE TO CHEMICAL USED.



# MARINE PLYWOOD

- IT IS A FORM OF PLYWOOD THAT HAS BEEN CONSTRUCTED USING WATERPROOF TO MAKE IT SUITABLE FOR USE IN WET ENVIRONMENTS INCLUDING A HOME BUILT BOAT , AND OTHER STRUCTURES.
- IT MAY SERVE AS UNDERLAYMENT OF YOUR BOAT VINYL DECK COVER , THE WALL AND COMPARTMENT OVERHEAD PANELS ON YOUR BOAT.



# SOFTWOOD PLYWOOD

- SOFTWOOD PANEL IS USUALLY MADE EITHER OF CEDAR , PINE , REDWOOD , AND IS USED FOR CONSTRUCTION AND INDUSTRIAL PURPOSE .
- THE MOST COMMON DIMENSION IS 1.2 M X 2.4 M OR LARGE IMPERIAL 4' X 8'.
- THICKNESS IS FROM 1.4 MM – 4.3 MM.



## FLEXO PLYWOOD

- IT IS FLEXIBLE AND IS USED FOR MAKING CURVED PARTS.
- IN IT THE GRAINS ARE NOT ADJACENT AN SO IT BEND.
- AS ALL THE GRAINS GO IN ONE DIRECTION.



## TROPICAL PLYWOOD

- TROPICAL PLYWOOD IS MADE FROM SPECIES OF TROPICAL WOOD.
- ORIGINALLY FROM THE ASIAN REGION , IT IS NOW ALSO MANUFACTURED IN AFRICAN AND SOUTH AMERICAN COUNTRIES.
- TROPICAL PLYWOOD IS SUPERIOR TO SOFTWOOD PLYWOOD DUE TO ITS STRENGTH , DENSITY AND HIGH QUALITY
- TROPICAL PLYWOOD IS USED WIDELY IN UK , JAPAN , US , TAIWAN , DUBAI AND OTHER COUNTRIES.





## DECORATIVE PLYWOOD

- USUALLY FACED WITH HARDWOOD INCLUDING ASH , OAK , RED OAK , BIRCH , MAPLE , MAHOGANY , ROSE WOOD , TEAK AND LARGE NUMBER OF OTHER WOODS.
- THIS PLYWOOD IS LOT EASIER TO DYE AND DRAW ON THAN ANY OTHER PLYWOOD.
- FABRIC BONDED ARE ALSO ADDED ON TOP OF PLYWOOD AT BOTH SIDE AS KIND OF READY FOR USE IN DECORATION FIELD.



## • TYPES OF PLYWOOD GRADE

- BWR : BOILING WATER RESISTANT
- BWP : BOILING WATER PROOF  
THIS GRADE IS MOSTLY USED IN KITCHENS.
- MR : MOISTURE RESISTANT



## • **PLYWOOD SIZES**

- 8FT X 4FT

- 7FT X 4FT

- 6FT X 4FT

- 8FT X 3FT

- 7FT X 3FT

- 6FT X 3FT

## • PLYWOOD THICKNESS & PRICE

THICKNESS (MM)	MR COMMERCIAL PLY PRICE PER SQ.FT	PF PLY PRICE PER SQ.FT
4 MM	45.37	55.89
6MM	54.25	70.10
8MM	68.69	80.76
12MM	80.90	102.63
15MM	103.04	130.64
18MM	115.20	146.36

(ALL PRICE IN SQUIRE FEET)  
(MM = MILI METRE)

## • **ADVANTAGES**

- PLYWOOD IS CONSTRUCTED OF LAYERS OF WOOD GLUED TOGETHER AT RIGHT ANGLES, WHICH GIVES IT ITS STRENGTH. THIS LAYERING MAKE THE PLANKS RESISTANT TO WARPING, CRACKING AND TWISTING, MAKING IT IDEAL FOR USE IN CONSTRUCTION.
- IN ADDITION TO ITS STRENGTH, PLYWOOD IS LESS EXPENSIVE THAN SIMILAR BOARDS MADE OF FULL WOOD SPECIES, WHICH MAKES IT IDEAL AS A CONSTRUCTION PLANKING MATERIAL.

## • **DISADVANTAGES**

- THE LAYERING EFFECT IN PLYWOOD MAKES IT POROUS AND SUSCEPTIBLE TO WATER DAMAGE IF EXPOSED OVER TIME. PLYWOOD BECOMES HEAVY WHEN WET AND SHOULD BE COVERED IF LEFT OUTSIDE TO REDUCE THE RISK OF WATER DAMAGE.