Seagate’s Approach to Product Environmental Compliance

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Seagate products must meet both regulatory and customer requirements

RoHS (and RoHS 2)
- Full substance data is required by customers
- Lab reports are required to meet customer and regulatory requirements
- Exemptions are used, but are limited by some customers
- Customer restrictions are much tighter than RoHS

REACH and other new regulations
- Managing changing SVHC lists is a key challenge
- “FMD” (Full Materials Disclosure) is one means of managing REACH
- Homogeneous material level reporting enables compliance to article-level restrictions

Nonregulatory restrictions
- Customers must meet market and consumer demands
- “Low Halogen”, BFR/PVC-free, phthalates, etc.
In order to meet regulatory and customer requirements, Seagate collects full substance content data from suppliers.

**Product Bill of Substances (example)**

Currently restricted and reportable substances
- Track exempt applications
- Transparency, credibility

Supply chain analyses:
- Extractives (conflict metals)
- Constrained materials
- Cost improvements

RoHS (and RoHS 2)

Manage compliance to new/future substance restrictions like REACH
- Know what’s in your product to respond rapidly to changing requirements
- Anticipate necessary engineering changes and implement efficiently

Product design improvements
- Cost reduction
- Green product attributes
- Reliability

WEEE/recycling reporting

Life Cycle Assessment

**Full disclosure positions Seagate to quickly respond to new regulations and customers’ product sustainability and environmental data requirements**
Resource requirements and impact to suppliers “spike” in response to new requirements, and total resource requirements ratchet up over time

- Emerging new restrictions result in spikes of NRE and business process change
- Resource levels rise over time to sustain compliance

**Challenge:**

*Meet increasing requirements with limited resources*
By investing early in full disclosure data, Seagate has been able to flatten the ‘sawtooth’ in resource requirements. Seagate is able to respond quickly to changing substance restrictions.

Seagate invested in CAS* system and developed full disclosure (Bill of Substances) strategy to deal with changing requirements. “sawtooth” is less pronounced, overall resources required reduced as compared to other compliance strategies. Resource trend is almost flat. Why? Because Seagate collects full content data up front, and software is used to grade against new specifications.

Full disclosure and alignment to standards allows Seagate to manage substance restrictions at low cost and resource levels.

*CAS – Compliance Assurance System, Seagate’s materials content compliance database

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Resources Required

RoHS, WEEE

Deca BDE

Low Halogen

Japan Green Procurement

E-waste

REACH

US states, Canada, New Annexe

RoHS 2

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Overview of Seagate’s Supplier Engagement Approach

- Put data requests in the context of business need and mutual benefit
- Build supplier capacity to provide data through standardization, training, and help desk support
- Ask suppliers for data in a stable, standard format
- Ask for sufficient data to avoid having to go back to supplier for more data (avoid “supplier fatigue”)
- Use software automation to collect, check, manage and report supply chain data
- Partner with suppliers and commit to making the process more efficient as long as they provide the data
Thank You