Health Product Declaration™ (HPD)
Acrovyn® 4000 Cradle to Cradle Certified™ Rigid Sheet and Wall Guards

C/S is committed to bringing high quality, sustainably manufactured, specialty architectural products to the market. Tools like the HPD and Cradle to Cradle Certified™ Products Program enable C/S to clearly and credibly communicate product environmental and human health impacts.

• The HPD is a tool that enables manufacturers to disclose product contents and hazards in a consistent format.
• The Cradle to Cradle Certified™ Product Standard is a rigorous multi-attribute, third-party certification designed to reward achievement in five categories. This program provides manufacturers with an optimization strategy for the material health of a product.

With approval from the Health Product Declaration Collaborative™ and the Cradle to Cradle Products Innovation Institute, C/S developed an HPD backed by the Cradle to Cradle Certified™ Product Standard to better disclose current optimization levels.

• Ingredient assessments per the Cradle to Cradle® protocol have been placed into the HPD builder to communicate our ingredients and their hazard evaluation disclosed at 100 ppm (0.01%).
• Models covered by this HPD can contribute to the LEED® v4 Materials and Resources Credit, Option 1 building product disclosure and Option 2 optimization.
• The information provided in this HPD is based on multiple products. To view specific material ingredient percentages and additional Cradle to Cradle® details for these products, visit http://transparency.c-sgroup.com.

- **Rigid Sheet:** WC-40N, WC-60N, WC-75N, RS-40AN, RS-60AN, TFC-40AN, TFCH-40AN, TFC-60AN, and TFCH-60AN
- **Corner Guards:** FS-10MN, FS-10N, FS-20N, SFS-20N, SM-10N, SM-20AN, SM-20MN, SM-20N, SSM-10N, SSM-20AN, and SSM-20N
- **Handrails:** HRB-20CMN, HRB-20N, HRB-35CMN, and HRB-35N

Selecting healthy and optimized products is our industry’s opportunity to enhance the lives of future generations by making buildings better today.

Cradle to Cradle Certified™ is a certification mark licensed by the Cradle to Cradle Products Innovation Institute.
Name: Acrovyn® 4000 Cradle to Cradle Certified(TM) Rigid Sheet and Wall Guards

Product ID: Wall Protection
Classification: 10 26 00.00 Specialties: Wall and Door Protection
Website: www.c-sgroup.com/acrovyn/wall-protection

Manufacturer: Construction Specialties, Inc.
Address: 347 South Broad Street
Hughesville, PA 17737
Contact Name: Kendra Martz
Title: Sustainability Coordinator
Phone: 5709401331
Email: kmartz@c-sgroup.com

Description: Wall Protection – Rigid Sheet, Corner Guards, Crash Rails and Handrails

Release Date: 2015-01-08
Expiry Date: 2018-01-08

SUMMARY DISCLOSURE
The content of this product was assessed for health hazard warnings as required using Pharos

Residuals Disclosure
☑ Measured 100 ppm (ideal)
☐ Measured 1000 ppm
☐ Predicted by process chemistry
☐ As per MSDS (1,000 & 10,000 ppm)
☐ Not disclosed
☐ Other

Full Disclosure of Intentional Ingredients ☐ Yes ☑ No
Full Disclosure of Known Hazards ☑ Yes ☐ No
Disclosure Notes

Contents in Descending Order of Quantity
ALUMINUM, Polyethylene Terephthalate Glycol (PETG), ACRYLONITRILE-BUTADIENE-STYRENE COPOLYMER, Polyethylene Terephthalate Glycol (PETG), Undisclosed (Proprietary Additive), Undisclosed (Colorant), NYLON 6, Undisclosed (Primer), Undisclosed (Top Coating), Undisclosed (Ink)

Hazards
☐ PBT (Persistent Bioaccumulative Toxic)
☐ Reproductive
☐ Cancer
☐ Endocrine
☐ Gene Mutation
☐ Neurotoxicity
☐ Mammal
☐ Skin or Eye
☐ Aquatic toxicity
☐ Respiratory
☐ Land toxicity
☐ Physical hazard
☐ Global warming
☐ Ozone depletion
☐ Multiple
☐ Unknown

Highest concern GreenScreen score - List Translator Possible Benchmark 1

Total VOC Content
Material (g/L) N/A
Regulatory (g/L) N/A

Does the product contain exempt VOCs? ☑ Yes ☐ No
Are there VOC-free tints available? ☑ Yes ☐ No

Notes

Certifications + Compliance
VOC Emissions
CHPS/Section 01350 Emission Manufacturer Claim
MBDC Cradle to Cradle - Silver (Version 2.1.1)
VOC Content N/A
Multi-attribute
MBDC Cradle to Cradle - Gold (Version 2.1.1)
The HPD Standard is solely a declaration of product content and direct health hazards associated with exposure to its individual contents. It is not a full assessment of environmental impacts from the life cycle of this product. It is not an assessment of risks associated with actual use of the product. It does not address the potential health impacts of substances used or created during manufacture that do not appear in the final product as residuals, nor substances created during combustion or other degradation processes.

This Health Product Declaration was generated following the requirements of the noted Standard version and is valid for a total of three years after date of issue or three months after a substantive change of product contents occurs. Users should verify that this Health Product Declaration is compliant with the most current version of the HPD Standard. Accuracy of claims made in this Health Product Declaration is the sole responsibility of the listed manufacturer and certifier (if applicable). The HPD Collaborative does not warrant any claim made herein, explicit or implicit. The HPD Standard is an “open standard” developed and managed by the HPD Collaborative, a nonprofit organization. For more information, visit hpdcollaborative.org.

CONTENT IN DESCENDING ORDER OF QUANTITY

All ingredients must be assessed for health warnings against Priority Hazard Lists, regardless of disclosure level. Priority Hazard Lists and information on the GreenScreen Benchmarks can be found at www.hpdcollaborative.org/hazardlists.

*GS*: GreenScreen Benchmark; *RC*: Recycled Content, *PC*: Post Consumer, *PI*: Post Industrial (Pre-consumer), *BO*: Both; *Nano*: comprised of nanoscale particles or nanotechnology

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS RN</th>
<th>% weight</th>
<th>GS</th>
<th>RC</th>
<th>Nano</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazard B</td>
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<tr>
<td>Hazard C</td>
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<tr>
<td>Hazard D</td>
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<tr>
<td>Hazard E</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Notes**

**ALUMINUM**

Endcaps, Base, Aluminum Clips/Splice Retainer, or Aluminum Bracket. Contact C/S factory for details.

**ENDOCRINE**

TEDX: Potential Endocrine Disruptor

**RESPIRATORY**

AOEC: Asthmagen (ARs) - sensitizer-induced - inhalable forms only

**FLAMMABLE**

EU H-Statements: H228 Flammable solid

**REACTIVE**

EU H-Statements: H261 In contact with water releases flammable gases

Aluminum assessed YELLOW under Cradle to Cradle® Protocol as Acceptable (one or more moderate risks to human health and/or environmental health; suitable for continued use until a GREEN alternative is found). Aluminum ranges from 0.00-89.00% of unit weight depending on model and role(s) – retainer, base, aluminum clips/splice retainer, or aluminum bracket. Recycled content also varies by model. Contact C/S factory for details.

**Polyethylene Terephthalate Glycol (PETG)**

No warnings found on HPD Priority lists

PETG assessed GREEN under Cradle to Cradle® Protocol as Preferred (little to no risk to human health and/or environmental health). PETG ranges 8.00-100.00% of unit weight depending on model and manufacturing variables. This ingredient may serve the role(s) – cover/sheet, regrind bumper, cover splice, or gasket. Contact C/S factory for details.

**ACRYLONITRILE-BUTADIENE-STYRENE COPOLYMER**

None found

Acrylonitrile-Butadiene-Styrene Copolymer assessed YELLOW under Cradle to Cradle® Protocol as Acceptable (one or more moderate risks to human health and/or environmental health; suitable for continued use until a GREEN alternative is found). ABS ranges 0.00-21.00% of unit weight depending on model and manufacturing variables. This ingredient may serve the role(s) – end cap, brackets, splice bar, or cushions.
### Polyethylene Terephthalate Glycol (PETG)

- **CAS Number:** 25640-14-6
- **Percentage:** 3.61%
- **HPD Priority:** N

**Film base resin assessed GREEN under Cradle to Cradle® Protocol as Preferred (little to no risk to human health and/or environmental health). This ingredient only covers the standard 24 Chameleon pattern offerings. PETG film base resin ranges .00-25.2% of the unit weight depending on the model and manufacturing variables. This range starts at 0 since this ingredient is not applicable to solid colored Acrovyn 4000 products.**

### Undisclosed (Proprietary Additive)

<table>
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<tr>
<th>Unknown</th>
<th>1.32 %</th>
<th>N</th>
<th>N</th>
<th>Flame Retardant - PETG Cover/Sheet and Regrind Bumper</th>
</tr>
</thead>
</table>

**Chemical identity is considered protected intellectual property by C/S but has been disclosed to MBDC (an accredited assessor for the Cradle to Cradle Products Innovation Institute). Additive assessed YELLOW under Cradle to Cradle® Protocol as Acceptable (one or more moderate risks to human health and/or environmental health; suitable for continued use until a GREEN alternative is found). Additive ranges 0.00-8.40% of unit weight depending on model and manufacturing variables.**

### Undisclosed (Colorant)

<table>
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<tr>
<th>Unknown</th>
<th>1.06 %</th>
<th>N</th>
<th>N</th>
<th>Colorant - PETG Cover/Sheet</th>
</tr>
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</table>

**Colorants for 53 Cradle to Cradle Certified(TM) Gold solid color offerings have been assessed YELLOW under Cradle to Cradle® Protocol as Acceptable (one or more moderate risks to human health and/or environmental health; suitable for continued use until a GREEN alternative is found). Colorants for 15 Cradle to Cradle Certified(TM) Silver solid color offerings and 24 Chameleon patterns have been assessed RED under the Cradle to Cradle® Protocol as Problematic (one or more significant risks to human and/or environmental health, should be phased out as quickly as possible; suitable for continued use until a YELLOW alternative is found). Colorant ranges 0.00-12.00% of unit weight for Acrovyn 4000 Rigid Sheet and Wall Guards depending on model and requirements. View standard solid color offerings and Cradle to Cradle certification levels at [http://www.csgroup.com/acrovyn/wall-protection/finish/Acrovyn%20Solid%20Colors](http://www.csgroup.com/acrovyn/wall-protection/finish/Acrovyn%20Solid%20Colors). View standard Chameleon pattern offerings at [http://www.csgroup.com/acrovyn/wall-protection/finish/Chameleon%20Simulated%20Wood%20and%20Metal](http://www.csgroup.com/acrovyn/wall-protection/finish/Chameleon%20Simulated%20Wood%20and%20Metal).**

### NYLON 6

- **CAS Number:** 25038-54-4
- **Percentage:** 1%
- **HPD Priority:** LT-U

**Component of Quick Lock Mounting Bracket used in certain handrail models assessed YELLOW under Cradle to Cradle® Protocol as Acceptable (one or more moderate risks to human health and/or environmental health; suitable for continued use until a GREEN alternative is found). Nylon 6 ranges 0.00-2.00% of unit weight depending on model. This range starts at 0 since this ingredient is not applicable to Acrovyn 4000 sheet and some wall guard models.**

### Undisclosed (Primer)

<table>
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<tr>
<th>Unknown</th>
<th>0 %</th>
<th>N</th>
<th>N</th>
<th>Decorative Film Primer</th>
</tr>
</thead>
</table>

**Film primers used for 18 of the standard Chameleon pattern offerings assessed YELLOW under Cradle to Cradle® Protocol as Acceptable (one or more moderate risks to human health and/or environmental health; suitable for continued use until a GREEN alternative is found). Film primers used for 4 of the standard Chameleon pattern offerings assessed RED under the Cradle to Cradle® Protocol as Problematic (one or more significant risks to human and/or environmental health, should be phased out as quickly as possible; suitable for continued use until a YELLOW alternative is found). Film primers for the remaining 2 standard Chameleon pattern offerings assessed GRAY under the Cradle to Cradle® Protocol as Incomplete (either ingredient data is not complete or evaluation data is not available for one or more criteria. Data should be completed or ingredient should be phased out of use). This ingredient only covers the standard 24 Chameleon pattern offerings. Film primer ranges 0.00-0.003% of weight depending on model and color requirements. This range starts at 0 since this ingredient is not applicable to solid colored Acrovyn 4000 products.**

### Undisclosed (Top Coating)

<table>
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<th>Unknown</th>
<th>0 %</th>
<th>N</th>
<th>N</th>
<th>Decorative Film Top Coating</th>
</tr>
</thead>
</table>

**Film top coating assessed RED under the Cradle to Cradle® Protocol as Problematic (one or more significant risks to human and/or environmental health, should be phased out as quickly as possible; suitable for continued use until a YELLOW alternative is found). This ingredient only covers the standard 24 Chameleon pattern offerings. Top coating ranges 0.00-0.034% of the unit weight depending on model and color requirements. This range starts at 0 since this ingredient is not applicable to solid colored Acrovyn 4000 products.**

### Undisclosed (Ink)

<table>
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<th>PC</th>
<th>N</th>
<th>Decorative Film Ink</th>
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**Film top coating assessed RED under the Cradle to Cradle® Protocol as Problematic (one or more significant risks to human and/or environmental health, should be phased out as quickly as possible; suitable for continued use until a YELLOW alternative is found). This ingredient only covers the standard 24 Chameleon pattern offerings. Top coating ranges 0.00-0.034% of the unit weight depending on model and color requirements. This range starts at 0 since this ingredient is not applicable to solid colored Acrovyn 4000 products.**
Film inks assessed RED under the Cradle to Cradle® Protocol as Problematic (one or more significant risks to human and/or environmental health, should be phased out as quickly as possible; suitable for continued use until a YELLOW alternative is found). This ingredient only covers the standard 24 Chameleon pattern offerings. Ink ranges .000-.031% of the unit weight depending on model and color requirements. This range starts at 0 since this ingredient is not applicable to solid colored Acrovyn 4000 products.

## CERTIFICATIONS AND COMPLIANCE

**Certifying Party** = First: Manufacturer’s self-declaration; Second: Verification by trade association or other interested party; Third: Verification by independent certifier (ideal).

**Applicable facilities** = Manufacturing sites to which testing applies.

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard or Certification</th>
<th>Certifier or Laboratory</th>
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<td>Certifier or Laboratory</td>
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### Applicable Facilities

### Notes

**VOC Emissions**

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</tr>
</tbody>
</table>

- **Manufacturer Claim**
  - 1st party manufacturer claim
  - 2009-10-05

- **US Production**

**VOC Content**

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard or Certification</th>
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<tr>
<td>Certifier or Laboratory</td>
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- **N/A**

**Recycled Content**

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<tr>
<td>Certifier or Laboratory</td>
<td>Certificate URL</td>
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</table>

- **Not tested**

**Multi-attribute**

<table>
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<th>Type</th>
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</tr>
<tr>
<td>Certifier or Laboratory</td>
<td>Certificate URL</td>
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</tbody>
</table>

- **MBDC Cradle to Cradle - Silver (Version 2.1.1)**
  - 3rd party independent certification
  - 2014-05-11
  - 2015-05-10

- **McDonough Braungart Design Chemistry (MBDC)**

**United States Facilities**

Walnut.

<table>
<thead>
<tr>
<th>Multi-attribute MBDC Cradle to Cradle - Gold (Version 2.1.1)</th>
<th>McDonough Braungart Design Chemistry (MBDC)</th>
</tr>
</thead>
</table>

**United States Facilities**


**ACCESSORY MATERIALS**

This section is for additional products required by warranty or recommended by the manufacturer for installation (such as adhesives, fasteners, or factory coatings) or for maintenance, cleaning, or operations. Refer to Health Product Declarations, published separately, for a complete view of these products. Note: This declaration is not intended to address hazards of the installation process.

<table>
<thead>
<tr>
<th>Required or Recommended Product</th>
<th>URL for Companion Health Product Declaration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Condition when required or recommended and/or other notes</strong></td>
<td></td>
</tr>
<tr>
<td>Acrovyn Wall Covering Trims</td>
<td></td>
</tr>
<tr>
<td>As required for preferred installation for rigid sheet. Available for models: .040 WCN and .060 WCN.</td>
<td></td>
</tr>
<tr>
<td>Mounting Hardware</td>
<td></td>
</tr>
<tr>
<td>Required for warranted installations of profiles.</td>
<td></td>
</tr>
<tr>
<td>Optional Crash Rail and Handrail Accent Reveals</td>
<td></td>
</tr>
<tr>
<td>As required for preferred installation of Crash Rail and Handrails. Available for models: BCR50N, BCR80N, HRB20CMN, HRB20N, HRB35CMN, HRB35N, HRO6C, SCR50MN, SCR50N, SCR80MN, and SCR80N.</td>
<td></td>
</tr>
<tr>
<td>COLORFLEX II CF9001 - Color Matching Caulk (VOC 20.00 g/L)</td>
<td></td>
</tr>
<tr>
<td>As required for preferred installation of rigid sheet.</td>
<td></td>
</tr>
<tr>
<td>Acrovyn Interiors Water-Based Mastic Primer (VOC 0.00 g/L)</td>
<td></td>
</tr>
<tr>
<td>Used for installation of rigid sheet as required for wall conditions.</td>
<td></td>
</tr>
<tr>
<td>Acrovyn Interiors Heavy-Duty Water Based Mastic Adhesive (VOC 0.00 g/L)</td>
<td></td>
</tr>
<tr>
<td>Required for warranted installations of rigid sheet.</td>
<td></td>
</tr>
<tr>
<td>Acrovyn 4000 Bracket Enclosure</td>
<td></td>
</tr>
<tr>
<td>As required based on installation preferences. Available for models: HRB20N and HRB35N.</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES**

HPD percentages reflect the ingredients of Construction Specialties’ Handrail with ABS Quick Lock Bracket model HRB-20N in 386 Honduras Mahogany. This specific model is Cradle to Cradle Certified™ Silver (v2.1.1). To see ranges for all colors and models, refer to the comments of each corresponding -
material ingredient. Visit http://transparency.c-sgroup.com to see more specific material ingredients percentages for other Cradle to Cradle Certified™ Gold and Silver Acrovyn® 4000 Wall Protection models.

- **Rigid Sheet**: WC-40N, WC-60N, WC-75N, RS-40AN, RS-60AN, TFC-40AN, TFCH-40AN, TFC-60AN, and TFCH-60AN
- **Corner Guards**: FS-10MN, FS-10N, FS-20N, SFS-20N, SM-10N, SM-20AN, SM-20MN, SM-20N, SSM-10N, SSM-20AN, and SSM-20N
- **Handrails**: HRB-20CMN, HRB-20N, HRB-35CMN, and HRB-35N

Referenced Cradle to Cradle® assessment levels are per MBDC Material Health assessments prepared May 2014 which covers most Acrovyn 4000 rigid sheet and wall guard products in standard solid colors and Chameleon pattern decorative film.

Construction Specialties’ MBDC and Cradle to Cradle documentation is available on our Transparency Label website http://transparency.c-sgroup.com; refer to certificates and reports for Acrovyn 4000 Wall Protection.

Cradle to Cradle Certified™ is a third-party sustainability label that verifies Construction Specialties’ commitment to avoid products that are harmful to humans, animals, and the environment when there are reasonable alternatives. The Cradle to Cradle® design protocol calls for materials to be defined as technical or biological nutrients that are safe and healthy for humans and the environment.

C/S’ Cradle to Cradle Certified™ Gold and Silver Acrovyn 4000 products meet the requirements of the Living Building Challenge Materials Red List, a list of chemicals identified by the International Living Future Institute as ones that should be phased out of production due to health concerns.

These products can also contribute to LEED® v4 Materials and Resources Credit, Option 1 building product disclosure and Option 2 optimization. These credits were added to LEED v4 to improve environmental and health performance of building material selections through transparency.

C/S is currently pursuing first-party certification per CDPH Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers v1.1 (ANSI/BIFMA M7.1)

Construction Specialties’ products are listed on GreenWizard.

**Data Source Documents and Links**

- Acrovyn® Wall and Door Protection Catalog
- Cradle to Cradle Product Innovation Institute – Product Certification
- Statement of Compliance Living Building Challenge – Red List
- GreenWizard
- Construction Specialties, Inc. Environmental Policy
- Acrovyn 4000 Data Sheet
- Acrovyn 4000 MSDS
- C/S Acrovyn Chameleon Collection Limited Lifetime Warranty
- Five Year Limited Warranty Policy
- Acrovyn Wall Protection System Care & Maintenance