TECHNICAL DATA SHEET (TDS)

Product: NESTEGG™ WILDLIFE HABITATION SYSTEM

Material: NECTERRA™ COMPOSITE

MANUFACTURER: PERDIGNUS CREATIONS (Brand: TERRADIGNUS)

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1.0 PRODUCT OVERVIEW

The **NestEgg™** is a modular, advanced wildlife habitation system designed to address well-documented limitations and deficiencies observed in traditional avian housing. Utilizing the proprietary **NecTerra™** material system, the NestEgg provides a thermally stable, breathable, and predator-resistant environment that mimics natural deadwood cavities.
This document describes design intent and material properties informed by published ornithological research and biomimetic principles. Quantitative field validation is ongoing.

2.0 MATERIAL SPECIFICATIONS: NECTERRA™

Necterra™ is a monolithic, sustainable composite material engineered specifically for outdoor wildlife applications. It bridges the gap between the thermal mass of masonry and the workability of timber. Material selection was treated as a primary design variable, rather than a downstream construction choice, in order to avoid form constraints imposed by conventional lumber-based methods.

- **Classification:** Cellulose-Cementitious Composite Matrix (CCCM).
- **Composition:** Post-consumer recycled cellulose fibers stabilized within a mineral-based hydraulic binder.
- **Structure:** Non-laminated, cellular microstructure.
- **Finish:** Hydrophobic mineral coating (exterior); Natural textured finish (interior).

2.1 Performance Characteristics

Property	Performance Metric	Comparative Advantage
Thermal Regulation	**High Thermal Mass / High R-Value**	Significantly reduces diurnal temperature spikes compared to resin or thin lumber (prevents "Oven Effect").
Vapor Permeability	**Microporous / Breathable**	Allows passive gas exchange and humidity regulation, reducing fungal growth risks common in non-porous plastics.

Durability	**Rot & Insect Resistant**	Inorganic binder matrix is impervious to boring insects (e.g., carpenter bees) and fungal decay.
Acoustics	**Sound Dampening**	Cellular structure attenuates external noise pollution, reducing stress on nesting occupants.

3.0 HABITATION SYSTEM SPECIFICATIONS

The NestEgg is designed based on ornithological requirements for cavity-nesting species (e.g., *Sialia sialis* - Eastern Bluebird, *Tachycineta bicolor* - Tree Swallow).

3.1 Dimensions & Capacity

- **Exterior Dimensions:** [Height: 8.0"] x [Width: 6.9"]
- **Nesting Cavity Volume:** [Approx. 136 cubic inches]
- **Wall Thickness:** [0.75" - 1.0" variable] (Provides insulation buffer)
- **Weight:** [1.5 lbs] (High stability against wind sway)

3.2 Entrance Specifications

- **Standard Aperture:** 1.50" diameter (Species-specific exclusion).
- **Predator Defense:** Integrated spherical overhang prevents access by roof-predating mammals (raccoons, cats) and blocks precipitation entry.
- **Modular Interface:** Aperture plate is interchangeable to accommodate various species requirements (e.g., 1.125" for Chickadees).

3.3 Fledgling Safety

- **Climb-Out Surface:** Interior walls feature an integrated, high-friction texture (no applied mesh or scoring required) to facilitate fledgling exit.
- **Drop-In Floor:** Recessed floor design keeps nesting material dry and prevents water intrusion at seams.

3.4 Maintenance

- **Cleanout Access:** Threaded bottom cap / Removable floor [Confirm Mechanism] allows for tool-free annual cleaning and winterizing.
- **Sanitization:** Material can be scrubbed with dilute bleach solution (1:9) for parasite control without degrading the substrate.

4.0 ENVIRONMENTAL IMPACT

- **Recycled Content:** Product contains >[60]% post-consumer recycled material by volume.
- **End of Life:** Material is inert and non-toxic. Crushedfir material is inert and may be repurposed as aggregate or soil-blending material, subject to local environmental guidelines.
- **Manufacturing:** Low-energy, cold-process production (no kiln firing required).

5.0 INSTALLATION

- **Mounting Interface:** [Describe mounting point, e.g., Universal back-mount bracket / Top-hang loop].
- **Orientation:** Recommended facing East/South-East to maximize morning warming and minimize afternoon solar gain.