Corvault 4U106

Data System Only[+]

SEAGATE

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

- Seagate Mozaic® areal density technology enables higher capacity storage with lower power requirements, minimizing electricity at use phase.
- Autonomic Distributed Allocation Protection Technology (ADAPT) extends hardware lifespan by dynamically redistributing workloads and preventing drive overuse.
- High-density storage enclosures maximize space utilization, reducing material usage.
- Base plate manufactured using 90% post-consumer recycled aluminum

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. Since 2022, our manufacturing facilities have operated using 100% renewable energy.

| Power Consumption	Per Unit
System Operating Power, Fans slow (W)	447.5
System Operating Power, Fans fast (W)	897.5
Average Annual (kWh)	7,862

Greenhouse Gas Emissions by Life Cycle Stage

Use Phase - Conventional Energy

9.4%	Bill of Materials
0.6%	Manufacturing
0.0%	Packaging
1.6%	Distribution
88.7%	Use Phase
0.2%	End of Life

5.5E+4
kg CO2e/data storage system
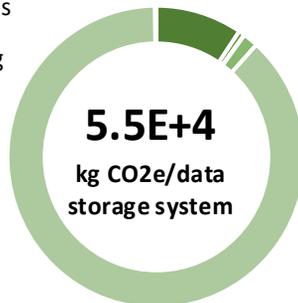
Use Phase - Renewable Energy

61.6%	Bill of Materials
4.2%	Manufacturing
0.2%	Packaging
10.7%	Distribution
22.2%	Use Phase
1.0%	End of Life

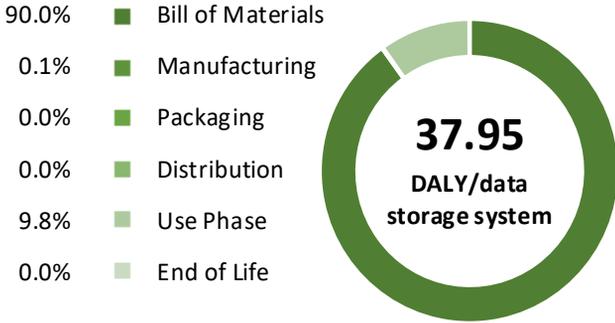1.1E+4
kg CO2e/data storage system
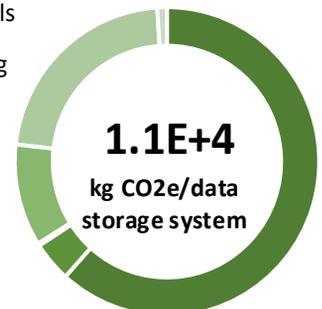
+Results shown in this report are for the Corvault data storage system only, excluding any HDDs configured with the system
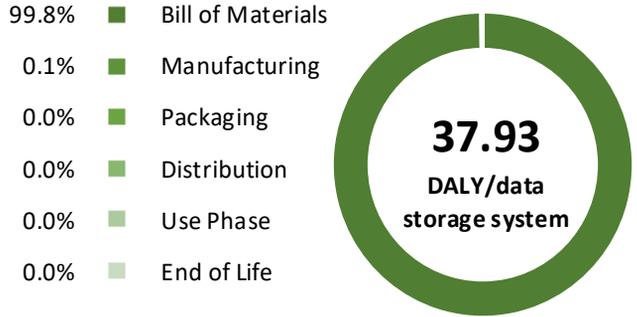
Safer Materials

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 Cycle Stage

Use Phase - Conventional Energy

%	Stage
90.0%	Bill of Materials
0.1%	Manufacturing
0.0%	Packaging
0.0%	Distribution
9.8%	Use Phase
0.0%	End of Life

37.95
DALY/data storage system

Use Phase - Renewable Energy

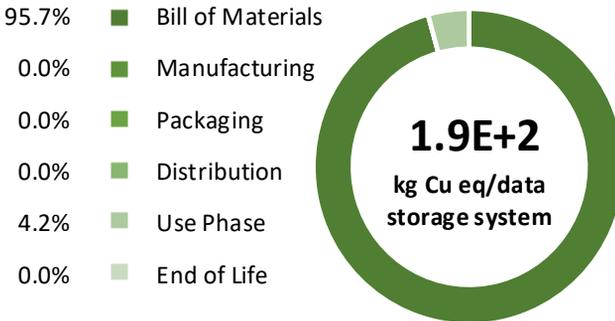| %	Stage
99.8%	Bill of Materials
0.1%	Manufacturing
0.0%	Packaging
0.0%	Distribution
0.0%	Use Phase
0.0%	End of Life

37.93
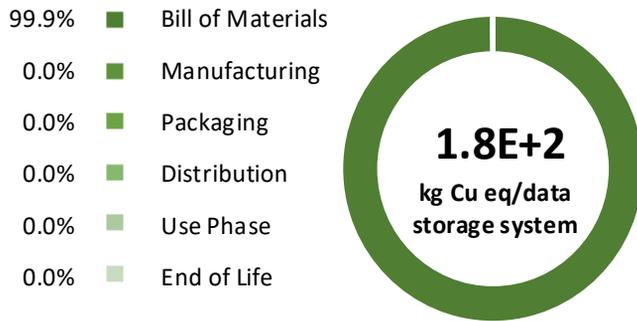DALY/data storage system

Scarce Resources

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

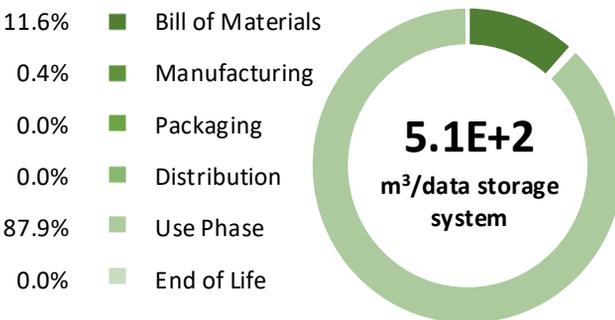### Mineral Resource Scarcity by Life Cycle Stage

Use Phase - Conventional Energy

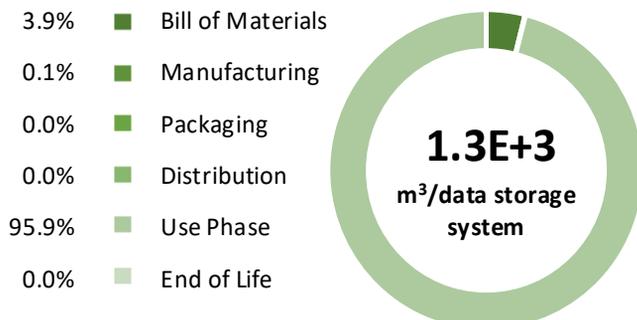| %	Stage
95.7%	Bill of Materials
0.0%	Manufacturing
0.0%	Packaging
0.0%	Distribution
4.2%	Use Phase
0.0%	End of Life

1.9E+2
kg Cu eq/data storage system

Use Phase - Renewable Energy

%	Stage
99.9%	Bill of Materials
0.0%	Manufacturing
0.0%	Packaging
0.0%	Distribution
0.0%	Use Phase
0.0%	End of Life

1.8E+2
kg Cu eq/data storage system

Water Consumption by Life Cycle Stage

Use Phase - Conventional Energy

%	Stage
11.6%	Bill of Materials
0.4%	Manufacturing
0.0%	Packaging
0.0%	Distribution
87.9%	Use Phase
0.0%	End of Life

5.1E+2
m³/data storage system

Use Phase - Renewable Energy

%	Stage
3.9%	Bill of Materials
0.1%	Manufacturing
0.0%	Packaging
0.0%	Distribution
95.9%	Use Phase
0.0%	End of Life

1.3E+3
m³/data storage system

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	103,459	41
	Media	27,509	11
	Electronics	3,189	1
Packaging	Cardboard and paper	660	1
	Other materials	228	1
Total		135,046	53

Materials Circularity Indicator

0%　　　　**19%**　　　　100%

Key Circularity Parameters	Per Unit
Estimated Operating Life	5 years
Recycled aluminum in base plate	90%
Recycled aluminum in other parts	World average
Recycled steel content	World average
Recycled cardboard	100%
Reused content	zero
Recycling rate	25%
Residual disposal	100% 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 uses the Ecoinvent 3.8 Life Cycle Inventory database.

For data storage systems without HDDs, sustainability performance is measured per configured system without impacts of HDDS, considering energy efficiency, materials used, and operational lifecycle impacts, ensuring comparability across different storage solutions.

Seagate's sustainability assessment tools used to generate life cycle assessment results 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.