

# Specifications for Timber Forest Products Laminated Flights

**SPECIES** - Shall be Douglas Fir, kiln dried to 12% to 15% moisture content with gradient not to exceed 5%.

**LAMINATIONS** - Nominal 1" thick (maximum 3/4" net thickness) plies specifically formulated for "Flight Grade". The combination of individual lamani engineered to provide the strength/deflection ratio required in settling tanks. The adhesive used in laminating shall be resorcinol resin cured as required for long term submersion in settling tanks. Individual plies shall be full length or may be finger jointed provided the mating surfaces of the finger joints are bonded with resorcinol resin adhesive. Laminating shall be in accordance with AITC/WCLIB - ANSI American National Standard A190.1 1992 or latest edition. All open knot holes, scant plies and/or voids shall be patched with an epoxy resin that will remain intact under continually submersed settling tank conditions. Maximum camber shall be 1/4" in 20 feet of length. All flights shall be square end trimmed, drilled and notched as required per the shop drawings, at the factory.

**GRADE** - Shall be Timber Forest Products "Flight Grade". Both wide faces shall be sanded.

**PACKAGING** - Shall be in accordance with industry accepted practices. Stickers shall be placed between layers of flights to provide air movement. Each bundle of flights shall be banded and wrapped with water resistant kraft paper. Each bundle shall have 3" thick dunnage strapped to the bottom of the bundle to provide for air movement under the bundle.

**STORAGE** - Timber Forest Products recommends all flights stored at the job site for over 30 days should be stored above ground, covered and protected against moisture. It should be noted that wood, when continuously submersed, is deprived of oxygen; one of the primary ingredients (water, oxygen and time) required for fungi to propagate; however, wood when allowed to alternately get wet and then allowed to dry will decay as a result of fungi. For this reason, wood must be either kept continuously wet, as in settling tanks, or must be kept dry.

**WARRANTY** - Any flight supplied by Timber Forest Products which fails to perform as a result of manufacturing defects, including delamination, during the effective life of the flight will be replaced. Such warranty does not include damage to the flight due to mechanical failure while in service.

**SEALANT PADS** - When specified, will be supplied by Timber Forest Products and should be installed between each attachment link and the flight. Sealant pads are 1/4" thick and will compress to provide a water seal between the attachment link and the flight.

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