

Stratasys Compliance and Sustainability Playbook



DIGI Dress by **Karim Rashid** in collaboration with STRATASYS

Stratasys focus on the shift to Mindful Manufacturing™

Stratasys has a sharp focus on the shift towards Mindful Manufacturing, which is revolutionizing traditional processes and supply chains. Our approach to manufacturing is driven by a deep sense of responsibility to the environment and future generations. With the help of 3D printing technology, we are redesigning parts and supply chains with great thought and intention to maximize sustainability while still supporting business growth. We remain dedicated to delivering industry-specific innovation that ensures a positive impact on the environment, and we are proud to play our part in creating a better world for future generations.

VeroEco™ Flex Materials for direct to textile 3D printing

The materials used in direct-to-textile 3D printing have become a topic of increasing importance amidst recent sustainability discussions. In this regard, Stratasys VeroEco™ Flex family of materials have made significant strides. They have been rigorously tested to meet industry standards for sustainability in line with RSL restricted substances lists for finished goods. This includes scrutinizing the chemical restrictions for all materials. The VeroEco™ materials are compatible with the cutting-edge J850 TechStyle™ printer, which is powered by 3DFashion™ technology for direct-to-textile 3D printing. These developments reflect our commitment to impacting the fashion supply chain with the establishment of on-demand Mindful Manufacturing™ solutions.

CERTIFICATIONS

Washability Testing



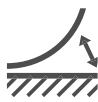
ISO 105-C06

Color fastness to rubbing testing (Veslic)



Dry 150 rubs
ISO 11640

Adhesion strength testing



>15 N

Color fastness for light exposure



ISO 105-B02

Resistance to abrasion



ISO 2947-2
>25K revs.

Material compliance



Restricted Substances List



ISO 105-C06



Wet 50 rubs
ISO 11640



Washability Testing
ISO 105-C06



As the world of 3D printing continues to grow and evolve, it is essential that we prioritize ethical and sustainable practices. At Stratasys, we recognize the crucial role that chemistry plays in every material that we use. That is why we make it our responsibility to carefully select the chemicals that meet industry standards and align with our values. We are committed to reducing our overall chemical footprint and creating a world that is both innovative and sustainable. Our dedication to this mission is what drives us to continue pushing the boundaries of what is possible in the world of 3D printing.

VeroEco Flex materials are in compliance with testing according to RSL requirements:

| Test | Requirement (mg/kg) | Results (mg/kg) | Pass/Fail |
|---|--|-------------------------------|-----------|
| [†] Azo dyestuffs (Arylamines) (BS EN ISO 14362-1:2017) | <30 (Detection limit: 20) | None detected (<20) | Pass |
| 4-chloro-o-toluidinium chloride 2-Naphthylammoniumacetate 4-methoxy-m-phenylene diammonium sulphate; 2, 4-diaminoanisole sulphate 2, 4, 5-trimethylaniline hydrochloride (BS EN ISO 14362-1:2017) (modified) | <30 (Detection limit: 30) | None detected (<30) | Pass |
| [†] Chlorinated phenols PCP, TCP & TeCP (BS EN ISO 17070:2015) | <1.0 each (Detection limit: 0.05) | None detected (<0.05) | Pass |
| NPEO, NP, OPEO and OP (BS EN ISO 18218-2:2019) | <100 (each and as a sum) (Detection limit: 10) | None detected (<10) | Pass |
| [†] Disperse Dyes (DIN 54231:2005-11) | Not detectable (Detection limit: <50 for Direct Blue 15, Direct Blue 218, and Disperse Violet 93:1. Detection limit for all others: <15) | None detected | Pass |
| Organotin compounds ([†] PD CEN ISO/TS 16179:2012 and BS EN ISO 22744-1:2020) | TBT, TPhT: <0.5 each All others: <1.0 each (Detection limit: 0.05) | MBT: 0.07 All others: (<0.05) | Pass |
| [†] PFOS/PFOA (IHM 001) | <0.025 (Detection limit: 0.025) | None detected (<0.025) | Pass |
| [†] Phthalates (CPSC-CH-C1001-09.4 and BS EN ISO 14389:2014) | <500 each <1000 sum (Detection limit: 100) | None detected (<100) | Pass |
| [†] PAH (AfPS GS 2019:01 PAK) | <1.0 each <10 sum (Detection limit 0.2) | None detected (<0.2) | Pass |
| [†] SOCP (C10-C13) (IHM 042 (GC-ECD)) | <1000 (Detection limit: 100) | None detected (<100) | Pass |

VeroEco Flex materials are free of heavy metals according to RSL requirements:

| Total Heavy Metals Screening - Total Digest (mg/kg) ([†] CPSC CH E1001-08.3 and [†] E1002-08.3 Microwave digest/ICP-MS, [†] BS EN 16711-1:2015) (Detection limit 0.1 mg/kg) | | | | |
|---|------|---------|---------|---------|
| Requirement (mg/kg) | <100 | <40 | <100 | <0.5 |
| | Lead | Cadmium | Arsenic | Mercury |
| | <0.1 | <0.1 | <0.1 | <0.1 |
| | Pass | | | |



Shown by Gant Goldstein in collaboration with STRATASYS

