RECYCLING YOUR STONE WOOL

Grodan stone wool is recyclable

Not only is Grodan stone wool recyclable, but our stone wool can also contain up to 75% recycled content. Stone wool's durability and resilience in the growing process also make the material an attractive product in the recycling market.

- Grodan stone wool can contain up to 75% recycled materials.
- The recycled content consists of cutting and trim and other factory wastes that are recycled back into the production stream, aka virgin material.

Rockwool's RockCycle Project takes back used stone wool to factories across the globe. Currently, RockCycle is targeted more toward the insulation business.

There should be no concerns about potential contamination from used materials. Uniform product quality is assured across each manufacturing facility – nothing can survive in the Rockwool furnace.

Stone wool is non-hazardous & non-toxic

As concluded through independent laboratories, stone wool is non-toxic, non-ignitable, non-reactive, and non-corrosive. The used Grodan material is typically classified as "Non-Hazardous - Solid Waste." – please confirm with your local regulator.

Grodan recycles its stone wool

Grodan collaborates with leading recycling institutions across the globe. Together, we have achieved a worldwide recycling rate of 65% in 2022. For reference, Germany (believed to be the most efficient recycling country in the world) recently recorded a recycling rate of 68% - if Grodan was a country, it would be one of the leading recyclers in the world.

Rockwool International is committed to sustainability, specifically circularity, and aims to offer recycling services in over 30 countries by 2030. Our manufacturing facilities in Denmark and Netherlands offer a take-back system – a fully circular manufacturing model.

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Re-use/recycling opportunities for your used stone wool

Used Grodan stone wool has several re-use markets, also called "secondary applications." This includes feedstocks for brick manufacturers, compost, potting mix, industrial bedding, and engineered soils. These options vary in every region based on what processors exist. Stone wool consumers should follow all local solid waste guidelines in their districts and reach out to their municipal waste management authorities to determine suitable options for recycling.

Stone wool usage in compost

In North America, Grodan composts over 5,000 tons of stone wool per year through leading compost facilities. Used stone wool improves its aeration, porosity, and water retention. This can lead to better growth for potted plants and other plants that are grown in compost.

Here are some of the benefits of using used stone wool in compost:

- Better growth for plants: Used stone wool can improve the growth of plants by providing them with a more aerated and porous growing medium. This allows the roots of the plants to breathe more easily and access more water and nutrients.
- Increased aeration: Used stone wool can help to increase the aeration of compost, which can help to prevent the growth of anaerobic bacteria. Anaerobic bacteria can produce gases that can be harmful to plants.
- Higher total porosity: Used stone wool can help increase the total porosity of compost, which means more space for air and water to flow through. This can help to improve the drainage of the compost and to prevent it from becoming waterlogged.

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Self Processing

How to Process Used Stone Wool for Potting Soil

- Each municipality has its own solid waste regulations; stone wool consumers seeking to process the material on-site should follow all local rules and regulations for handling and disposing of solid waste and alternative waste classifications.
- If stone wool consumers have confirmed that they are able to handle the material on-site, used stone wool makes a great amendment for potting soil.
- Consumers should de-sleeve the plastic wrapping. This can be done using a conventional box cutter. Self-processing can consist of the removal of the stalk, stem, and other green waste. Crumble the stone wool, and sift the media in with potting soils. Always use gloves, goggles, and appropriate safety apparel.

Separating out the plastic foil

Consumers should check with their recycler to see if they can accept the material with plastic.

- If the recycler cannot take the plastic foil, it can be easily torn and separated from the stone wool with a knife or box cutter during harvest.
- If I compost or backfill with stone wool, will its degradation into the soil increase my heavy metal content? Does the used stone wool release heavy metals? No, new and used stone wool has been thoroughly tested and shown no traceable leaching values. In Europe, Grodan stone wool qualified for the "EUROPEAN ECOLABEL," – which ensures safe ecological criteria for growing media, soil improvers, and mulch.
- 3rd Party testing results available upon request.

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Recommend Grinder/shredder

- Stone wool can be processed using most conventional grinders.
- Most conventional greenhouses will require small-scale shredders with motor sizes ranging from 5-30 hp. This means they have less footprint, less operating costs, and are a fraction of the price of traditional shredders. Consumers should coordinate the specific size requirements and other needs with the manufacturers and distributors.
  - Two of the leading suppliers include JWC Environmental and High Yield Solutions Corp., Which includes the Muffin Monster Shredder Series from JWC and the Plant Muncher from HYSC.
  - Material processing footage and results are available upon request.

Grodan recycling services

- Grodan is constantly expanding its reach to give our consumers better access to recycling across North America and around the globe. Together we can make stone wool one of the most recycled materials in the world.
- Please visit www.grodan101.com/about/recycling-solutions

The State of Biodegradable Plastic Foil and Grodan's Commitment to Sustainability

- Biodegradable plastics are still developing for commercial scales. Presently, most products in the marketplace are not fit for typical greenhouse environments and are often not accepted at composting facilities across the country.
- Plastic foil plays a pivotal role in the growing process; Grodan's R&D team is actively exploring how to best utilize this valuable resource, deliver the highest quality products to the marketplace, limit the environmental impact from its plastic stream, and identify long-term viable and environmentally friendly alternatives to plastic foil.
- Many plastic products in the market are claiming to be biodegradable. All biodegradable plastics should conform to the technical standards and requirements set by the Biodegradable Products Institute and include a "BPI Certification." If there is no BPI labeling, this material will not be accepted at most organic processing facilities.