



## Safe Disposal of Products That Have Reached End of Life

### Summary

Even though synthetic turf will perform and last for a relatively long time, it is important to ensure that synthetic turf products meet guidelines for safe disposal when it is time for removal and replacement.

FLK9F-AS has been tested for “D listed metals” using the U.S. Environmental Protection Agency (EPA) Toxicity Characteristic Leaching Procedure (TCLP). Results show that all metals tested are well below the EPA regulated concentration levels.

### Background and Results

The Resource Conservation and Recovery Act (RCRA) governs waste management and materials recovery, including the disposal of solid waste. In support of RCRA, EPA has developed test methods for the analysis of solid materials to ensure safe disposal. One of the tests is the Toxicity Characteristic Leaching Procedure (TCLP). It is a soil sample extraction test that simulates leaching through a landfill. It establishes if a potential landfill waste is “characteristically hazardous” by determining if there are EPA “D List” contaminants at concentrations above regulated levels. “D” listed metals and regulated levels are listed in the table below.

EPA Hazardous Metals – “D” List		
EPA Hazardous Waste Code	Contaminant	Regulated Level (mg/L)*
D004	Arsenic (As)	5.0
D005	Barium (Ba)	100.0
D006	Cadmium (Cd)	1.0
D007	Chromium (Cr)	5.0
D008	Lead (Pb)	5.0
D009	Mercury (Hg)	0.2
D010	Selenium (Se)	1.0
D011	Silver (Ag)	5.0

\*mg/L = milligrams/liter (concentration of metal in solution)



# Safe Disposal of Products That Have Reached End of Life

The TCLP test is conducted by extracting the solid material in a mild acid for 20 hours at room temperature. A sample of the solution is then tested for the above metals using EPA method 6010C for all metals but mercury. Mercury is tested using EPA method 7470A. Using this process, the following results were obtained for FLK9F-AS:

## Client Sample Results

Client: ForeverLawn  
Project/Site: TCLP Metals (ForeverLawn)

TestAmerica Job ID: 490-144612-1

Client Sample ID: FLK9F-AS

Lab Sample ID: 490-144612-1

Date Collected: 01/112/18 16:00

Matrix: Solid

Date Received: 01/15/18 09:30

### Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50		mg/L		01/24/18 18:09	01/25/18 20:33	1
Barium	ND		10		mg/L		01/24/18 18:09	01/25/18 20:33	1
Cadmium	ND		0.10		mg/L		01/24/18 18:09	01/25/18 20:33	1
Chromium	ND		0.50		mg/L		01/24/18 18:09	01/25/18 20:33	1
Silver	ND		0.50		mg/L		01/24/18 18:09	01/25/18 20:33	1
Lead	ND		0.50		mg/L		01/24/18 18:09	01/25/18 20:33	1
Selenium	ND		0.10		mg/L		01/24/18 18:09	01/25/18 20:33	1

### Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0020		mg/L		01/25/18 08:33	01/25/18 13:33	1

ND = Not Detected

RL = Reporting Limit

mg/L = milligrams/liter (concentration of metal in solution)

These results show that all metals tested are well below the EPA regulated concentration levels.