

## Waste Profile Datasheet

Stratasys Ecoworks Cleaning Agent with SR-20 Soluble Support Material

Discharge of wastewater is subject to varying regulatory requirements. In some countries, discharge from a support cleaning system into the public sewer system may be subject to an authorization/discharge permit. You should check with local authorities whether restrictions apply to the discharge of wastewater generated by the support cleaning system and, where necessary, apply for such permit. Values provided below represent a conservative assessment of the daily discharge values with Ecoworks Cleaning Agent when used as directed.

Characteristics	Value	Units	Daily Volumes <sup>1</sup>	Units
Annual discharge volume (approximate) **	3000 (800)	Liters (Gallons)	15 (4)	Liters (Gallons)
Discharge Temperature	75	° C		
pH	6.5 – 10			
Discharge per cycle	7.5 – 15 (2-4)	Liters (Gallons)		
<b>Metals Content (average)</b>				
Barium	37.2	µg/l	0.56	mg
Calcium	17.3	mg/l	259.5	mg
Chromium	35.9	µg/l	0.54	mg
Copper	35.8	µg/l	0.54	mg
Iron	308	µg/l	4.62	mg
Nickel	22.8	µg/l	0.34	mg
Magnesium	11.6	mg/l	174.0	mg
Manganese	9.0	µg/l	0.14	mg
Potassium	3.84	mg/l	57.6	mg
Sodium	2600	mg/l	39.0	grams
Zinc	46.2	µg/l	0.69	mg
<b>Organic Compounds detected</b>				
Acetone	148	µg/l	42.22	mg
Phenol	16,900	µg/l	253.5	mg
<b>Other Characteristics (average)</b>				
Specific conductance	8,290	µmhos/cm	N/A	
Alkalinity, Total as CaCO <sub>3</sub>	489	mg/l	7.34	grams
Total Dissolved Solids	12,000	mg/l	180.0	grams
Total Suspended Solids	12.3	mg/l	0.18	grams
BOD (Biological Oxygen Demand) - 5 day	561	mg/l	8.42	grams
Chemical Oxygen Demand (COD)	11,800	mg/l	177.0	grams
Total Phosphorous	36.4	mg/l	0.55	grams

<b>Characteristics</b>	<b>Value</b>	<b>Units</b>	<b>Daily Volumes <sup>1</sup></b>	<b>Units</b>
Total Kjeldahl Nitrogen	52.4	mg/l	0.79	grams
Nitrate Plus Nitrite	6.4	mg/l	0.10	grams
Sulfate	6.8	mg/l	0.10	grams
Chloride	185	mg/l	2.78	grams
Cyanide	0.327	mg/l	4.91	mg
Aquatic Toxicity LC 50 (fish)	> 750 mg/l concentration		N/A	

<b>Non-Detected Metals</b>	<b>MDL (Method Detection Limit)</b>	<b>Units</b>
Aluminum	100	µg/l
Antimony	5	µg/l
Arsenic	5	µg/l
Beryllium	2.5	µg/l
Cadmium	1.1	µg/l
Cobalt	5	µg/l
Lead	1.5	µg/l
Mercury	0.1	µg/l
Silver	5	µg/l
Thallium	7.5	µg/l
Vanadium	7.5	µg/l

Waste water discharge was analyzed after removing approximately 88 cc's (5.4 cu. in.) of support material in a 7.5 liter (2 gallon) support cleaning system with the entire contents of one Stratasys Ecoworks Cleaning Agent foil bag and after a 7.5 liter water-only rinse. Larger systems with the same concentration of Ecoworks Cleaning Agent and a clean water rinse cycle of the same volume should expect similar effluent results. Under normal conditions, a user will average 16.4 cc's (1 cu. in.) of support material per part created.

<sup>1</sup>Typical user – assumes one cycle per day at 15 liters (4 gallons) per cycle (wash and rinse volumes combined). Daily volumes for users with large support cleaning systems could be higher.