



How to use GreenScreen[®] for LEED v4

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Clean Production Action

&

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Outline



- LEED Material Credit Strategy
- Introduction to GreenScreen® & the List Translator
- How to use GreenScreen in LEED v4
- LEED v4 Third Party Compliance with Green Circle Certified
- Questions? type them in chat box



LEED Material Credit Strategy



Innovation
Necessitates
Reporting

Option 1 – Material Ingredient Reporting (1 point)

Reporting
Enables
Evaluation



Evaluation
Enables
Preferential
Selection

Option 2 - Optimization (1 point)

Preferential
Selection
Guides
Innovation

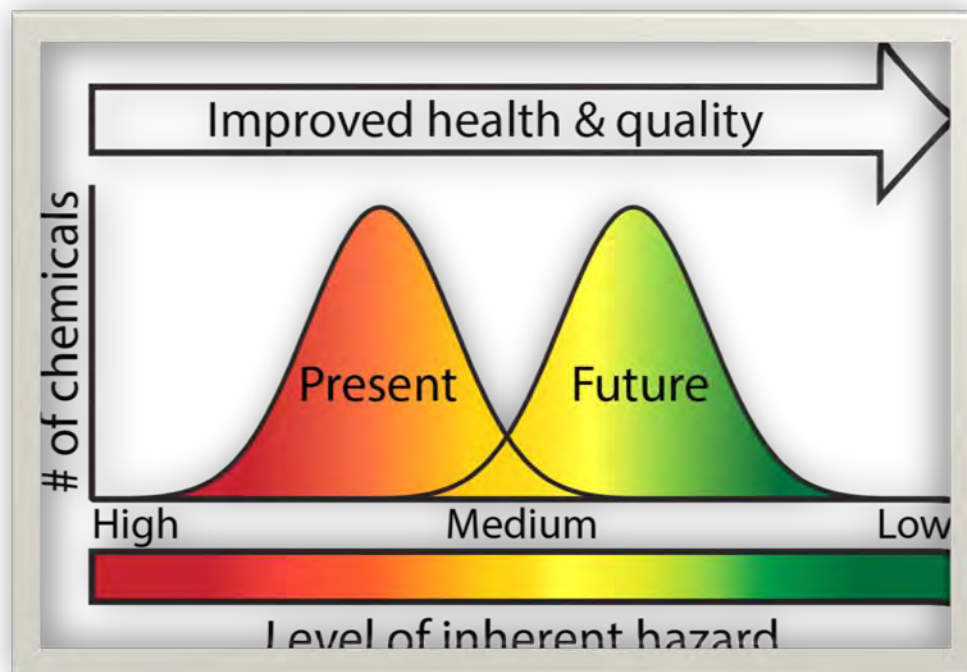


What is GreenScreen?

A chemical hazard assessment method

(hazard x exposure = risk)

- Transparent
method is freely and publicly available
- Scientifically robust
- Systematic
- Comprehensive





Comprehensive hazard data

Chemical Z (CASRN ##-##-#)

Green Screen Hazard Ratings																			
Group I Human					Group II and II* Human								Ecotox		Fate		Physical		
Carcinogenicity	Genotoxicity/Mutagenicity	Reproductive Toxicity	Developmental Toxicity	Endocrine Activity	Acute Toxicity	Systemic Toxicity		Neurotoxicity		Skin Sensitization*	Respiratory Sensitization*	Skin Irritation	Eye Irritation	Acute Aquatic Toxicity	Chronic Aquatic Toxicity	Persistence	Bioaccumulation	Reactivity	Flammability
						single	repeated*	single	repeated*										
L	L	L	M	M	L	L	L	vH	H	L	DG	L	L	H	H	vL	L	M	L

Summarizes hazards in a single benchmark score



Benchmark U:
Data gap
analysis

Drives the selection of inherently safer chemicals



Green Screen Assessments of Similar Function Chemical		
Common Name	CAS #	Full Name
Preferred		
Design	none	Design material out, dematerialize
Substance 0	#####-##-#	Chemical name
Use but still opportunity for improvement		
Substance 1	#####-##-#	Chemical name
Substance 2	#####-##-#	Chemical name
Use but search for alternatives		
Substance 3	#####-##-#	Chemical name
Substance 4	#####-##-#	Chemical name
Substance 5	#####-##-#	Chemical name
Substance 6	#####-##-#	Chemical name
DO NOT USE		
Substance 7	#####-##-#	Chemical name
Substance 8	#####-##-#	Chemical name
Substance 9	#####-##-#	Chemical name
Substance 10	#####-##-#	Chemical name
Substance 11	#####-##-#	Chemical name
Substance 12	#####-##-#	Chemical name

GreenScreen List Translator

- Checks for chemical on known hazard lists
- Identifies known hazards
- Does not identify safer chemicals
- Does not identify unknown hazards



GreenScreen

List Translator & Assessments



List Translator

- Requires little technical expertise or time
- Good at identifying known hazardous chemicals
- Doesn't identify safe chemicals or unknown hazardous chemicals
- Doesn't identify or evaluate transformation products



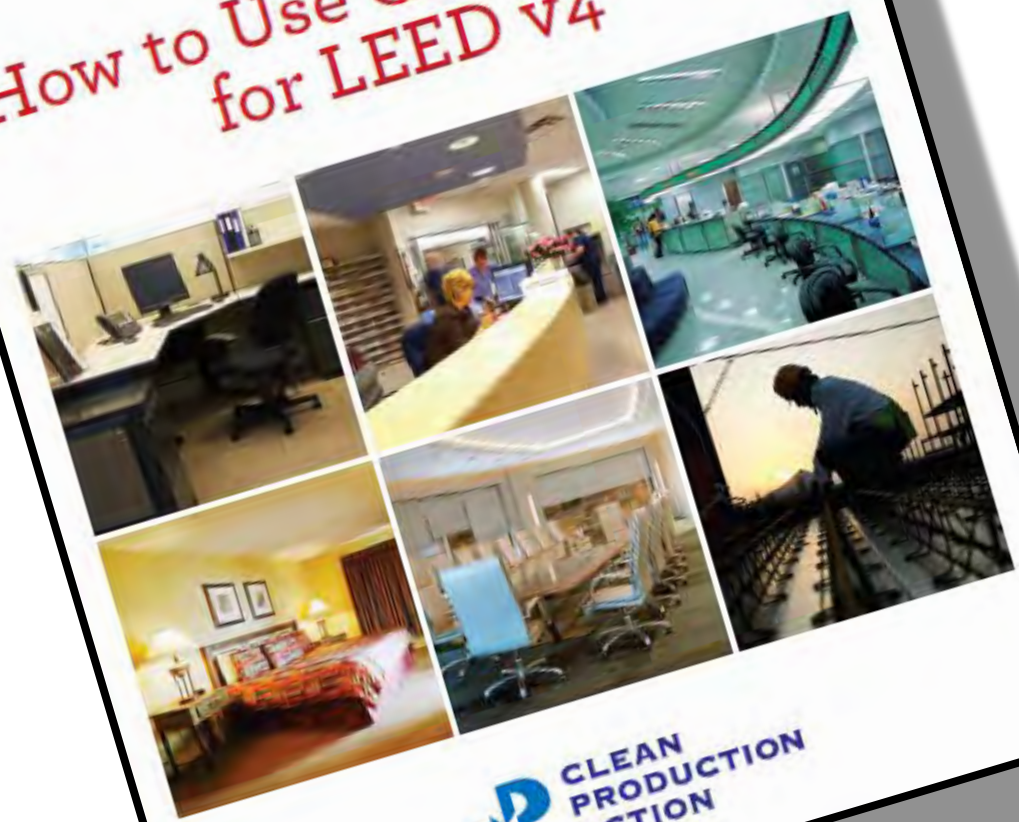
GreenScreen Assessment

- Requires significant technical expertise and time
- Identifies hazardous, safe, and poorly understood chemicals
- Evaluates transformation products
- Certified GreenScreen trumps List Translator





How to Use GreenScreen® for LEED v4



LEED v4 -- Option 1: Reporting

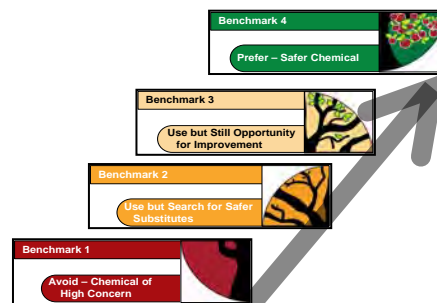
Identify →

Assess →

Optimize

Ingredients	CAS #	Percent of Final Product
PET	25038-59-9	89.27%
Titanium Dioxide	1344-28-1	1.60%
Calcium Carbonate	1317-65-3	7.56%

LEED v4 Option 1: Material Ingredient Reporting





LEED v4 -- Option 1: Material Ingredient Reporting -- Manufacturer Inventory

Homogeneous Material or Chemical Substance	CAS #	Percent of Final Product	Chemical Substances	Percent of Chemical Substances	Function of Chemical Substance	List Translator or Benchmark score	Hazard
Non-proprietary							
Non-proprietary							
Non-proprietary							
Proprietary	Not reported						
Proprietary	Not reported						

GreenScreen List Translator or Benchmark score

GreenScreen Benchmark score protects proprietary ingredients while revealing hazard

LEED v4 -- Option 2: Optimization



Identify → Assess → Optimize

Option 1: Material Ingredient Reporting (1 Point)

Nutrition Facts		
Serving Size: 100g (3.5oz)		
Amount Per Serving		
	Amount	% Daily Value
Total Fat	10g	20%
Sodium	400mg	80%
Total Carbohydrate	100g	200%
Dietary Fiber	5g	10%
Sugars	4g	8%
Protein	10g	20%
Vitamin A	10%	20%
Vitamin C	10%	20%
Calcium	10%	20%
Iron	10%	20%

Option 2: Material Ingredient Optimization (1 Point)



LEED v4 - Optimization

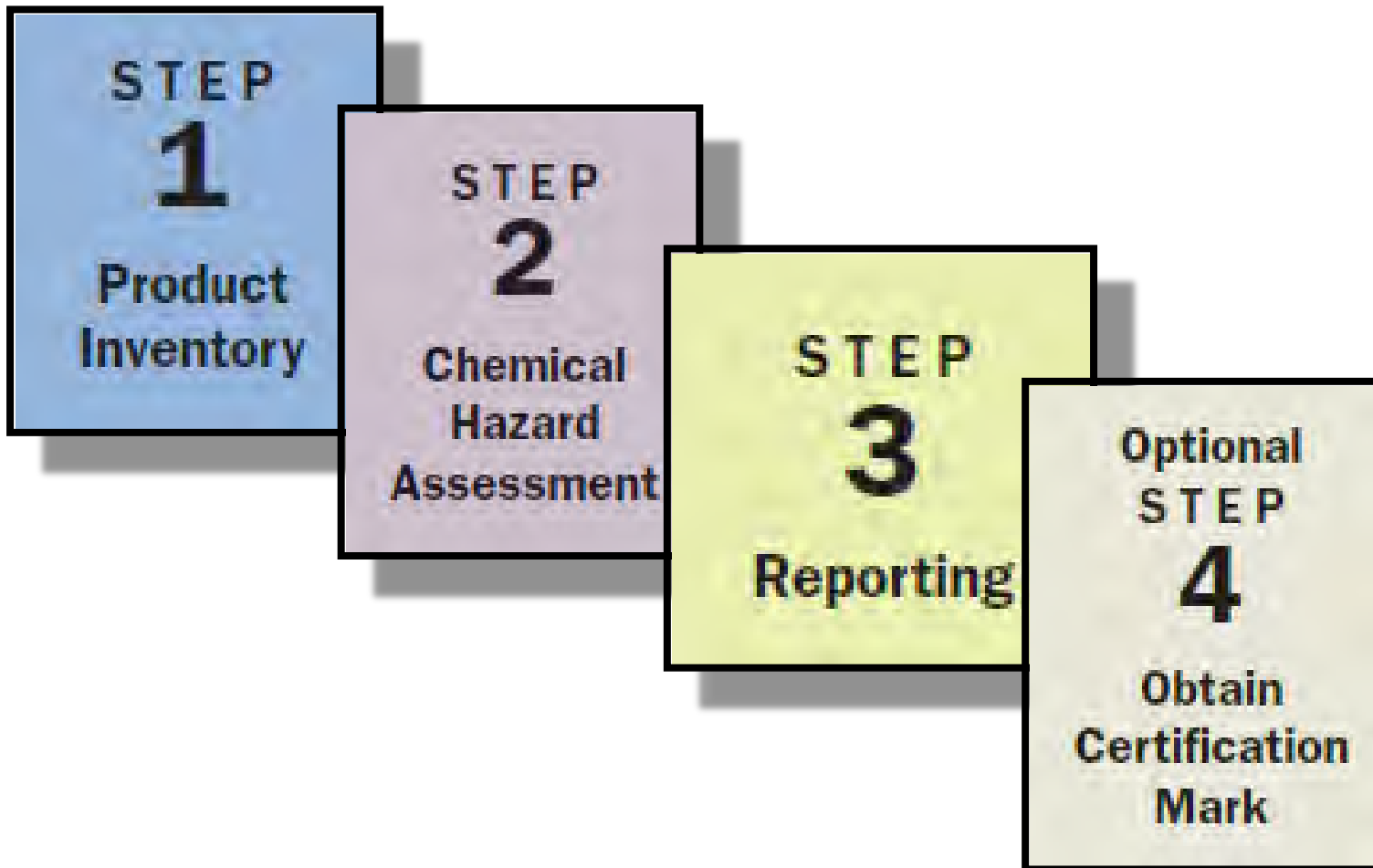
Two GreenScreen Pathways



100% Value – List Translator	150% Value – GreenScreen Assessments
<p data-bbox="150 743 935 868">List Translator LT-1</p>	<p data-bbox="1141 719 1669 943">GreenScreen Benchmark-1</p>



LEED v4 - Optimization CPA “How to” guide: Steps to Optimization w/GreenScreen





STEP
1
Product
Inventory

LEED v4 – Optimization
“How to” guide Step 1:
Product Inventory
(100% with List Translator)

LEED CREDIT OPTION 2—Optimization with GreenScreen List Translator (100% value)

- Conduct early research to help the project team identify products that contribute to multiple credits and options.
- Create a list of products/materials/ingredients/chemicals to get an idea of the scope of work.

Can you identify CASRNs at or above **100 ppm** reporting threshold, either directly from your suppliers or using a Consultant?

YES

NO

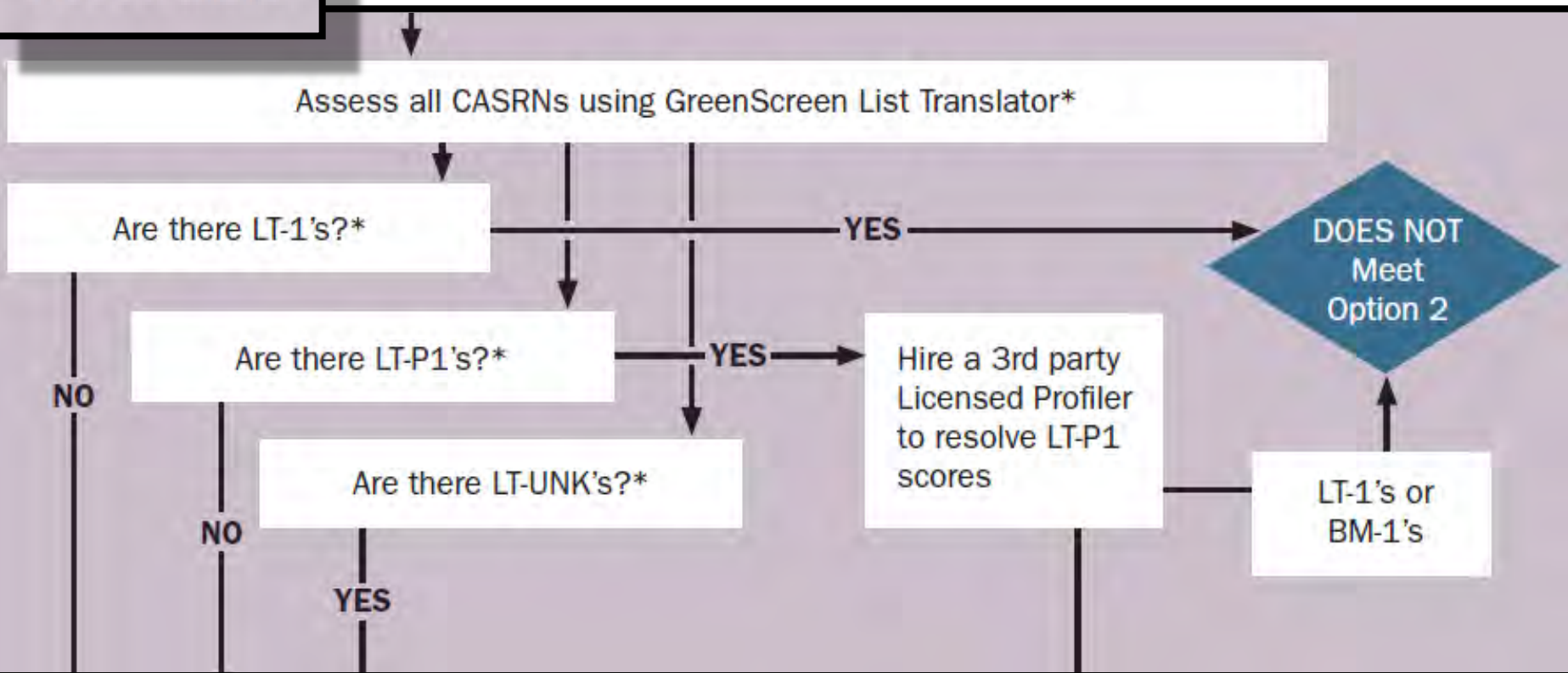
DOES NOT
Meet
Option 2



LEED v4 – Optimization

“How to” guide Step 2: Chemical Hazard Assessment (100% w/LT)

STEP 2 Chemical Hazard Assessment

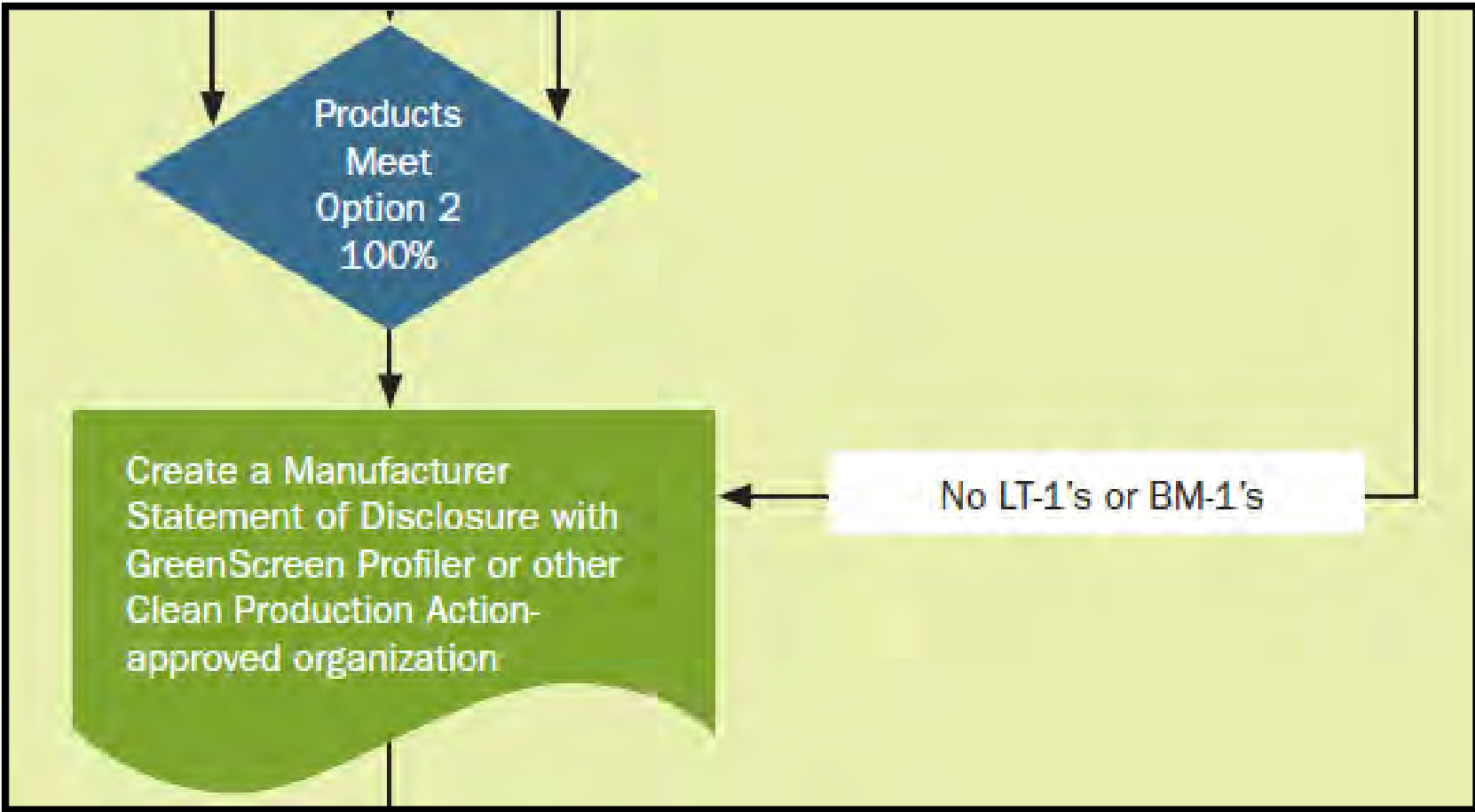




STEP
3
Reporting

LEED v4 – Optimization
“How to” guide Step 3:
Reporting (100% w/LT)

Manufacturer Statement of Disclosure – “No LT-1’s”





**Optional
STEP
4**

**Obtain
Certification
Mark**

LEED v4 – Optimization
“How to” guide Step 4 (optional):
Obtain Certification Mark (100% w/LT)

Engage Clean Production Action
to issue a certification mark for
LEED v4 compliance

GreenScreen
certification mark for
LEED v4 compliance



**LEED v4 Compliant
MR Credit
Materials Ingredients
Option 2 Optimization
GreenScreen® List Translator—
100% by Cost**



Sample Client Base



MERCK

ASSA ABLOY

Aleris


SAINT-GOBAIN


MASTIC
HOME EXTERIORS
by PLY GEM



COVANTA
ENERGY

 **PLY GEM**

 **SUPERIOR
ESSEX**



 **AARON**
INDUSTRIES CORP.
Recycled Plastic Compounds

decoustics
SAINT-GOBAIN

CertainTeed
SAINT-GOBAIN

 **RETURN**
POLYMERS INC.
POLYMER PROCESS & RECOVERY

deceuninck

GAF

WYNDHAM
WORLDWIDE

STANLEY
Security Solutions


HeritagePlastics

 **EOS**
SURFACES

 **REGUPOL** AMERICA

 **PRODUCTION
ACTION**

Why Third-Party Certification?



- Confusion in marketplace
- Lack of accuracy
- Ensures completion to proper thresholds
- Ensures compliance to LEED v4



Certification Procedure

- Step 1: Contact approved LEED v4 GreenScreen Certifier
- Step 2: Data Collection and Desk Audit
 - Initial Data Collection Phase (includes call(s) with manufacturer contact)
 - Desk Top Analysis to verify manufacturer's claims
 - Conclusion call to report results of verification
 - A final report will be submitted to the manufacturer documenting the audit process



Documentation Needed for Certification

- Fully Completed Product Inventory
- Purchase Orders (sampling) for all ingredients within your product
- All MSDS or SDS sheets for all ingredients within your product
- A Technical Sheet or MSDS/SDS for your product (as applicable)
- A copy of either your Manufacturer's Inventory or Statement of Disclosure (pending the option)
- Copies of valid and certified GreenScreen Assessment Summary Reports (if applicable)



Certification Procedure (Cont.)

- Step 3: LEED v4 Compliant marks
 - Marks applied directly to Manufacturer's Inventory or Statement of Disclosure documentation for submittal in LEED v4 projects.
 - Online Product Database: Manufacturer documentation can be uploaded and stored on the Online Product database for download and reference by architects, designers, or other LEED professionals.





LEED v4 Compliance Certification- Option 1 and Option 2

Option 1.



**LEED v4 Compliant
MR Credit
Material Ingredients
Option 1 Manufacturer Inventory**

Option 2.



LEED v4 Compliant
MR Credit
Materials Ingredients
Option 2 Optimization
GreenScreen List Translator – 100% by Cost

Sample Manufacturer's Inventory Report

Company Name Here

"Company slogan here"

123 E. My Address Avenue • Chicago, IL 60614-0240

Phone: (312) 555-5555 • Fax: (312) 555-5555 • <http://www.companywebsite.com>



LEED v4 Material Ingredient Credit, Reporting Option: Manufacturer Inventory

Product Name: Fancy Fence™

Reporting Threshold: 1000ppm

Ingredients	CAS #	Percent of Final Product	Constituents of Ingredients	Percent of Constituents	Function of Constituent	List Translator or Benchmark score	Hazard
PET	25038-59-9	89.27%					
Titanium Dioxide	1344-28-1	1.60%					
Calcium Carbonate	1317-65-3	7.56%					
Antioxidant	Proprietary MIXTURE	0.68%	CAS 1	95%	Inhibits oxidation	LT-1	High-Carcinogen
			CAS 2	5%		Not required - Below 1000 ppm in final product	
Impact modifier	Proprietary MIXTURE	0.89%	CAS 3	85%	Improves impact resistance	LT-UNK	
			CAS 4	10%		Not required - Below 1000 ppm in final product	
			CAS 5	5%		Not required - Below 1000 ppm in final product	

Sincerely,

John Smith, VP of Operations



Challenges

- Resistant suppliers
- Lack of available certified and valid GreenScreen Assessments
- Lack of understanding of GreenScreen tool and methodology



Benefits of Certification

- Transparency
- Assurance
- Brand Recognition
- Preference



Thank You!

Questions?

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