

## Information Sheet No. 7-1-6

### Composted mulch

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#### Definition

A relatively mature composted organic product that is suitable for placing on soil surfaces. Organic in this context excludes polymers (e.g. plastics, rubber and coatings), which do not degrade.

Composted products have been pasteurised and have undergone aerobic composting for a period of not less than 6 weeks (to achieve a specified level of maturity).

Mulch has at least 70% by mass of its particles with a maximum size of greater than 16 mm (Standards Australia AS 4454, 2002). See Information Sheet No. 3-8, *“Introduction to Australian Standard AS 4454-2002 for composts soil conditioners and mulches”* in the *“Producing Quality Compost”* package of Information Sheets for more details (Recycled Organics Unit, 2002a).

#### Uses

Composted mulches are usually applied to soil surfaces and are not incorporated or mixed into soil.

Composted mulches can be beneficially added to soils in a variety of applications, including: home gardens; community open space; urban landscaping; agriculture; forestry, and for soil and site rehabilitation.

#### Benefits

Composted mulches have a number of benefits when applied to soils. These include: reduced soil erosion, particularly in areas with exposed soils; a reduction in water loss through evaporation, thereby reducing the frequency of watering to maintain plant growth; inhibits the establishment of weeds and can suppress existing weeds, thereby reducing herbicide usage.

Composted mulches are considered a superior product to pasteurised mulches because they have been processed (composted) to a more mature state. Thus composted mulches are more stable and do not break down as rapidly on soil surfaces, giving longer lasting benefits.

**Plate 1.** Examples of mulch applications to garden beds.



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## Risks

Minimal.

Effective *pasteurisation* via an aerobic and thermophilic (>55°C) composting or equivalent process, destroys weeds, seeds and plant/animal pathogens that may have been present in the original plant and other organic materials.

In most instances pasteurised products should be considered superior to shredded plant material products (e.g. leaf mulches), because non-pasteurised products increase the risk of spreading weeds, seeds or plant/animal pathogens.

Composted mulches are a more mature product, and are considered superior in quality to an equivalent product that has been pasteurised, but is immature.

Some composted mulch products may have an elevated electrical conductivity (EC) due to excessive levels of soluble salts. EC levels may restrict the maximum application rates for some product, see details below.

## Additives

Composted mulches are generally regarded as high-grade products, being both pasteurised and mature. Additives are rarely used.

## Application rates

The rate of application of a composted mulch to soil depends on the coarseness of the product, though most can be applied to a maximum depth of 100 mm or 100 L/m<sup>2</sup>. At greater application rates, oxygen movement through the mulch and into soil reduces, and can impair plant growth. Plants absorb some oxygen via their root systems, and this is needed to maintain good root function.

For composted mulches that are high in soluble salts (measured as electrical conductivity, dS/m), application rates may be limited as soluble salts that leach out can cause water stress in plants. If the composted mulch has an electrical conductivity in excess of 1 dS/m, application rates need to be restricted, depending on the sensitivity of the plant(s) to salt. See Information Sheet 6-6, "*Use of recycled organics products – Importance of electrical conductivity*" from the "*Buyers Guide for Recycled Organics Products*" for more information.

## Application methods

Application to garden soils and relatively small areas can be done with a wheel barrow, spade and rake.

For larger areas, such as agricultural

## Definitions\*

### Pasteurisation

The process whereby organic materials are treated to kill plant and animal pathogens and weed propagules.

\* Recycled Organics Unit (2002b).

or forestry applications, mulches can be spread with a manure spreader.

A recent technology developed allows the delivery of mulch via a flexible hose with a blowing unit mounted on a truck containing the mulch. This system is useful for the efficient delivery of fine mulch, particularly in areas difficult to access, such as steep areas (e.g. roadsides for erosion control application).

## Important references

- Recycled Organics Unit (2002a). Producing Quality Compost: Operation and management guide to support the consistent production of quality compost and products containing recycled organics. Third Edition. Recycled Organics Unit, internet publication: <http://www.recycledorganics.com>
- Recycled Organics Unit (2002b). Recycled Organics Industry Dictionary & Thesaurus: standard terminology for the recycled organics industry. Recycled Organics Unit, internet publication: <http://www.rolibrary.com>
- Standards Australia (2002). AS 4454—Composts, soil conditioners and mulches. Standards Australia, Homebush, NSW.

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