



Best Practices in Wood Waste Recycling

Wood Waste Feedstock Specification for Hardboard

Material: Wood Waste

Issue: Clear communication is necessary between wood waste processors and their customers regarding the quality expectations for wood waste derived feedstocks. Since wood waste processors are trying to displace traditional virgin wood fiber suppliers, satisfactorily meeting the hardboard manufacturer's specifications is critical to sustaining the captured market share (especially in a buyer's market). The end-user of wood waste derived products would have distinct expectations regarding a number of product quality characteristics including: wood species, geometry, color, size distribution, allowable contaminant levels, and moisture content. Hardboard manufacturers closely monitor their wood fiber supplies since poor quality feedstock can lead to costly down-time, excessive equipment maintenance or damage, and end product quality problems in the panelboard production plant. These types of problems will jeopardize the long-term viability of the supply relationship. If the quality problems are consistent or severe enough, the end user will have to ask for price reductions, reject delivered product, or terminate the supply relationship.

Best Practice: This Best Practice recommends that wood waste derived feedstock suppliers and end-users come to a clear, written understanding with regard to product quality requirements. Wood waste processors need to develop these agreements with each individual customer since the particular details of feedstock specifications will vary from manufacturer to manufacturer. The variations in feedstock specifications are due to differences in the processing equipment and techniques among manufacturing plants.

Wood Species

Species specifications vary by mill and region. All species are acceptable except cedar. Some manufacturers might restrict the species mix to a few or even a single specie.

Size Distribution

- Feedstock must be no more than 3" in the largest dimension.
- No more than 10-15% of any load may be less than 1/16".
- Feedstock is typically a mixture of sawdust, shavings, and chips.

Acceptable Geometry

Hardboard mills accept hogged, shredded, and chipped feedstocks.

Maximum Allowable Contaminant Levels

Non-Wood Contaminants:

Dirt, rock, metal, rubber, plastics, silicon, exposure to hazardous wastes, and other foreign material.

Other Contaminants:

Bark: maximum allowed is 8% by weight

Best Practices in Wood Waste Recycling

Color/Brightness

Hardboard mills prefer bright colored feedstock as opposed to aged.

Moisture

Particleboard mills accept feedstocks of somewhat varying moisture content in the range of 10 to 50 percent. However, consistent moisture level within each specific load of material from the wood waste processor is desired.

Implementation: Wood waste processors should work with each manufacturer's fiber buyer to develop and adhere to written specifications for their unique production systems and product requirements. A quality control program should be in place to ensure product consistently complies with the paper manufacturer's specifications. The goal of the quality control program should be to detect and correct any problems before shipping the processed wood to the manufacturers.

However, if problems are identified, they should be resolved properly, quickly, and objectively. Regardless of whether the supplier (wood waste processor) failed to meet the required specifications or the buyer (the paper manufacturer) changed the agreed upon specifications and expectations, both parties should work together to resolve the problem. Maintaining an open communication and diplomacy throughout the settlement process would foster a healthy business relationship and avoid future problems.

Benefits: Consistently providing high quality feedstock and adhering to the specifications improves the marketability of the material and potentially increases the price and use of it. Arbitrating problem loads promptly, adjusting specifications mutually, and continuously making equipment and process modifications are practices that could improve the use of the wood waste processor's material.

Application Site: Manufacturing Site and Processing Facility.

Contact: For more information about this Best Practice, contact CWC (206) 443-7746, e-mail info@cw.org.

References:

1. Ellingson, Andrea. Dee Forest Products. Hood River, OR.
2. "Investigation of Alternative Markets for Recycled Wood," prepared by International Resources Unlimited, Inc. for the Portland Metropolitan Service District; 1992.
3. Wright, William. Heartwood Consulting. Gresham, OR.

Issue Date / Update: March 1997