
Green Seal is proposing a revision to a set of standards to add annexes that cover the following product categories: products that are powders, solids, or non-aqueous liquids; products that contain microorganisms; and products that contain enzymes. The proposed revision would add these annexes to the following Green Seal Standards:

- Green Seal Standard for General-Purpose, Bathroom, Glass, and Carpet Cleaners Used for Household Purposes, GS-8 (all three annexes)
- Green Seal Standard for General-Purpose, Bathroom, Glass, and Carpet Cleaners Used for Industrial and Institutional Purposes, GS-37 (all three annexes)
- Green Seal Standard for Soaps, Cleansers, and Shower Products, GS-44 (all three annexes)
- Green Seal Standard for Specialty Cleaning Products for Household Use, GS-52 (powders/solids/non-aqueous liquids annex addition and microorganism annex revision; enzyme annex already included)
- Green Seal Standard for Specialty Cleaning Products for Industrial and Institutional Use, GS-53 (powders/solids/non-aqueous liquids annex addition and microorganism annex revision; enzyme annex already included)

Green Seal has identified several product categories that require specific criteria beyond those contained in the existing standards. The annex for Powders, Solids, and Non-Aqueous Liquids is a new annex being proposed with this revision. The annexes for Products Containing Microorganisms and Products Containing Enzymes were developed through an extensive stakeholder review and approval process during the development of GS-52 and GS-53 in 2011. Background information regarding those annexes can be found on that project webpage: http://www.greenseal.org/GS52Development.aspx. However, some revisions to the microorganism annex are being proposed, as summarized in this document. The enzyme annex is proposed unchanged from the GS-52 and GS-53 standards.

Background Information

Powders/Solids/Non-Aqueous Liquids Annex: Products with limited water content or no water content such as powders, solids, or non-aqueous liquids can provide advantages in the environment and marketplace. There is the benefit of reducing the product’s environmental footprint, by using less water, less packaging, and saving on the energy required to ship and store the products. For the end user, these products can reduce waste, offer precise portion control, and control chemical costs. However, with these benefits comes the downside of potentially having a product with more hazards such as the potential to be toxic by oral ingestion, to cause serious eye damage, or to cause skin corrosion. Green Seal is proposing to allow powders, solids, and non-aqueous liquids with these potential hazards to be certified if appropriate protections are taken.

For example, the acute oral mammalian toxicity for these types of products in the marketplace falls within the 1,000 to 4,000 mg/kg range. These levels fall across two ranges of acute toxicity hazard categories in the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Category 5 (greater than 2000 mg/kg and less than 5000 mg/kg) and Category 4 (greater than 300 mg/kg and less than or equal to

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2000 mg/kg). For Category 5 in the GHS, the intent is to identify materials with a relatively low acute toxicity hazard, but which under certain circumstances may present danger to vulnerable populations. Category 4 would be materials with a higher acute toxicity hazard. Therefore, if products are allowed in Green Seal standards under the classification of these categories, additional protection, especially for vulnerable populations, should be considered in the formulation, packaging, and labeling. The following information provides the options considered for the protection and those proposed for the annex.

**Formulation Considerations:** When products are formulated with the least amount of water possible, the level of toxicity may increase. It may be possible to include deterrent ingredients, like bittering agents, to potentially ward off consumption of the product. However, Green Seal has found that the use of bittering agents to ward off consumption of a product is not an appropriate protection measure. The data in the literature do not support the concept that adding a bittering agent will result in less product consumed or fewer instances of poisoning. As a result, Green Seal is not requiring the use of bittering agents in products.

**Packaging Considerations:** For products that have hazards, packaging can offer a physical means of deterring exposure. There are two main exposure routes to a packaged product, 1) during accidental or unplanned access to the product during storage, and 2) when the product is being dispensed for use.

Green Seal proposes two packaging options to protect against possible access during storage. One option would be to utilize child-resistant packaging. The Home Safety Council states that since the passage of the Poison Prevention Packaging Act of 1970, child-resistant packaging has been the only prevention strategy that has been documented in the public health literature to have successfully reduced unintentional poisoning deaths and non-fatal injuries. Child-resistant packaging is widely available for many packaging types, but limited for others. For example, tablets within a box or pouch can be individually wrapped in a child-resistant package such as an ASTM D3475 Type VIII semi-rigid blister which requires multiple steps or a tool to open. Products using bottles can be contained in a child-resistant package such as an ASTM D3475 Type I or II which requires multi-step tasks to open the package. The most challenging packaging type is for powdered products. These products are most typically sold in boxes with a spout or tubs with a lid. These types of packaging are not child-resistant. There is evidence in the literature that it is difficult to ingest large quantities of powders. However, the preference would be to provide these powdered products in a child-resistant package, such as a small mouth HDPE bottle with a child-resistant closure. Testing of child-resistant packaging would be required per ISO 8317 and EN 862.

The other packaging option would be to prove that the package is durable by showing it is able to withstand falls, is spill resistant, and is practically inaccessible. Spill resistant means that the package does not spill when tipped over, turned upside down, or shaken and doesn’t leak when exposed to water. Practically inaccessible means that the package does not allow for easy access/exposure of the product during routine handling of the package, such as while transferring from shipping cartons, during storage, or when opened (e.g. the user still cannot get at the contents, or the contents are protected or wrapped). Testing would be required to confirm these attributes of the packaging.

See Attachment 1 for additional information on packaging.

Regarding exposure concerns during product dispensing, manufacturers are able to demonstrate that they can minimize the hazards during expected situations. Such testing includes dissolution testing and pressure testing on these product forms to show that exposure during incidental contact when dispensing the product is not likely. Therefore, Green Seal will require such documentation.

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4 http://www.homesafetycouncil.org/aboutus/Research/re_sohs_w015.asp
**Labeling Considerations:** For products that have hazards, the label should clearly indicate such hazards. The Federal Hazardous Substance Act (FHSA), administered by the U.S. Consumer Product Safety Commission (CPSC), contains requirements for labeling of hazardous products, such as DANGER, WARNING, Keep out of reach of children, etc. There is an exemption consideration for substances falling in the toxicity range of 500 to 5000 mg/kg, upon proof that such labeling is not needed because of the physical form of the substances (solid, a thick plastic, emulsion, etc.), the size or closure of the container, human experience with the article, or any other relevant factors. However, given the potential for access, exposure, and potential ingestion of a product by children in any form, Green Seal proposes that warning statements and precautions be required on all products for household or industrial and institutional use with skin corrosion, risk of serious eye damage, or acute oral mammalian toxicity in the range of 500 to 5000 mg/kg.

**Microorganism Annex:** The annex currently in GS-52 and GS-53 focuses on the use of microorganisms to serve the primary cleaning function of the product. Since the development of this annex additional information has been reviewed by Green Seal regarding the use of these materials to serve a secondary function in the product. Proposed revisions to the annex have been made to include this consideration, namely that when microorganisms serve a secondary function they are usually used at a lower level than when used for the primary cleaning function and thus do no need to meet a minimum colony forming unit requirement. Other non-substantive changes were also made to the microorganism annex. Specifically, component was replaced with generic text that describes the same concept and the definition for pathogenic microorganisms was further clarified. All substantive proposed changes to this annex are highlighted in red text.

**Proposed Revisions**

The annexes for Products as Powders/Solids/Non-Aqueous Liquids, Products Containing Microorganisms, and Products Containing Enzymes are included below. Please note that in many cases generic references are used in these versions of the annexes; however, when the annex is actually added to a specific standard some of the language may need to be customized to work within the existing standard language. A statement such as "Refer to Annex __, for potential alternate thresholds for products as powders/solids/non-aqueous liquids." will also be added to the relevant criteria.

**Products as Powders/Solids/Non-Aqueous Liquids Annex**

Products as Powders/Solids/Non-Aqueous Liquids. Powder/solid/non-aqueous liquid products that meet all of the following requirements may be exempt from the skin and eye corrosion criterion (reference section number in specific standard) and may have an alternate threshold of 500 mg/kg for oral acute mammalian toxicity (reference section number in specific standard) herein.

A. **Packaging Requirements.** The product shall meet the requirements under either A(1) Child-Resistant Packaging Requirements or A(2) Packaging Durability Requirements.

   (1) **Child-Resistant Packaging.** The product shall be packaged in child-resistant packaging following the ASTM D3475 classification. Child-resistant packaging must be tested per ISO 8317 or EN 862.

   (2) **Packaging Durability.** The product shall meet the following requirements to be considered durable.

      i. **Drop Test.** The primary package, including any lid, shall be durable as demonstrated by passing the following drop test: drop the product from a height of 48 inches with 4 drops scenarios: flat-on-bottom, flat-on-top, flat-on-side, and corner; with passing results including that the packages must not leak, contents must be retained, and no damage to the outer package likely to adversely affect safety must be sustained.

      ii. **Practically Inaccessible.** The primary package shall not allow for easy access/exposure of the product during routine handling of the package, such as while transferring from shipping cartons, during storage, or after opening (e.g. the user still cannot get at the contents, or the contents are protected or wrapped).
iii. Spill Resistant. The primary package shall not spill when tipped over, turned upside down, or shaken and shall not leak when exposed to water.

B. Dispensing Exposure Requirements. Documentation shall be provided to demonstrate that expected dispensing situations will not result in incidental contact exposure to oral consumption/toxicity, skin corrosion, or eye corrosion.

C. Labeling Requirements. The product shall include the following on the product label in a conspicuous location:
   - The signal word “DANGER” written in red text on products which cause skin corrosion, cause serious eye damage, or are highly toxic, with the applicable precautionary measures:
     o May cause skin corrosion, do not get on skin
     o May cause serious eye damage, do not get in eyes
     o Harmful if swallowed, do not ingest
   - The signal word “WARNING” or “CAUTION” on a product which is toxic, with the applicable precautionary measures:
     o Harmful if swallowed, do not ingest
   - Instruction, when necessary or appropriate, for first-aid treatment
   - The statement “KEEP OUT OF REACH OF CHILDREN” or its practical equivalent in capitalized text

Definitions (to be added to the standards for the Products as Powders/Solids/Non-Aqueous Liquids Annex)

Child-Resistant Packaging. Child-resistant packaging, as defined by the Poison Prevention Packaging Act, is packaging that is designed or constructed to be significantly difficult for children under five years of age to open or obtain a toxic or harmful amount of the substance contained therein within a reasonable time, and not difficult for normal adults to use properly, but does not mean packaging which all such children cannot open or obtain a toxic or harmful amount within a reasonable time. Code of Federal Regulations, Title 16, Part 1700 and Title 40, Part 157.

Highly Toxic. A product having an acute mammalian toxicity oral lethal dose LD$_{50}$ greater than or equal to 500 mg/kg or less than or equal to 2,000 mg/kg is considered highly toxic for the purposes of this standard.

Powders/Solids/Non-Aqueous Liquids. Products that cannot be formulated with additional water due to the form of the product, including, but not limited to: powdered detergents, solid bar soaps, detergents in tablet form, detergents as extruded or cast solids, non-aqueous liquid products in a dissolvable shell.

Primary Package. Package material that physically contains and contacts the product, not including the cap or lid. For products that meet the annex requirements for Products as Powders/Solids/Non-Aqueous Liquids, the primary package is the material that holds the individually packaged product units or the entire product.

Serious Eye Damage. The production of tissue damage in the eye, or serious physical decay of vision, following application of a test substance to the anterior surface of the eye, which is not fully reversible within 21 days of application. This includes substances identified under Category 1 for Serious Eye Damage/Eye Irritation (H318) under the GHS.

Skin Corrosion. The production of irreversible damage to the skin, namely visible necrosis through the epidermis and into the dermis, following the application of a test substance for up to 4 hours. Corrosive reactions are typified by ulcers, bleeding, bloody scabs, and, by the end of observation at 14 days, by discoloration due to blanching of the skin, complete areas of alopecia, and scars. This includes substances designated as Category 1A, 1B or 1C for Skin Corrosion/Irritation (H314) under the GHS.

Toxic. A product having an acute mammalian toxicity oral lethal dose LD$_{50}$ greater than or equal to 2,000 mg/kg or less than or equal to 5,000 mg/kg is considered toxic for the purposes of this standard.
Products Containing Microorganisms Annex

Products Containing Microorganisms. Products that contain microorganisms shall meet all of the following, with any specified testing conducted with an objective, scientifically-validated method under controlled and reproducible laboratory conditions (and appropriate testing details provided to the certification program):

A. Genetically Modified Microorganisms (GMM) in Microbial Products. The presence of genetically modified microorganisms (GMM) as a deliberate addition or as a contaminant above 0.01% in the finished product is prohibited.

B. Microorganism Biosafety. All microorganisms shall be classified as World Health Organization (WHO) Risk Group 1 or equivalent biosafety designation. For strains that do not appear on any international biosafety designation lists, alternative means may be acceptable; consultation with the certifying organization may be required.

C. Microorganism Strain Identification. Microorganism strains shall be identified through a taxonomic review (e.g., genetic or phenotypic analysis) that is provided by a full-service culture collection listed with the World Federation of Culture Collections, whether or not the strain is part of the collection.

D. Absence of Contaminants. Pathogenic microorganisms shall not be present in the microbial strain, finished product, or at the end of the product’s intended shelf life. Testing for the presence of pathogenic microorganisms shall be conducted according to the Joint FAO/WHO Expert Committee on Food Additives (JECFA) Combined Compendium of Food Additive Specifications standard microbiological analytical methods or comparable method and a Certificate of Analysis shall be provided to the certification program.

E. Effective Prevention Measures and Treatment. All microorganisms shall be demonstrated to be susceptible to the following prevention and treatment measures:

- Anti-microbial agents, as demonstrated by testing the microbial strain against an acceptable substance (i.e., an EPA general disinfectant, Center for Disease Control (CDC) low-level disinfectant, or a registered antimicrobial agent by Health Canada) in accordance with the EPA Office of Pesticide Programs (OPP) Standard Operating Procedure (SOP) or the AOAC International (AOAC) Use Dilution Method for Testing Disinfectants, SOP Number: MB-05-04
- Each of the five major antibiotic classes (aminoglycoside, macrolide, beta-lactam, tetracycline and fluoroquinolones), as demonstrated by testing the microbial strain in accordance with Beckman Dickinson BBL antimicrobial susceptibility disc method

F. Microbial Count. A microorganism used to serve the primary cleaning function in the undiluted product shall have a plate count that is greater than or equal to $1 \times 10^7$ colony forming units (CFU) per milliliter for liquid products and $1 \times 10^9$ CFU per gram for solid products. A total plate count shall be conducted in accordance with the methods for microbiological analyses listed in the JECFA Combined Compendium of Food Additive Specifications or comparable method. An exception shall be made for microorganisms used to serve a secondary function in the undiluted product.

G. Spray Packaging. Products containing microorganisms in spray packaging, or designed for use in spray packaging shall demonstrate airborne enzyme exposure for users below 1 ng/m$^3$ when sampling is conducted according to the protocol described in the international Association for Soaps, Detergents and Maintenance Products (AISE) document “Exposure measurements of enzymes of risk assessment of spray products.”

H. Labeling Requirements. Products containing microorganisms shall include the following on the product label:

- A declaration that the product contains microorganisms
- A statement that immune-compromised individuals should avoid exposure to products containing microorganisms from both direct use and incidental contact during or shortly after application to these products, especially when the treated areas are still wet
• Contact with open cuts or sores should be avoided
• Users should wash their hands after using the product
• Instructions that microorganisms may not be effective in the presence of antimicrobial agents such as chlorine bleach
• Instructions that the product shall not be used on food-contact surfaces
• Instructions that products containing microorganisms should not be sprayed directly into the air

Definitions (to be added to the standards for the Products Containing Microorganisms Annex)

Aerosol Packaging. A package that requires a pressurized propellant to dispense product through a nozzle.

Antimicrobial Agent. A substance intended to disinfect, sanitize, reduce, or mitigate growth or development of microorganisms and protect inanimate objects, industrial processes or systems, surfaces, water, or other chemical substances from contamination, fouling, or deterioration caused by bacteria, viruses, fungi, protozoa, algae, or slime.

Colony Forming Unit (CFU). A measure of bacteria concentration assuming that each bacterium is capable of forming a colony.

Genetically Modified Microorganism (GMM). A microorganism in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination. The methods or techniques by which GMM are produced are listed by the European Commission Directive 2009/41/EC on the Contained Use of Genetically Modified Microorganisms.

Microorganism. An organism that cannot be seen by the naked eye (microscopic organisms) including, but not limited to, bacteria, fungi, archaea, and protists. Also included in this category are viruses or virus-like particles, although they are generally regarded as non-living.

Package. This includes the primary package and any secondary package used for the product.

Pathogenic Microorganism. For the purposes of this standard this includes microorganisms that cause disease, including, but not limited to: coliforms, Escherichia coli, Salmonella, Staphylococcus aureus, Pseudomonas aeruginosa, and some yeasts and molds.

Primary Cleaning Function. For the purposes of this standard, a cleaning product’s primary function is to remove soil.

Secondary Function. For the purposes of this standard, the secondary function of a cleaning product may be to enhance the primary cleaning function through bubble or foam formation or to provide some other added functional enhancement (e.g. longer-term cleaning effect).

Spray Packaging. A package that dispenses the product through a nozzle and the product is in small droplets (i.e., a spray). It does not require a pressurized propellant to dispense the product.

World Health Organization (WHO) Risk Group 1. Microorganisms that are unlikely to cause human or animal disease under the basis for classification defined by the World Health Organization in the Laboratory Biosafety Manual. In the case that a particular strain has conflicting risk group designations on various international lists, the most hazardous (highest level) designation will be utilized. The biosafety designation lists that will be consulted include:

• Australia/New Zealand
• Belgium
• Switzerland
• United Kingdom
• Germany
• United States Department of Health and Human Services, National Institutes of Health (NIH)
Products Containing Enzymes Annex

Products that contain enzymes shall meet all of the following:

A. Enzyme Form. Enzymes in the product shall be in liquid form or an encapsulated solid (or other dust-free solid) with a minimum diameter of 0.15 mm. Smaller diameters may be permitted for solid products if they are demonstrated to result in airborne enzyme concentrations equivalent to or less than encapsulated solids with a 0.15mm diameter.

B. Enzyme Source. The source from which enzymes were derived shall be identified to a species level and disclosed to the certification program.

C. Enzyme Source Microorganisms. For enzymes derived from microorganisms, documentation shall be provided that the source microorganism is absent from the finished product. Test methodology and results shall be documented in sufficient detail and provided to the certification program. If the product does not conform to this provision, then all microorganisms shall meet the requirements in section Annex C herein.

D. Sensitization and Asthma. Enzymes as a deliberate addition or as a contaminant above 0.01% in the undiluted product are exempt from being categorized as asthmagens or respiratory sensitizers.

E. Spray Packaging. Enzyme products in spray packaging, or designed for use in spray packaging shall demonstrate airborne enzyme exposure for users below 1 ng/m³ when sampling is conducted according to the protocol described in the international Association for Soaps, Detergents and Maintenance Products (AISE) document “Exposure measurements of enzymes of risk assessment of spray products.”

F. Enzyme Labeling. Products containing enzymes shall declare clearly on the label, that the “product contains enzymes,” in addition to the listing in the ingredient line.

G. Industrial Hygiene. Documentation shall be provided to the certification organization that demonstrates that the manufacturer has implemented an industrial hygiene plan intended to minimize concentrations of and exposure to airborne enzymes (e.g., engineering controls, work practices, and personal protective equipment) and monitor the air concentrations of the enzyme/s and worker illness/sensitization due to the enzyme/s. An example of best practices that may be applicable for this plan is available at AISE.

Definitions (to be added to the standards for the Products Containing Enzymes Annex)

Asthmagen. A substance designated as an asthma causing agent by the Association of Occupational and Environmental Clinics (AOEC), which after review by AOEC have met the AOEC sensitization criteria.

Enzyme. A protein that acts as a catalyst in biochemical reactions. Each enzyme is specific to a particular reaction or group of similar reactions.

Microorganism. An organism that cannot be seen by the naked eye (microscopic organisms) including, but not limited to, bacteria, fungi, archaea, and protists. Also included in this category are viruses or virus-like particles, although they are generally regarded as non-living.

Respiratory Sensitizer. A substance designated as Category 1 for respiratory sensitization (H334), leading to hypersensitivity of the airways following inhalation under the GHS.

Spray Packaging. A package that dispenses the product through a nozzle and the product is in small droplets (i.e., a spray). It does not require a pressurized propellant to dispense the product.
Instructions for Commenting:
Green Seal is accepting comments from the public on the proposed revision until Monday, February 27, 2012 at 8PM Eastern.

Any comments outside of the scope of these changes will not be considered during this review process. The comments received on the revision under review will be responded to with a response to comments document and any outcome that results in substantive changes will be made publicly available. There will be no balloting on this revision due to its limited scope and since this process is open to the public at large, rather than a set of registered stakeholders.

Commenting will be conducted through Green Seal’s online forum. Once registered on the forum for this project, one can post comments on the proposed revision. All registered users will be able to view all the comments and the username of the commenter. There is a Help section available once you log in to the forum. Green Seal has administrative rights to the forum to ensure proper use of the online forum.

To register for the project and access the forum:
- Go to the project web page: http://www.greenseal.org/AnnexRevision.aspx
- Register for an account; for the username please use first initial and full last name (e.g., J Smith); select “Annex Additions 2012”; provide all requested information; click Register.
- You should receive a welcome email from the Green Seal Forum within one to two business days, please account for this when approaching the commenting deadline Then post your comments in the appropriate section of the standard.

If you have already registered through the forum, please email forumadmin@greenseal.org with your username and request to be added to the Annex Additions 2012 project.

If you have any questions, please contact Green Seal at (202) 872-6400 or email standards@greenseal.org

Thank you for your interest and assistance with this process.

Sincerely,
Stacey Koch
Project Coordinator
ATTACHMENT 1 – ADDITIONAL PACKAGING INFORMATION

With the increasing use of child-resistant packaging, an international standard was developed to avoid confusion and misunderstanding. ISO 8317: “Child-resistant packaging – Requirements and testing procedures for reclosable packages” is the international standard for reclosable package testing. This testing would be applicable to reclosable pouches. The European Committee for Standardization (CEN) also approved EN 862: “Child-resistant packaging – Requirements and testing procedures for non-reclosable packages for non-pharmaceutical products” as an international standard. This testing would be applicable for single-use product types such as tablets for cleaning, dishwashing, or laundry use.

ASTM D3475 classifies the different types of child-resistant packages. The examples for each type are not intended to be all-inclusive, but are included only as an aid in the understanding of the concept for each package type. Examples of child-resistant packaging in ASTM D3475 are summarized in the following table; see the standard for manufacturers/examples of each type.

### Classification of Child-Resistant Packages (ASTM D3475)

<table>
<thead>
<tr>
<th>Type</th>
<th>Style</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I Reclosable</td>
<td>Continuous thread closure</td>
<td>Requires push down while turning, squeezing, or other multi-step tasks to open the package</td>
</tr>
<tr>
<td>Type II Reclosable</td>
<td>Lug finish closure</td>
<td>Requires random push and turn or pressing/holding fitment to open</td>
</tr>
<tr>
<td>Type III Reclosable</td>
<td>Snap closure</td>
<td>Requires alignment of points and push up, or specific pressure points to open</td>
</tr>
<tr>
<td>Type IV Non-Reclosable</td>
<td>Flexible (strip/pouch)</td>
<td>Requires hidden tear notch or tool to open</td>
</tr>
<tr>
<td>Type V Non-Reclosable</td>
<td>Rigid</td>
<td>Requires tool or peelable backing or coating to open</td>
</tr>
<tr>
<td>Type VI Reclosable</td>
<td>Metered device</td>
<td>None at this time</td>
</tr>
<tr>
<td>Type VII</td>
<td>Aerosol</td>
<td>Requires squeeze and lift, directional cap opening, or localized pressure points to open</td>
</tr>
<tr>
<td>Type VIII Non-Reclosable</td>
<td>Semi-Rigid (Blister)</td>
<td>Requires remove a portion, peel, bend, internal notch, push out, or tool to open</td>
</tr>
<tr>
<td>Type IX</td>
<td>Dispensers (not intended to be removed)</td>
<td>Requires finger pump, trigger pump, line up arrows, or push to release lock to dispense</td>
</tr>
<tr>
<td>Type X</td>
<td>Box or Tray</td>
<td>Requires squeeze and slide, combination lock or tool to open</td>
</tr>
<tr>
<td>Type XI Reclosable</td>
<td>Flexible</td>
<td>Requires multi step squeeze, lift, and pull to open</td>
</tr>
<tr>
<td>Type XII</td>
<td>Dispenser (may be removed)</td>
<td>Requires trigger with rotation and lock in place to dispense</td>
</tr>
<tr>
<td>Type XIII Reclosable</td>
<td>Semi-rigid (blister)</td>
<td>Requires press hold, pull out, push out or other combinations to open package</td>
</tr>
</tbody>
</table>