LulzBot Filament Testing Report

Manufacturer: Taulman
Filament Name: T-lyne
Filament Type: Clear Surlyn ionymer filament, 3mm
Tested By: Brent M
Date: 02/23/2016

Ease of use: 1/10
Appearance: 8/10
Color consistency: 10/10
Print temperature Range (C): 180-300/40-60
Variance in diameter: (2.84-2.88)
Minimum bend radius: NA, can tie in knot
Prints using current Lulzbot profiles/temps: Could not get a successful print that had retractions or more than 30 second layers. Does not work at all in a standard extruder.

General Notes:

- Nice looking filament, as optically clear as polycarbonate.
- The material is flexible but not particularly elastic, similar to PCTPE
- Came on a standard reel unlike most Taulman products
- Buckled and jammed within first layer in a standard extruder
- Was able to get one complete print (of the OSHW logo) with a flexystruder on a mini, but all other prints failed (30+ attempts throughout the temperature and speed range). The material may need greater cooling than we can provide, but strip-outs were common and frequent.
- Interestingly, the material will confirm perfectly to the filament path when fed into a nozzle, and will retain the shape when pulled out, this revealed alignment issues on several flexystruders that had been running in R&D for months.
- First line of the SDS: This SDS adheres to the standards and regulatory requirements of Lithuania and may not meet the regulatory requirements in other countries.

Health or environmental risks:
No major hazards noted. General advice listed in SDS is "Remove from exposure, lie down. Never give anything by mouth to an unconscious person. No hazards which require special first aid measures. If a person vomits when lying on his back, place him in the recovery position."

^This is good advice, but worrying that it is included in an SDS which lists no negative health effects.

Disposal Options:
Like most thermoplastic plastics the product can be recycled. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled, when in compliance with local regulations. Do not contaminate ponds, waterways or ditches with chemical or used container.

Recommendation:
Between the sketchy SDS and difficult printing, we have to reject this filament. To pursue it in the future we will need a working profile and an SDS that is explicitly valid in the US and EU.