



BENEFITS OF ENSTRON PLUS INCLUDES:

- Near Zero-formaldehyde emission Engineered Wood Underlay
- Contributes to Leadership in Energy and Environmental Design (LEED) credits (see chart below).
- Manufactured specifically for use as a flooring underlayment, countertops, cabinets, millwork, furniture and -fixtures.
- No Formaldehyde added
- Readily available from one of North America's leading manufacturers.
- FSC Available
- Made from white wood species mix (Pine, Douglas Fir, Larch and Hemlock for better machinability and easier color-matching in finishing applications
- Precision face sanding means a smoother surface for better adhesion to laminates
- Proven performance
- Moisture resistant
- Improved dimensional stability
- CARB Exempt - Meets Phase I and Phase II

PHYSICAL AND MECHANICAL PROPERTIES

PLUMMER Particleboard meets or exceeds ANSI A208.1-1999 standard for the following:

| Units | Underlayment Grade (PBU) Imperial (Metric) | Industrial Grade (M2) Imperial (Metric) | Industrial grade (M-3) Imperial (Metric) |
|------------------------------|--|--|--|
| Density | 43.0#/cu.ft. (689kg/m3) 1595 p.s.i. (11N/mm2) | 44-46#/cu.ft (705-737kg/m3) 2103 p.s.i. (14.5N/mm2) | 45-47#cu.ft. (721-753kg/m3) 2393 p.s.i. (16.5N/mm2) |
| Modulus of Elasticity | 250200 p.s.i. (1725 N/mm2) | 326300 p.s.i. (2250 N/mm2) | 398900 p.s.i. (2750 N/mm2) |
| Internal Bond | 58 p.s.i. (0.40 N/mm2) | 65 p.s.i. (0.45N/mm2) | 80 p.s.i.(0.55N/mm2) |
| Linear Expansion | 0.35% Max Avg. | 0.35% Max Avg. | 0.35% Max Avg. |
| Hardness Janka Ball | 500 pounds (2225 N) | 500 pounds (2225 N) | 500 pounds (2225 N) |
| Panel Average from Specified | ±0.015 inch (±0.375mm) | ±0.008 inch. (±0.200mm) | ±0.008 inch (±0.200mm) |
| Variance from Panel Average | ±0.010 inch (±0.250mm) | ±0.004 inch (±0.100mm) | ±0.004 inch (±0.100mm) |
| Length Tolerances | +0 (+0) | +0.080 inch (+2.0mm) | +0.080 inch (+2.0mm) |
| Width Tolerances | -0.160 (-4.00mm) | -0.080 inch (-2.0mm) | -0.080 inch (-2.0 mm) |
| Face | No Standard | 225 pounds (1000 N) | |
| Edge | No Standard | 202 pounds (900 N) | 225 pounds (1000 N) |

ENSTRON PLUS CREDIT AND LEED POINT INFORMATION

| LEED Category | Requirement | Possible Credits/Points | Enstron Plus Qualification |
|--------------------------------------|---|-------------------------------|---|
| Indoor Environmental Quality IEQ 4.4 | Composite wood products must contain no added formaldehyde resins | 1 point | Enstron Plus has no added formaldehyde resins |
| Materials and Resources MR 4.1 | Sum of re-cycled content constitutes at least 10% of material in the project | 1 point | Enstron Plus is 100% pre-consumer |
| Materials and Resources MR 4.2 | Sum of re-cycled content constitutes at least 20% of material in the project | 1 point in addition to MR 4.1 | Enstron Plus is 100% pre-consumer |
| Materials and Resources MR 5.1 | Use a minimum of 20% of combined value of construction materials and products manufactured within a 500 mile radius | 1 point | Enstron Plus is manufactured in Post Falls, ID. and may contribute based on project location. |
| Materials and Resources MR 5.2 | In addition to requirements of MR 5.1, use a minimum of 10% of the combined value of construction materials and products extracted, harvested, or recovered as well as manufactured within 500 miles of the project | 1 point | Enstron Plus is manufactured in Post Falls, ID. and may contribute based on project location. |