Description: **OKAL WOOD** 

### **PRODUCT COMPOSITION**

Raw Material: Mixture of more than 100+ species of natural hardwood from

Viet Nam forestry.

Type of Glue: MUF (Melamine – Urea – Formaldehyde (14L520)

Technology: A German technology applied for Panel Board Industry

(Plywood, Particle Board, MDF ...)

Pressing Time: 90 minutes at heat temperature of 250°C

#### **ACTUAL APPEARANCE**



COMPOSITION of GLUE

Melamine urea formaldehyde polymer 52% - 60%

Water 40% - 48%

Formaldehyde <0.5%

Note: This resin conform the British Standard (MR) and Japanese Standard (JAS) – Type II

| PHYSICAL PROPERTIES       |                      |  |  |
|---------------------------|----------------------|--|--|
| Density (kg/m^3)          | 560.00~720.00 kg/m^3 |  |  |
| Young's Modulus           | 9.300E+009 Pa        |  |  |
| Poisson's Ratio           | 0.3500               |  |  |
| Yield Strength            | 4.660E+007 Pa        |  |  |
| Ultimate Tensile Strength | 5.500E+006 Pa        |  |  |
| Thermal Conductivity      | 0.140 W/(mc)         |  |  |
| Linear Expansion          | 4.900E-006 ul/c      |  |  |
| Specific Heat             | 1.200E+003 J/(kg c)  |  |  |

| PHYSICAL ANALYSIS                        |                                    |               |  |  |
|--|------------------------------------|---------------|--|--|
| Description of sizes                     | cription of sizes 100x100x100 (mm) |               |  |  |
| Density (kg/m3)                          | 560 kg/m^3                         | 720 kg/m^3    |  |  |
| Thickness Tolerance (mm)                 | +/- 0.50 (mm)                      | +/- 0.50 (mm) |  |  |
| Width Tolerance (mm)                     | +/- 0.10 (mm)                      | +/- 0.10 (mm) |  |  |
| Bending Strength (MOR) (kg/cm2)          | 25                                 | 25            |  |  |
| Moisture Content                         | 8-10%                              | 8-10%         |  |  |
| Thermal Resistance                       | 120°C                              | 120°C         |  |  |
| Modulus of Elasticity (MOE) (kg/cm2)     | 380 kg/m^3                         | 380 kg/m^3    |  |  |
| Emission from Flue Gas During Combustion | Like hardwood                      | Like hardwood |  |  |

# Description: MDF – Medium Density Fiberboard

### PRODUCT COMPOSITION

Raw Material: Mixture of more than 100+ species of natural wood from Viet

Nam forestry.

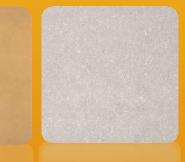
Type of Glue: MUF (Melamine – Urea – Formaldehyde (14L520)

Technology: A German technology applied for Panel Board Industry

(Plywood, Particle Board, MDF)

Pressing Time: ~20 minutes at heat temperature of 200~250°C

#### **ACTUAL APPEARANCE**



**BRIGHT** 

LIGHT

| PHYSICAL DIMENSIONS & WEIGHT |                            |  |
|------------------------------|----------------------------|--|
| Thickness                    | 15mm~25mm                  |  |
| Dimensions                   | 1220mm X 2440mm<br>4" X 8" |  |
| Weight                       | 40~45 Kilograms            |  |

| STABILITY & REACTIVITY  |
|---|
| Chemical Stability: Chemically stable under normal conditions                               |
| Condition to Avoid:  Avoid open flames and environments with high moisture and temperatures |
| Incompatible Material:  Avoid contact with oxidizing agents and strong acid.                |
|   |

| COMPOSITION of GLUE                |           |  |  |
|------------------------------------|-----------|--|--|
| Melamine urea formaldehyde polymer | 52% - 60% |  |  |
| Water                              | 40% - 48% |  |  |
| Formaldehyde                       | <0.5%     |  |  |

Note: This resin conform the British Standard (MR) and Japanese Standard (JAS) – Type II

| Standard (5/16) Type II           |   |                  |  |
|-----------------------------------|---|------------------|--|
| PHYSICAL PROPERTIES               |   |                  |  |
| Density (kg/m^3)                  |   | ≥450 kg/m^3      |  |
| Moisture C                        | Content   | <20%             |  |
| HAZARD IDENTIFICATION             |   |                  |  |
| Physical Hazard                   |   | Non-Classifiable |  |
| Health Haz                        | zard  | Non-Classifiable |  |
| IMMEDIATE HAZARD (During Process) |   |                  |  |
| Inhalatio<br>n                    | May cause irritation of the nose & throat   |                  |  |
| Skin                              | May cause irritation  |                  |  |
| Eyes                              | May cause irritation  |                  |  |
|                                   | FIRST AID   |                  |  |
| Inhalatio<br>n                    | lalatio In case of inhalation of dust causes adverse effects, remove to fresh air. If discomfort persists, seek medical advice            |                  |  |
| Skin                              | In case of irritation from dust generated from processing of MDF, wash with water   |                  |  |
| Eyes                              | In case particles enter the eyes during processing, immediately flush eyes with plenty of water. If irritation persists, pls seek medical |                  |  |

# Description: MDF – Medium Density Fiberboard

## **Material Data Composition & Specification**

| STT | TÊN CHỈ TIÊU   | TIÊU CHUẨN VÀ<br>PHƯƠNG PHÁP<br>THỬ | ĐVT     | MỨC<br>TIÊU CHUẨN |
|-----|--|-------------------------------------|---------|-------------------|
| 01  | Kích thước ván ( rộng 'dài)                            | EN 324 -1;<br>EN 324-2              | mm      | (1830'2440) ±5    |
| 02  | Chiều dày  |                                     | mm      | (6-30) ±0.3       |
| 03  | Cường độ chịu uốn                                      | EN 310                              | N/mm2   | 18-23             |
| 04  | Độ kết dính bên trong                                  | EN 319                              | N/mm2   | >=0.50            |
| 05  | Trương nở chiều dày sau khi<br>ngâm nước 24 h          | EN 317                              | %       | <=30              |
| 06  | Độ ấm  | EN 322                              | %       | 4 – 15            |
| 07  | Tỷ trọng   | EN 323;<br>EN 325                   | Kg/m3   | 650 — 850         |
| 08  | Độ bám vít với chiều dày<br>>=12<br>- Bề mặt<br>- Cạnh | EN320                               | И       | >=800<br>>=700    |
| 09  | Hàm lượng Formaldehyde<br>loại ván E2                  | EN 120<br>Perfarator                | mg/100g | 9 <=E2<=30        |
| 10  | Hàm lượng Formaldehyde<br>loại ván CARB- P1            | ASTM D 6007-02                      | Ppm     | 0.21              |
| 11  | Hàm lượng Formaldehyde<br>Ioại ván MDF CARB- P2        | ASTM D 6007-02                      | Ppm     | 0.11              |
|     | Hàm lượng Formaldehyde<br>Ioại ván Thin MDF CARB- P2   | ASTM D 6007-02                      | Ppm     | 0.13              |