



Laptop Thin HDD

Sustainability Report*



Sustainability @ Seagate

Seagate is committed to sustainable storage. Our engineering focus is on increasing storage capacity and utilization, while controlling the quantity and types of materials we use, and improving energy efficiency and recyclability.

Sustainable Design Features

- The first 7mm, 2.5-inch drive from Seagate now supports up to 500GB of data in a single-disk design.
- SeaTools™ diagnostic software performs a drive self-test that eliminates unnecessary drive returns.

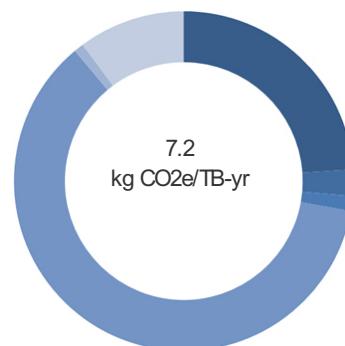
Energy and Greenhouse Gases

Manufacturing and using our products requires energy and produces Greenhouse Gas (GHG) emissions. We assess life cycle energy and GHG impacts and work towards improving energy and GHG efficiency, and reducing ownership costs with each new generation of our products.

Power Consumption	Per Unit	Per TB
Idle Performance (W) Average	1.2	2.4
Idle Active (W) Average	0.7	1.4
Idle Low Power Mode (W) Average	0.45	0.9
Write (W) Average	1.7	3.4
Read (W) Average	13	2.6
Standby and Sleep (W)	0.18	0.36
Average Annual (kWh)	0.509	1.02

Greenhouse Gas Emissions by Life Stage

24%	Bill of Materials
3%	Distribution
1%	End of Life
61%	Manufacturing Energy
1%	Packaging
10%	Use Phase



*Network Systems: ST500LM021- YarraR, 500GB, 32MB, SATA, 1D/2H, STD OEM (2016)

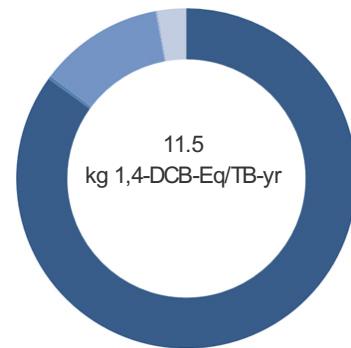


Safer Materials

As a leading supplier to major original equipment manufacturers, Seagate helps to establish standards for direct materials – components that make up our products - to meet customers' strictest specifications. We are meticulous about cataloging restricted substances; currently we list more than 2,000.

Human Toxicity by Life Stage

85%	Bill of Materials
0.1%	Distribution
0.2%	End of Life
12%	Manufacturing Energy
0.2%	Packaging
3%	Use Phase

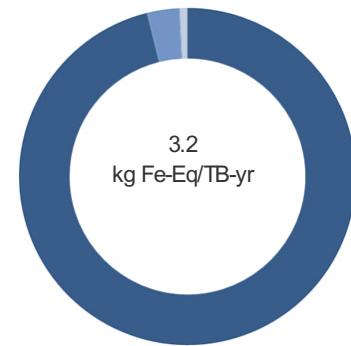


Scarce Resources

We aim to reduce our use of scarce resources during the life cycle of our products. We assess the water and metal depletion impacts of our products in order to minimize dependence on key natural resources, and reduce manufacturing and product ownership costs.

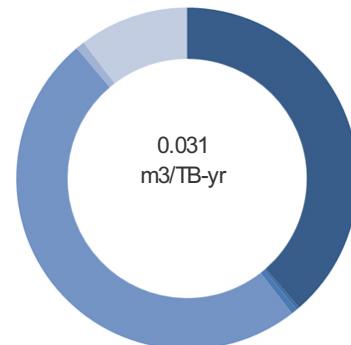
Metal Depletion by Life Stage

96%	Bill of Materials
0.04%	Distribution
0.04%	End of Life
3%	Manufacturing Energy
0.1%	Packaging
1%	Use Phase



Water Depletion by Life Stage

39%	Bill of Materials
0.3%	Distribution
0.6%	End of Life
49%	Manufacturing Energy
1%	Packaging
10%	Use Phase





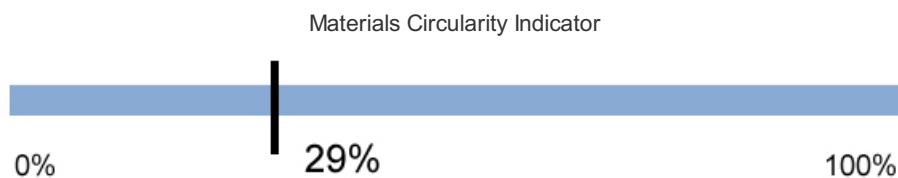
Enterprise Performance 10K HDD



Materials Efficiency and Circularity

Seagate recognizes the traditional “take, make, dispose” linear approach to business is unsustainable. We measure our progress towards a circular economy with a variety of indicators including material used per TB of storage, use of recycled content, reuse rates, and recycling type and efficiency.

Device Weight - Shipped (g)		Per Unit	Per TB
Drive	Enclosure	69	137
	Media	10	19
	Electronics	14	29
	Other parts	1.1	2
Packaging	Cardboard and paper	14	28
	Other materials	9	19
Total		117	234



Key Circularity Parameters	Per Unit
Estimated Operating Life	3 years
Recycled aluminum and steel content	world average
Recycled cardboard	100%
Reused content	zero
Recycling rate	25%
Residual disposal	50% incineration/50% landfill
Reuse rate	zero
Recycling efficiency	95%
Recycling collections efficiency	90%

Seagate measures and reports its product sustainability performance on a TB-year basis. Seagate's drives come in different storage sizes and have different estimated useful lives. When referring to drive capacity, one terabyte, or TB, equals one trillion bytes. The TB-year measure combines these factors so that sustainability performance data is comparable across products and that annual impacts are directly reported.

Seagate's sustainability assessment tools used to generate the product sustainability analysis have been verified by UL in accordance with ISO 14040, ISO 14044, and the World Resources Institute and World Business Council for Sustainable Development's GHG Protocol Product Life Cycle Accounting and Reporting Standard.