



Contents

Acknowledgments	vii
GreenScreen Advisory Groups	viii
Preface	ix
Overview	
1. Introduction	1
2. Normative References	1
3. General Requirements	2
4. General Reporting Requirements	2
5. Making Informed Decisions	2
6. Records	3
7. Terms and Definitions	4
SECTION I — Assessing Chemicals	
8. Purpose	10
9. Scope	10
10. Process Overview	10
11. Organic Chemical Assessment Procedure	12
11.1 Step 1 – Identify Chemical to Assess	12
11.2 Step 2 – Research	12
11.2.1 Step 2a – Conduct a comprehensive data review	12
11.2.2 Step 2b – Review all GreenScreen Specified Lists	12
11.2.3 Step 2c – Use measured data from suitable analog(s) to fill missing data	12
11.2.4 Step 2d – Use estimated data from a model to fill in missing measured data	13
11.3 Step 3 – Classify Hazards	14
11.3.1 Step 3a – Classify hazard level for each hazard endpoint	14
11.3.2 Step 3b – Determine level of confidence (high or low) for each hazard level assigned	15



11.3.3	Step 3c – Assign a data gap (DG) to each hazard endpoint with insufficient information	17
11.3.4	Step 3d – Document hazard classifications	17
11.3.5	Step 3e – Fill in the Hazard Summary Table	18
11.4	Step 4 – Identify Environmental Transformation Product(s)	19
11.4.1	Identify potential environmental transformation products	19
11.4.2	Determine if feasible	19
11.4.3	Determine if relevant	20
11.5	Step 5 – Assess Environmental Transformation Product(s)	21
11.6	Step 6 – Assign a GreenScreen Benchmark™ Score	21
11.6.1	Step 6a – Determine the preliminary Benchmark score	21
11.6.2	Step 6b – Determine the final Benchmark score	22
11.6.3	Step 6c – Document the Benchmark score	24
12.	Inorganic Chemical Assessment Procedure	25
12.1	Step 1 – Identify Chemical to Assess	25
12.2	Step 2 – Research	25
12.3	Step 3 – Classify Hazards	25
12.4	Step 4 – Identify Environmental Transformation Products	25
12.5	Step 5 – Assess Environmental Transformation Products	25
12.6	Step 6 – Assign a Benchmark Score	25
 SECTION II — Assessing Polymers		
13.	Purpose	26
14.	Scope	26
15.	Polymer Assessment Procedure	26
15.1	Step 1 – Identify Polymer Type and Inventory Constituents and/or Components	26
15.1.1	Polymer substance	26
15.1.2	Polymer mixture	28
15.2	Step 2 – Classify Human Health and Ecotoxicity Hazards of Polymer	29
15.2.1	Step 2a – Use test data for the polymer	29
15.2.2	Step 2b – Apply bridging principles for a similar polymer	29
15.2.3	Step 2c – Apply hazard criteria for qualifying constituents or components	29
15.2.4	Step 2d – Apply expert judgment	30



15.3 Step 3 – Classify Environmental Fate and Physical Hazards of Polymer	32
15.3.1 Environmental fate endpoints – Persistence (P) and Bioaccumulation (B)	32
15.3.2 Physical hazard endpoints – Reactivity (R) and Flammability (F)	33
15.4 Step 4 – Determine Polymer Benchmark Score	33
15.4.1 Step 4a – Generate a preliminary Benchmark score	33
15.4.2 Step 4b – Determine the final Benchmark score	33
16. Document Hazard Classifications	34
SECTION III — Assessing Products	
17. Purpose	36
18. Scope	36
19. Assessment and Disclosure Thresholds: Non-polymeric Products	37
19.1 Chemical Substances	37
19.2 Chemical Mixtures	37
20. Assessment and Disclosure Thresholds: Polymeric Materials	37
21. Guidance for All Product Types	37
22. Product Reporting Template	38
22.1 General Template Guidelines	38
22.1.1 GreenScreen Benchmark Summary Section	38
22.1.2 Inventory Thresholds Section	38
22.2 Template 4 – Non-Polymeric Product Assessment Reporting Template	38
SECTION IV — Assessing Chemicals with GreenScreen List Translator™	
23. Introduction	40
23.1 Method Limitations	40
24. List Translator Resources	41
25. Uses and Applications of GreenScreen List Translator	41
26. Process Overview	41
27. Step 1 – Determine Chemicals to Assess	42
28. Step 2 – Search GreenScreen Specified Lists	42
28.1 Individual versus Multiple Hazard Lists	42
28.2 Authoritative versus Screening Lists	42



28.3	A-Sublists and B-Sublists	43
28.4	Trumping Rule	44
29.	Step 3 – Assess and Classify Hazards – List Translator	44
29.3	Document Hazard Classifications	45
30.	Step 4 – Determine List Translator Score	46
30.1	List Translator Score Description	46
30.2	Assign a List Translator Score	47
30.2.1	Step 4a: LT-1 Criterion (a)	48
30.2.2	Step 4b: LT-1 Criteria (b) through (e)	48
30.2.3	Step 4c: Multiple endpoint hazard lists	49
30.2.4	Step 4d: Assign a final List Translator score	49
31.	Step 5 – Report List Translator Results	49
31.1	Supporting Documentation	49
31.2	Format	49
32.	Automation of GreenScreen List Translator	49
SECTION V — Annexes		
Annex 1	GreenScreen Chemical Hazard Criteria™	51
Annex 2	GreenScreen Hazard Endpoint Classification Guidance	70
Annex 3	GreenScreen Benchmark Criteria for Organic Chemicals	74
Annex 4	GreenScreen Benchmark Criteria for Inorganic Chemicals	76
Annex 5	GreenScreen Benchmark Data Requirements	78
Annex 6	GreenScreen Benchmark Worksheet	81
Annex 7	GreenScreen Polymer Hazard Criteria	83
Annex 8	GreenScreen Polymer Qualifying Constituent/Component Hazard Criteria	85
Annex 9	GreenScreen Transformation Product Worksheet & Resources	94
Annex 10	GreenScreen Information Sources	97
Annex 11	GreenScreen Specified Lists™	101
Annex 12	GreenScreen List Translator™ Map	115
SECTION VI — Assessment Templates		154

Tables & Figures

Table 1.	Example GreenScreen Hazard Summary Table for a Chemical	19
Table 2.	Water Solubility Classifications	32
Table 3.	Example Polymer Hazard Summary Table for a Polymer Substance with a Residual Monomer > 100 ppm	35
Table 4.	Quick Steps to Conduct a GreenScreen List Translator Assessment	41
Table 5.	Categorization of GreenScreen Specified Lists	43
Table 6.	Trumping Rules for GreenScreen Specified Lists	44
Table 7.	Description of Hazard Levels for List Translator	45
Table 8.	Example List Translator Hazard Summary Table	45
Table 9.	List Translator versus Benchmark Scores	47
Table 10.	List Translator Scoring Algorithm	48
Figure 1.	GreenScreen Chemical Assessment Procedure	11
Figure 2.	GreenScreen Chemical Hazard Criteria for Carcinogenicity	15
Figure 3.	GreenScreen Polymer Assessment Procedure	27
Figure 4.	Inventory Constituents of a Polymer Substance	28
Figure 5.	Inventory Components of a Polymer Mixture	28
Figure 6.	Example Template 4 Report for an Uncured Polymeric Material	39