

## STRAW MAN GREEN CLEANING CRITERIA

| ISSUE   | CRITERIA  | CRITERIA DEFINITION   | DOCUMENTATION   | YOUR NOTES |
|---|---|---|---|------------|
| <b>HUMAN HEALTH FACTORS</b>   |   |   |   |            |
| Traditional commercial cleaning products may contain human toxins (chronic and acute) | <b>HH #1<br/>Must Not Be Toxic To Humans</b>                          | The product in its undiluted form must not be toxic to humans.  | Independent third-party certification and verification  |            |
| Traditional commercial cleaning products may contain human carcinogens                | <b>HH #2<br/>Must Not Be Human Carcinogenic</b>                       | The product in its undiluted form must not contain any ingredients that are known, probable or suspected carcinogens.   | Third-party verification that the product contains no known carcinogens as listed by NTP, IARC or OSHA. |            |
| Traditional commercial cleaning products may contain teratogens                       | <b>HH #3<br/>Must Not Be Teratogenic</b>                              | The product in its undiluted form must not contain any ingredients that are known to be teratogens.   | Third-party verification that the product contains no known teratogens.                                 |            |
| Traditional commercial cleaning products may contain mutagens                         | <b>HH #4<br/>Must Not Be Mutagenic</b>                                | The product in its undiluted form must not contain any ingredients that are known to be mutagens.   | Third-party verification that the product contains no known mutagens.                                   |            |
| Traditional commercial cleaning products may contain skin and eye irritants           | <b>HH #5<br/>Must Not Be A Skin or Eye Irritant</b>                   | The product in its undiluted form must not be corrosive to the skin or eyes. Products packaged in closed loop, no chemical contact containers must be tested as used.   | Independent third-party certification and verification  |            |
| Traditional commercial cleaning products may contain skin sensitizers                 | <b>HH #6<br/>Must Not Be A Skin Sensitizer</b>                        | The product in its undiluted form must not be a skin sensitizer as tested by the OECD Guidelines for testing chemicals, Section 406. Products packaged in closed loop, no chemical contact containers must be tested as used. | Independent third-party certification and verification  |            |
| Traditional commercial cleaning products may be harmful when absorbed by the skin     | <b>HH #7<br/>Must Have a Low Potential to Be Absorbed By The Skin</b> | The product in its undiluted form must have a low potential to be absorbed by the skin. Products packaged in closed loop, no chemical contact containers must be tested as used.  | Verify that product meets definition as having a low potential to be absorbed by the skin               |            |

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| Traditional commercial cleaning products may cause respiratory irritation  | <b>HH #8<br/>Must Have Minimal Respiratory Irritation</b> | The product in its undiluted form must have minimal respiratory irritation. Products packaged in closed loop, no chemical contact containers must be tested as used.   | Independent third-party certification and verification   |            |
| <b>ENVIRONMENTAL HEALTH FACTORS</b>  |   |  |  |            |
| Traditional commercial cleaning products may be considered hazardous wastes  | <b>EH #1<br/>Must Not Be Regulated As Hazardous Waste</b> | The product in its undiluted form must not be regulated as hazardous waste as defined in WAC 173-303-070 or as characterized in WAC 173-303-090  | Independent third-party certification and verification that ingredients are not listed as hazardous waste by the States of Washington and Oregon |            |
| Traditional commercial cleaning products may contain organic ingredients that are not readily biodegradable                        | <b>EH #2<br/>Must Be Readily Biodegradable</b>            | Each of the organic ingredients must exhibit ready biodegradability in accordance with the OECD definition of readily biodegradable.   | Independent third-party certification and verification   |            |
| Traditional commercial cleaning products may contain ingredients that are toxic to aquatic life                                    | <b>EH #3<br/>Must Be Non Toxic To Aquatic Life</b>        | The product as used must not be toxic to aquatic life. A compound is considered not toxic to aquatic life if it meets one or more of the following criteria: Acute LC50 for algae, daphnia, or fish at 100 mg/L or more. | Independent third-party certification and verification   |            |
| Traditional commercial cleaning products may contain ingredients that can affect the endocrine systems of birds, fish and mammals. | <b>EH #4<br/>Must Not Contain Endocrine Disruptors</b>    | The product as used must not contain endocrine disruptors or modifiers including alkylphenol ethoxylates and dibutyl phthalate.  | Independent third-party certification and verification   |            |
| Traditional commercial cleaning products may contain ingredients that can bioaccumulate in the environment.                        | <b>EH #5<br/>Must Not Bioaccumulate</b>                   | The product in an undiluted form shall contain none of the persistent, bioaccumulative and toxic chemicals as listed by EPA.   | Independent third-party certification and verification   |            |

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| Traditional commercial cleaning products may contain ingredients that can contribute significantly to depletion of ozone from the protective ozone barrier.                                | <b>EH #6<br/>Must Not Contain Any Ozone Depleting Substances</b>                    | The product in an undiluted form shall not contain any ozone depleting chlorinated or halogenated compounds.   | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may be combustible and create a fire hazard   | <b>EH #7<br/>Must Not Be Flammable or Combustible</b>                               | It is desirable that the product in an undiluted form shall not be combustible. A product is considered to be combustible if it has a flash point below 200 <sup>0</sup> F                           | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may contain ingredients that can contribute significantly to the production of photochemical smog, tropospheric ozone or poor indoor air quality. | <b>EH #8<br/>Must Have Acceptable VOC Levels</b>                                    | It is desirable that the product as used must have a VOC percentage content determined by the California Air Resources Board (CARB) Method 310 and comply with VOC levels for each product category. | Independent third-party certification and verification |            |
| Traditional commercial cleaning products or their ingredients may be tested on animals.  | <b>EH #9<br/>No Animal Testing</b>  | Animal testing is discouraged and should not be used for testing products unless there are no acceptable in vitro testing methods.   | Independent third-party certification and verification |            |
| <b>FORMULATION FACTORS</b>   |   |  |  |            |
| Traditional commercial cleaning products may contain added disinfecting or sanitizing agents. These agents are toxic.  | <b>F #1<br/>Must Not Contain Added Disinfectants</b>                                | It is desirable that the product in an undiluted form must not contain any intentionally added disinfectants or sanitizers.  | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may contain sodium EDTA.  | <b>F #2<br/>Must Not Be Formulated With Ethylenediamine tetraacetic acid (EDTA)</b> | It is desirable that the product in an undiluted form must not contain EDTA.   | Independent third-party certification and verification |            |

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| Traditional commercial cleaning products may contain sodium NTA which is a carcinogen.   | <p style="text-align: center;"><b>F #3</b></p> <p style="text-align: center;"><b>Must Not Be Formulated With Nitritotriacetate Acid (NTA)</b></p>    | It is desirable that the product in an undiluted form must not contain NTA.  | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may contain alkylphenol ethoxylates which are considered endocrine disruptors         | <p style="text-align: center;"><b>F #4</b></p> <p style="text-align: center;"><b>Must Not Be Formulated With Alkyl Phenol Ethoxylates (APEs)</b></p> | The product in an undiluted form must not contain alkylphenol ethoxylates.   | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may contain heavy metals that can be toxic and accumulative                           | <p style="text-align: center;"><b>F #7</b></p> <p style="text-align: center;"><b>Must Not Be Formulated With Heavy Metals</b></p>                    | The product in an undiluted form must not contain heavy metals.  | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may contain 2-butoxyethanol which is a respiratory irritant, neurotoxin and teratogen | <p style="text-align: center;"><b>F #11</b></p> <p style="text-align: center;"><b>Must Not Be Formulated With 2-butoxyethanol</b></p>                | The product in an undiluted form must not contain 2-butoxyethanol  | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may contain high levels of phosphates which can disrupt eco-systems                   | <p style="text-align: center;"><b>F #15</b></p> <p style="text-align: center;"><b>Must Not Be Formulated With Phosphates or Derivatives</b></p>      | It is desirable that the product in an undiluted form must not contain phosphates in a level of more than 0.5% as phosphorous.               | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may contain toxic dyes or colorants   | <p style="text-align: center;"><b>F #16</b></p> <p style="text-align: center;"><b>Must Not Be Formulated With Synthetic Colorants</b></p>            | It is desirable that the product not contain toxic dyes or colorants. The MSDS must identify any dyes, colorants or pigments in the product. | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may contain synthetic fragrances that can cause respiratory distress                  | <p style="text-align: center;"><b>F #17</b></p> <p style="text-align: center;"><b>Must Not Be Formulated With Synthetic Fragrances</b></p>           | It is desirable that the product not contain synthetic fragrances. The MSDS must identify any fragrances in the product.                     | Independent third-party certification and verification |            |
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| <b>DERIVATION FACTORS</b>   |  |   |  |            |
| Traditional commercial cleaning products may contain ingredients that are derived from non-renewable resources              | <b>D #1<br/>Ingredients Must Be Derived From Rapidly Renewable Resources</b> | It is desirable that the organic ingredients used in the product be derived from rapidly renewable resources  | Independent third-party certification and verification |            |
| <b>LABELING FACTORS</b>   |  |   |  |            |
| Traditional commercial cleaning products may have labels that contain information that is unclear, ambiguous and confusing. | <b>L #1<br/>Must Have Labeling For Proper Use</b>                            | It is desirable that the label on the product shall state clearly and prominently that dilution with water from the cold tap is recommended and shall state the recommended level of dilution and detailed instructions for proper use and disposal and use of PPE. | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may be packaged in containers that are not reusable or recyclable                  | <b>L #2<br/>Must Have Labeling For Recycling</b>                             | It is desirable that the product shall be packaged in containers that are readily recyclable and labeled accordingly  | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may be hazardous waste and not be properly identified on the labels                | <b>L #3<br/>Must Be Labeling For Proper Disposal</b>                         | It is desirable that the product shall be properly labeled with clear and prominent disposal information  | Independent third-party certification and verification |            |
| <b>PACKAGING FACTORS</b>  |  |   |  |            |
| Traditional commercial cleaning products may be packaged as ready-to-use that require the use of more packaging materials   | <b>P #1<br/>Concentrated</b>   | It is desirable that the product be provided in a concentrated form.  | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may be packaged in non-recyclable containers producing more solid waste            | <b>P #2<br/>Packaged in Recyclable Containers</b>                            | It is desirable that the product be provided in recyclable containers   | Independent third-party certification and verification |            |

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| Traditional commercial cleaning products may be packaged in non-refillable containers producing more solid waste   | <b>P #3<br/>Packaged in Readily Refillable Containers</b>   | It is desirable that the product be provided in refillable containers   | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may be packaged in containers that contain zero post-consumer resin   | <b>P #4<br/>Recycled Content in Containers</b>  | It is desirable that the product be provided in containers that have been manufactured using with a minimum of 20% PCR                                  | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may be packaged in plastic containers that are not Type 1 or 2 Recyclable   | <b>P #5<br/>Must Be Packaged in Type 1 or 2 Plastic Containers</b>                                    | It is desirable that the product be provided in containers that are Type 1 or 2 Recyclable Plastic  | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may be packaged in aerosol containers that can release VOCs, contribute to poor air quality and be flammable gasses under pressure associated to aerosol propellants. | <b>P #6<br/>Must Not Be Packaged in an Aerosol Can</b>  | It is desirable that the product be packaged in non-aerosol containers  | Independent third-party certification and verification |            |
| Traditional commercial cleaning products may be packaged in containers that readily expose their chemical contents to workers and indoor air   | <b>P #7<br/>Engineering of Container is Protective From Minimal Exposure to Concentrated Contents</b> | It is desirable that the product be packaged in closed loop, no chemical contact systems to prevent exposure to workers and the indoor air environment. | Independent third-party certification and verification |            |
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| <b>EFFICACY FACTORS</b>  |  |  |  |            |
| Traditional commercial cleaning products are effective for their intended purposes   | <b>E #1<br/>Effective When Diluted</b>         | It is desirable that the product properly perform for its intended use or uses   | Independent third-party certification and verification |            |
| Traditional commercial cleaning products are typically limited and specific in their application and purposes                                      | <b>E #2<br/>Multi-Purpose Use</b>              | It is desirable that the product be multi-use to reduce the need for a multitude of product inventory and packaging  | Independent third-party certification and verification |            |
| <b>TRAINING AND WORKER RIGHT-TO-KNOW FACTORS</b>   |  |  |  |            |
| Product manufacturers and distributors frequently do not offer or provide training or training materials in the proper use and safety requirements | <b>T #1<br/>Safety Training</b>                | It is desirable that the manufacturer, its distributor or a third party shall offer training or training materials in the proper use of the product including safety training. | Independent third-party certification and verification |            |
| Product MSDSs frequently are difficult to read and lack comprehensive information about human and environmental health                             | <b>T #2<br/>ANSI Formatted MSDS</b>            | It is desirable that the product MSDS be formatted in the ANSI format which includes expanded human health and environmental information                                       | Independent third-party certification and verification |            |
| Product MSDS and label for many commercial cleaning products do not contain HMIS ratings   | <b>T #3<br/>HMIS Ratings</b>                   | It is desirable that the product MSDS and/or label contain an HMIS or NFPA rating chart  | Independent third-party certification and verification |            |
| Many product MSDSs and labels are only available in the English language   | <b>T #4<br/>Multi Lingual Labels and MSDSs</b> | It is desirable that the product MSDS and label text be made available in multi languages including but not limited to english and spanish                                     | Independent third-party certification and verification |            |