



A Global Sustainability Certification

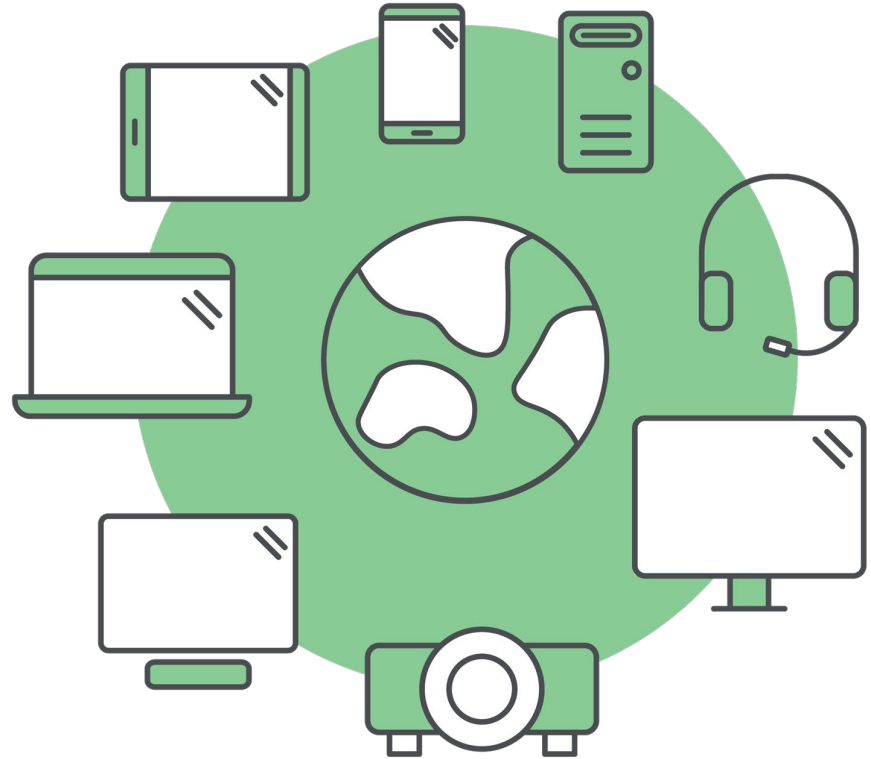
Complete sustainability certification.
Social & environmental responsibility

Independent verification - ISO 14024

8 product categories

Generation 8 launched Dec 2018

- Supporting UN 2030 Sustainable Development Goals
- Supply chain responsibility / transparency
- A circular approach to IT products



Revising the criteria

- Purchaser dialogue
- Consultation with experts
- Workshops with brand owners and manufacturers
- Working groups that include Brands, NGOs, purchasers and experts
- Setting an achievable level for 30% of certifiable products

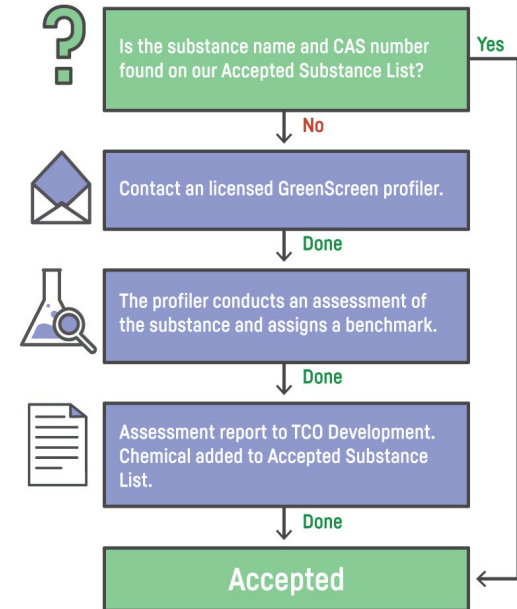


Our approach to flame retardants and chemicals

- Restriction of halogenated flame retardants
- Restriction and candidate lists alone not leading to safer substitution
- Working with manufacturers to help them find the safer alternatives
- An Accepted Substance List benefits industry & society
- Driving chemical suppliers to be transparent

Beyond banning - driving safer alternatives

- Public list of flame retardant substances assessed as safer
- GreenScreen[®] benchmark 2, 3 or 4 by independent licensed profiler
- Presently 25+ benchmarked FRs and plasticizers
- TCO Certified Accepted Substances List (ASL) – published on tcocertified.com



TCO Certified Accepted Substance List

Substance name	CAS	Flame retardant	Plasticiser	Benchmark	Assessment date	Sunset date	Report public	Comments
Aluminum diethylphosphinate	225789-38-8	Yes		2	Feb, 2016		Yes	
Aluminum Hydroxide	21645-51-2	Yes		2	Feb, 2016		Yes	
Ammonium Polyphosphate	68333-79-9	Yes		3	Feb, 2016		Yes	
Bisphenol A diphosphate	181028-79-5; 5946-33-5	Yes	Yes	2	Feb, 2016			Interchangeable CAS numbers
Magnesium Hydroxide	1309-42-8	Yes		3	Feb, 2016		Yes	
Melamine Polyphosphate	15541-60-3	Yes		2	Feb, 2016		Yes	
Phenoxyphosphazene	890525-36-7, 2791-22-2, 2791-23-3	Yes		3	Feb, 2017			
Poly[phosphonate-co-carbonate]	77226-90-5	Yes		2	Feb, 2016		Yes	
Polyphosphonate	68664-06-2	Yes		3	Feb, 2016		Yes	
Red Phosphorus	7723-14-0	Yes		2	Feb, 2016		Yes	
Resorcinol Bis-Diphenylphosphate	125997-21-9; 57583-54-7	Yes		2	Feb, 2016		Yes	Interchangeable CAS numbers
Siloxanes and silicones, di-Me, di-Ph, polymers with Ph silsesquioxanes	68648-59-9	Yes		2	Jan, 2016			
Substituted Amine Phosphate mixture	66034-17-1	Yes		2	Feb, 2016		Yes	
Tetrakis (2,6-dimethylphenyl)-m-phenylene biphosphate	139189-30-3	Yes		2	Jan, 2015			
Triphenyl Phosphate	115-86-6	Yes		2	Feb, 2016		Yes	
2-Ethyl-1-Hexanol	104-76-7		Yes	2	Aug, 2018			
Acetyl tri-butyl citrate (ATBC)	77-90-7		Yes	3	Aug, 2018			
Bis(2-ethylhexyl) Adipate (DEHA)	103-23-1		Yes	2	Aug, 2018			
Di(2-ethylhexyl) Terephthalate (DEHT)	6422-86-2		Yes	3	Aug, 2018			
Disononyl Adipate (DINA)	33703-08-1		Yes	2	Aug, 2018			
Disononyl Cyclohexanedicarboxylate (DINCH)	166412-78-8, 474919-59-0		Yes	2	Aug, 2018			Interchangeable CAS numbers
Dimethyl phthalate (DMP)	131-11-3		Yes	2	Aug, 2018			
Epoxidized soya bean oil (ESBO)	8013-07-8		Yes	3	Aug, 2018			
White mineral oil	8042-47-5		Yes	2	Aug, 2018			



Do certified products cost more?

- TCO Certified products are mainstream, volume produced commercial products, not niche
- Un-restricted use of flame retardants is the most cost effective solution to manufacturers
- Safer alternatives already used - but not by all
- A safer substitution avoids expensive recalls

Sustainability benefits

- Reduces risk of toxic exposure - whole lifecycle
- Safer alternatives that meet strict safety requirements
- Helps close hazard data gaps
- Speeds the shift towards safer alternatives
- Deselection of substances already at the design phase
- Reusable plastics – less energy than creating virgin plastic
- Transparency
- Expanding to plasticisers and process chemicals



Questions?

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