



## Best Practices in Wood Waste Recycling

### Quality Specification for Mulch

#### Material: Wood Waste

**Issue:** Clear communication is necessary between wood waste processors and potential purchasers regarding the characteristics and quality of mulch made from recycled wood. For mulch products, the critical characteristics may include:

- acceptable size distribution
- allowable contamination levels

Failure to satisfy quality expectations for these characteristics can lead to lost business.

**Best Practice:** This best practice recommends that suppliers (processors) of wood waste derived mulches and potential customers come to a clear understanding of quality requirements. Written product specifications should be developed and made available to purchasers of mulches to enable them to use the products properly and effectively.

The appropriate specifications for mulch products will vary significantly from region to region depending on consumer expectations and the quality of competing products. Within a given locale, the appropriate specification will also vary depending on the type of application, and on the price of the wood waste product versus the prices of competing products.

Provided below are general specifications for two grades of mulch made from wood waste. The low-grade mulch is appropriate for very limited applications where the appearance of the material is not critical. The high-grade mulch is more appropriate for a broader range of applications, for competitive marketplaces, or as a feedstock for colorizing to create a premium mulch product.

#### Wood Species

There are typically no limitations on the acceptable types of tree species or on the softwood-hardwood mix for this product, except to the extent that these may affect the visual appearance of the mulch. For some applications, however, it would be important not to include certain varieties such as Black Walnut and some Cedars as these contain compounds that inhibit plant growth, whereas in other cases these species may be acceptable or even desirable for these same characteristics.

#### Size Distribution

	<u>Low-Grade</u>	<u>High-Grade</u>
• Length:	1 - 2" (25-50 mm)	max. 1" (25 mm)
• Overs:	(> 2"), max. 25%	(> 1"), max. 5%
• Thickness:	Not critical	Not critical
• Width:	Not critical	Not critical
• Fines:	Varies *	Varies *

\* Acceptable fines content for mulches depends on the application and local standards. An excessive amount of fines can prevent rainfall from infiltrating, causing ponding and related problems in rainy areas, although in "spot" applications this would not be a problem. Fines content for high-grade mulches could be as high as 15 to 30%, depending on local markets and the visual impacts of the fines.

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### Acceptable Geometry

A coarse/shredded material is typically acceptable or even preferable over of a chipped material.

### Maximum Allowable Contamination Levels \*\*

	<u>Low-Grade</u>	<u>High-Grade</u>
Rot:	5%	1%
Bark	Not critical	5%
Dirt, rock, sand	10%	1%
Metals	1%	0.2%
Plywood	5%	0.25%
Particleboard	3%	0.25%
Wood with laminates	2%	0.25%
Plastics	0.5	Trace
Painted wood	1%	0.25%
Treated wood	1%	1%
Other non-wood materials	1%	Trace

\*\*Allowable contamination levels are highly dependent on local market conditions and on the actual visual impact of the contamination.

### Color/Brightness

There is typically no brightness requirement, but color may be an aesthetic consideration.

### Moisture

Moisture content is typically not critical.

**Implementation:** In the course of adapting processing systems to produce a mulch, wood waste processors must work with potential buyers (and with actual customers on an ongoing basis) to determine consumer expectations and satisfaction. Wood waste processors should manage their compliance with printed specifications through a consistent QA/QC program that both controls incoming material before processing and continuously tests finished products for compliance with specifications and consumer expectations.

**Benefits:** Providing a consistent and quality mulch will improve the marketability of the processor's product(s), potentially increasing both the price and volume of the material sold.

**Application Site:** This Best Practice applies to wood-waste processing facilities.

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

### **References:**

1. Hoeck, Jack. Rexius Forest Products, Eugene, OR.
2. Sargent, Bob. Rainier Wood Recyclers, Kent, WA.
3. Hlavka, Rick. Green Solutions, South Prairie, WA

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