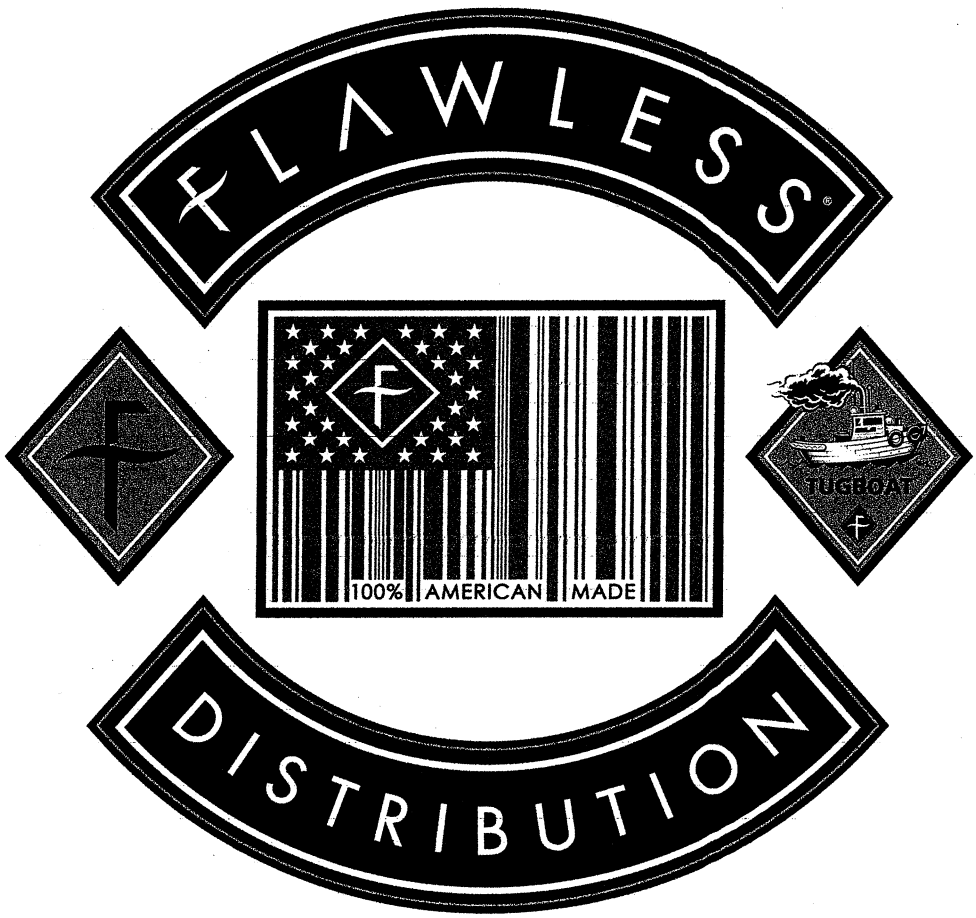


1021 E. Orangethorpe Ave
Anaheim, CA 92801

60ml E-Liquids

Flawless Liquids:
Game Over
Hot Mess
Aftermath
We Ain't Done
Can't Stop
Won't Stop

We Out Here:
Carnival
Boardwalk

BFB
Straight Outta The Toaster
Morning Fire

Big League Cloud
Grape Clouds
Sour Apple O's
Watermelon Clouds

Waffle Man Liquids
Strawberry Waffle Man
Blueberry Waffle Man

Lace N Vape
Watermelonlicious
Lucious Banana
Forbidden Fruit

Fair Foodies
Fried Surprise

TugLyfe
Leprechaun Milk
Still Sippin'

Mallow Man Liquids
Mallow Man

Braskem

Regulatory Information Sheet

FPT300F Polypropylene Resin

This Information Sheet is intended for informational purposes only. This Information Sheet relates solely to the Braskem America, Inc. ("Braskem") polypropylene grade set forth above as currently manufactured by Braskem and not as incorporated in any grade or used in any process. Information provided is as of the date hereof and Braskem assumes no responsibility to update, revise or amend this information. Determination of the suitability or fitness of this product for any particular application is the sole responsibility of the purchaser. Braskem specifically disclaims any warranty of merchantability or fitness for a particular purpose. **Braskem makes no representations or warranties (express or implied) with respect to the accuracy or completeness of the information contained herein.** The presence, absence or lack of information herein with respect to any particular international, national, federal, state, or local law, statute, regulation, order or rule ("Laws") should not be construed to mean that the Braskem polypropylene grade set forth above is regulated under, complies, with or is exempt from such Laws.

COUNTRY OF ORIGIN

This product is manufactured in the U.S.

U.S. Regulatory Information:

FDA FOOD CONTACT STATUS:

This product meets the requirements of FDA Regulation 21 CFR177.1520(c), item 1.1.a, for the safe use of olefin polymers in articles or components of articles intended for food contact with all Food Types as set forth in Table 1 of FDA Regulation 21 CFR176.170(c) and Conditions of Use B-H as described in Table 2, with a maximum use temperature of 212°F. Tables 1 and 2 are found in 21 CFR 176.170(c).

The uses cited above are subject to good manufacturing practices and any limitations which are part of the applicable regulations. The notification and regulations should be consulted for complete details.

ANIMAL BASED:

Based on this product's product formulation, Braskem does not intentionally incorporate any adjuvants in this product that are derived from animals, or any materials of human origin.

ALLERGEN STATEMENT:

The following allergens are not used in the manufacture of or formulation of this product. However, Braskem does not test our products for these substances.

- Peanuts, peanut oil, any peanut products;
- Tree nuts (almonds, Brazil nuts, chestnuts, filberts, hazelnuts, hickory nuts, macadamia nuts, pecans, pine nuts, pistachios, and walnuts);
- Refined or unrefined oils;
- Milk (casein) or milk products, dairy products, dairy derivatives, lactose with protein;
- Eggs or egg products;
- Fish (e.g. cod, salmon) or fish products; Shellfish, crustaceans (e.g. shrimp, crabs, lobsters, oysters, clams, scallops, crayfish); Molluscs (e.g. snails, clams, squid, octopi) or mollusc products;
- Sulfites;
- Food colors;
- Carmine;
- Cochineal;
- Corn;
- Celery or celery products;

- Wheat (gluten) or wheat products;
- Seeds (e.g. cotton, poppy, sesame, sunflower, mustard) or seed products;
- Aspartame;
- Monosodium glutamate (MSG);
- Caffeine;
- Hydrogenated vegetable protein (HVP);
- Hydrolized protein;
- Grains (e.g. rye, barley, oats);
- Lecithin;
- Lupine or lupine products.

This product may utilize additives that may contain material derived from soybeans or palm.

This evaluation is based on information provided by our raw material and additive suppliers relating to the presence or absence of the potential allergen-stimulating substances listed above. Any further adulteration or processing of this grade could introduce allergens. Braskem is not responsible for any further adulteration or processing which may occur to this grade.

GENETICALLY MODIFIED ORGANISM (GMO):
Based on this product's formulation, adjuvants derived from a genetically modified organism may be added during the manufacture of this product.

DRUG MASTER FILE (DMF) STATUS:
This grade is listed in the Braskem TYPE III Drug Master File, No. 1584. Letters of Authorization can be requested exclusively through or by Braskem direct sales customers.

UL:
This product has not been evaluated for UL clearance.

CONEG:
Braskem does not intentionally add lead, mercury, cadmium or hexavalent chromium to this product, and this product does not contain incidental levels of lead, mercury, cadmium or hexavalent chromium greater than 100 parts per million (ppm).

CALIFORNIA PROPOSITION 65:
Braskem does not manufacture with nor intentionally add any raw materials known to the State of California to cause cancer or reproductive toxicity as set forth in its latest Proposition 65 chemicals listing dated June 4, 2014.

This product may contain the following two chemical substances as impurities found in a manufacturing process aid used in the manufacture of this product:

Ethylene oxide	(CAS# 75-21-8)	carcinogen and reproductive toxin
1,4-Dioxane	(CAS# 123-91-1)	carcinogen

Based on a worst-case mass balance calculation, these substances are expected to be found at levels lower than 10 ppb.

This product may also contain trace levels of phthalates in amounts generally less than 10 ppm.

Each person doing business in California is responsible for determining the status of its own products

under Prop 65 and developing his or her own regulatory plan. Braskem makes no representation or warranty in that regard.

CONSUMER PRODUCT SAFETY IMPROVEMENT ACT (CPSIA):
In regards to the Consumer Product Safety Improvement Act of 2008, P.L. 110-314 (the "Act"), this product does not contain lead at or above the limit of 100 parts per million specified in Section 101(a)(2)(C) of the Act. Braskem does not use lead as a raw material in the manufacture of polypropylene, and lead is not a significant component of any additives used in the manufacture of polypropylene.

This product does not contain phthalates at or above the limit of 0.1% (1000 ppm) specified in Section 108(a) and (b) of the Act.

This product, as manufactured and distributed by Braskem, is not a children's product, children's toy, child care article, or consumer product, and is therefore not subject to the Act. Each person or manufacturer doing business under the Act is responsible for determining the status of its own products under the Act and Braskem makes no representation or warranty in that regard.

STATE OF WASHINGTON CHILDREN'S SAFE PRODUCT ACT (CSPA):
Braskem does not manufacture with nor intentionally add any raw materials containing any of the 66 chemicals of high concern found on the "CHCC List" (as of December 1, 2014) in concentrations above 100 ppm. More specifically:

- This product does not contain lead or cadmium in quantities greater than 0.004 % by weight
- This product does not contain phthalates in quantities greater than 0.1 % by weight or above the designated PQL.

However, Braskem does not test for these substances.

Canadian Regulatory Information:

CANADIAN FOOD CONTACT STATUS:
A letter of "no objection" for food contact use of this product has been obtained from the Canadian Health Protection and Food Branch (HPFB). The HPFB publishes the polymer products which have "no objection" letters on their website at

http://www.hc-sc.gc.ca/fn-an/legislation/guide-ld/poymers_tc-polymere_tm_e.html.

Consult the HPFB polypropylene list at the above website for information on this product and for any limitations of use that may have been assigned to this product by HPFB.

CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999 (CEPA 1999) CHEMICAL MANAGEMENT PLAN (CMP) - SUBSTANCE GROUPINGS INITIATIVE:
Braskem does not intentionally use compounds found on the following 8 substance groupings during the manufacture of this product. However, Braskem does not analyze for these substances.

- Aromatic Azo and Benzidine Based Substances
- Boron-containing Substances

- Certain Organic Flame Retardants
- Cobalt-containing Substances
- Internationally Classified Substances
- Methylenediphenyl Diisocyanates and Diamines (MDI / MDAs)
- Selenium-containing Substances
- Substituted Diphenylamines

For the 9th Substance Grouping: Phthalates, Braskem America does not intentionally add phthalate additives or plasticizers in the manufacture of its polypropylene. This product may contain trace levels of phthalates from the polymerization. Any trace levels of phthalates in the polypropylene would be below regulatory and advisory standards.

A list of the substances considered for inclusion in each group and covered under this announcement of planned actions can be found at http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=F4633EDC-1.

CANADIAN DMF Status:
This product is not listed on the Canadian Drug Master File.

European Regulatory Information:

PACKAGING AND PACKAGING WASTE:
With respect to the European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste and its amendments 2004/12/EC of 18 February 2004, 2005/20/EC of April 5, 2005, and 2013/2/EU of 7 February 2013, Braskem does not intentionally add lead, mercury, cadmium or hexavalent chromium to this product. With respect to Article 11, this product does not contain incidentally present aggregate levels of lead, mercury, cadmium or hexavalent chromium greater than 100 parts per million (ppm).

In addition, this product has the potential to be recycled according to the requirements in these directives.

RESTRICTION OF HAZARDOUS SUBSTANCES (RoHS):
Braskem does not intentionally use lead, cadmium, chromium, mercury, any compounds of these metals, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) as listed in the RoHS regulation 2002/95/EC and its amendments in the manufacture of or formulation of this product.

EUROPEAN FOOD CONTACT STATUS:
This product satisfies the requirements of EU 10/2011 and its amendments on plastic materials and articles intended to come into contact with food.
• It meets the requirements of 1935/2004/EC Framework Regulation and its amendments as a plastic intermediate material.
• The resin is manufactured in accordance with good manufacturing practices as outlined in 2023/2006/EC.
• All monomers and additives used in the manufacturing of this resin are listed on the Union List of Authorized Substances (Annex I of EU 10/2011).

This product contains:
• at least one dual use additive as identified in the "Union Guidelines on Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food" and Annex II of EC 1333/2008

• at least one component in the formulation that has a specific migration limit (SML) and/or a total specific migration limit (SML(T)) and/or a QMA (residual content per food contact surface area) as defined in Tables 1-3 of Annex I of EU 10/2011

The identities of the components with an SML, SML(T) or QMA and those that are dual use additives can be obtained under a confidentiality agreement. Please contact your Braskem representative.

EU 10/2011 Plastics Regulation requires that the finished plastic material or article used in contact with food must meet an overall migration limit (OML) of 10 mg per square decimeter of the surface area of the material or article (mg/dm2). Migration testing is dependent on the specific intended conditions of use of the final article, including the food type that needs to be simulated and the time and temperature of exposure. Therefore, it is the responsibility of the manufacturer of the final food contact material or article to verify that the final article or material satisfies the OML and SML requirements for compliance.

It remains the responsibility of the manufacturer of the finished food contact material or article to make sure that the requirements of 1935/2004/EC pertaining to the final articles are met. It should be noted that thermal emissions such as aldehydes, ketones and organic acids are generated during typical processing of polypropylene. These emissions could have an impact on the organoleptic properties of the final article.

EPOXY DERIVATIVES:
The materials Bisphenol A diglycidyl ether (BADGE), Bisphenol F diglycidyl ether (BFDGE) or Novolac Glycidyl Ether (NOGE) are not intentionally added in this product as referenced in Commission Regulation 1895/2005/EC on the use of certain epoxy derivatives in materials and articles intended to contact foods as plasticizers, additives or raw materials.

BIOCIDE DIMETHYL FUMARATE (DMF):
With respect to the European Union's "Commission Directive 2009/251/EC of 17th March, 2009 on the biocide dimethylfumarate (DMF), after review of the operating parameters for this grade, Braskem does not use DMF as a raw material in the manufacture of this product, and, to the best of Braskem's knowledge, DMF is not a significant component of any additives used in the manufacture of this product.

PHTHALATES:
Braskem America does not intentionally add phthalate additives or plasticizers in the manufacture of its polypropylene. This product may contain trace levels of phthalates from the polymerization. Any trace levels of phthalates in the polypropylene would be below regulatory and advisory standards. For more specific information, please contact your Braskem Account Manager or Product Regulatory.

Global Regulatory Information:

GLOBAL CHEMICAL INVENTORY COMPLIANCE:
This product complies with the following chemical inventories. Foreign purchasers or exporters of this product should consult the appropriate local governing authority to verify there are not regulatory requirements that would prohibit or restrict the import of this product into the applicable country.

Country	Inventory	Y/N/Unknown
Europe[1]	EINECS	Yes
Europe[1]	ELINCS	Unknown
Canada	DSL	Yes
Taiwan	NECSI	no
United States[2]	TSCA	Yes
Australia	AICS	Yes

Country	Inventory	Y/N/Unknown
China	IECS	yes
Japan	ENCS	Yes
Japan	ISHL	Unknown
Korea	KECI	Yes
New Zealand	NZIoC	Yes
Philippines	PICCS	Yes

[1]EINECS and ELINCS are replaced by REACh
[2]This product has no special requirements under US TSCA (e.g. consent orders, test rules, 12(b) Requirements, etc.).

GLOBAL AUTOMOTIVE DECLARABLE SUBSTANCE LIST (GADSL):
Braskem does not intentionally add any of the chemicals on the Global Automotive Declarable Substance List (2014 GADSL Version 1.4, Revised 2014-11-18) at or above, 0.1%, or the stated threshold for a declarable or prohibited substance. Formaldehyde (CAS# 50-00-0) is not intentionally used in the manufacture of or formulation of the aforementioned product, however, it is commonly known that formaldehyde is a potential decomposition product of polypropylene. The amount of formaldehyde emissions is dependent on the process. It is recommended that customers monitor their operations for formaldehyde emissions.

Other Supporting Information:

DYES, INKS, PULP, etc...
After review of the operating parameters for this grade, Braskem does not intentionally add any inks, pigments, dyes, carbon black, registered pesticides, pulp, nor pulp based material to this product.

METALS:
After review of the operating parameters for this product, Braskem does not intentionally add any of the following metals during the production of this product.

• Antimony	• Gold	• Thallium
• Arsenic	• Hexavalent chromium	• Tin
• Barium	• Lead	• Vanadium
• Beryllium	• Mercury	
• Bromine	• Molybdenum	
• Cadmium	• Nickel	
• Chromium	• Palladium	
• Cobalt	• Silver	
• Copper	• Tantalum	

CONFLICT MINERALS:
To the best of our knowledge, this product is not intentionally manufactured or formulated with "Conflict Minerals", which include columbite-tantalite (also known as coltan) [source for tantalum], cassiterite [source for–tin], gold, and wolframite [source for tungsten], and their derivatives. However, Braskem does not analyze for these specific substances or compounds.

ORGANOTINS:
Braskem does not intentionally add any tributyl tin, tributyl tin oxide, triphenyl tin, trialkyl tin, triaryl tin, or organotins in the manufacture of this product. Braskem does not analyze for these substances.

OZONE DEPLETING CHEMICALS (ODCs):
This product is not manufactured with any of US EPA's Class I or Class II Ozone Depleting Chemicals (ODC) or the ODCs listed under the Montreal Protocol or EU Directive 1005/2009/EC.

BISPHENOL A, BISPHENOL F & BPX (Bisphenol based derivatives such as BPS):
Braskem does not intentionally add Bisphenol A, Bisphenol F, Bisphenol S, or BPX (Bisphenol based derivatives such as BPS) to this product. Braskem does not use Bisphenol A, Bisphenol F, Bisphenol S, or BPX (Bisphenol based derivatives such as BPS) as a raw material in the production of this product.

ALKYLPHENOLS & ALKYLPHENOL ETHOXYLATES:
Braskem does not intentionally add alkylphenol ethoxylates to this product. Braskem does not add the simple substituted phenols, nonyl phenol, octylphenol ethoxylates, or trisnonylphenylphosphite (TNPP) to this product. Polypropylene manufacturers, including Braskem, do add complicated phenolic materials as anti-oxidants to their polypropylene products, which are technically alkylphenols. This product may contain such an antioxidant. Accordingly, these anti-oxidants are approved for indirect food contact and are utilized by Braskem in accordance with 21 Code of Federal Regulations (CFR) 178.2010.

LATEX-SYNTHETIC, DRY, OR NATURAL:
Braskem does not manufacture synthetic rubber latex, natural rubber latex (NRL) or dry natural rubber latex (DRL), nor does Braskem add synthetic rubber latex, NRL or DRL to this grade; however Braskem does not analyze for these specific substances or compounds.

PERFLUOROCHEMICALs (PFCs):
Braskem does not manufacture any of the following compounds. Braskem does not intentionally add or use any of the following compounds during the manufacture of this product:

• Perfluorooctanoic acid	• Perfluorooctane sulfonate
• Perfluoro-n-butyric acid	• Perfluorooctane sulfonamide
• Pentafluoropropionic acid	• Perfluorononanoic acid
• Perfluoropentanoic acid	• Perfluorodecane sulfonate
• Perfluorohexane sulfonic acid	• Perfluorodecanoic acid
• Perfluoroheptanoic acid	• Perfluorododecanoic acid
• Perfluorooctanoic acid (PFOA)	• Perfluorooctyl sulfonate (PFOS)

POLYCYCLIC AROMATIC HYDROCARBONS:

Braskem does not manufacture any of the following compounds. Braskem does not intentionally add or use any of the following compounds during the manufacture of this product:

• Naphthalene	• Fluorene
• Acenaphthylene	• Phenanthrene
• Acenaphthene	• Anthracene
• Fluoranthene	• Benzo(b)fluoranthene
• Pyrene	• Benzo(k)fluoranthene
• Benzo(a)anthracene	• Indeno(1,2,3-cd) pyrene
• Chrysene	• Dibenzo(ah)anthracene
• Benzo(ghi)perylene	• Benzo(a)pyrene

ADDITIONAL SUBSTANCE INFORMATION:

Braskem does not intentionally add or use any of the following compounds during the manufacture of this grade:

• 1,1,1-Trichloroethane	• 4-aminodiphenyl
• 1,1,2,2-Tetrachloroethane	• 4-nitrobiphenyl +salts
• 1,1,2-Trichloroethane	• 4-nitrodiphenyl
• 1,2-Dichloroethane	• 4-nitrotoluene
• 1,4, Dioxane	• 4-Nonylphenol
• 2-(2-Hydroxy-3,5-di-tert-butylphenyl) benzotriazole	• Acenaphthene
• 2, 3, 7, 8-Tetrachlorodibenzo (para) dioxin	• Acenaphthylene
• 2,2-bis(4-hydroxyphenyl) propane bis(2,3-epoxypropyl) ether (BADGE)	• Adipates
• 2,4-Toluene diisocyanate	• Aldrin
• 2,6-Toluene diisocyanate	• Alkylphenol ethoxylates
• 2-Bromopropane	• Aminobiphenyl (4-) + salts
• 2-Ethoxyethanol	• Anthracene
• 2-Ethoxyethanol acetate	• Aromatic Amines
• 2-Ethyl hexyl acrylate (2-EHA)	• Arsenic compounds
• 2-Methoxy-1-propanol	• Artificial musks
• 2-Methoxyethanol	• Asbestos
• 2-Methoxyethanol acetate	• Azo compounds
• 2-naphtylamine + salts	• Azodicarbonamide (ADA

• Benzenamine, 2-ethyl-N-(2-ethylphenyl)-, (tripropenyl) derivs.	• Butylated Hydroxyanisole (BHA)
• Benzenamine, 4-(1,1,3,3-tetramethylbutyl)-N-[4-(1,1,3,3-tetramethylbutyl)phenyl]-	• Butylated Hydroxytoluene (BHT)
• Benzenamine, 4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl)phenyl]-	• Cadmium
• Benzenamine, 4-nonyl-N-(4-nonylphenyl)-	• Cellulose Acetate
• Benzenamine, 4-octyl-N-(4-octylphenyl)-	• Ceramic fibers
• Benzenamine, 4-octyl-N-phenyl-	• Chlordane
• Benzenamine, ar-nonyl-N-(nonylphenyl)-	• Chlordecone
• Benzenamine, ar-nonyl-N-phenyl-	• Chlorinated paraffin
• Benzenamine, ar-octyl-N-(octylphenyl)-	• Chlorine
• Benzenamine, N-phenyl-, (tripropenyl) derivs.	• Chloro-1-ethylene
• Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	• Chlorocresol (meta-)
• Benzenamine, N-phenyl-, reaction products with isobutylene and 2,4,4-trimethylpentene	• Chlorocresol (ortho-)
• Benzenamine, N-phenyl-, styrenated	• Chloroethylene
• Benzene	• Chlorofluorocarbons (CFCs)
• Benzidine (+ salts)	• Chloroform
• Benzo(a)anthracene	• Chloromethyl isothiazolinone (CIT)
• Benzo(a)pyrene	• Chromic acid
• Benzo(b)fluoranthene	• Chromium, hexavalent (Cr6+) compounds
• Benzo(ghi)perylene	• Coal tar
• Benzo(k)fluoranthene	• Colophony (rosin)
• Beryllium	• Congeners
• Bis(chloromethyl)ether (BCME)	• Creosote
• Bis-phenol A	• Deca-bromodiphenyl ether (DBDE)
• Bis-phenol ether	• Decabromodiphenyloxide
• Bisphenol-F-diglycidyl ether (BFDGE)	• DHTDMAC
• Bromide	• Diacetyl
• Bromine	• Dialkyl tin
• Butyl glycidyl ether (BGE)	• Dibenzo(a,h)anthracene

• Dichloromethane	• Hexachlorobenzene
• Dieldrin	• Hexachlorobutadiene
• Difurans	• Hexamethylene-1,6-diisocyanate
• Diisononyl phthalate (DINP)	• Hydrobromofluorocarbons (HBFCs)
• Dimethyl phthalate	• Hydrochlorofluorocarbons
• Dimethylformamide (free)	• Hydrofluoric acid (HF)
• Dioctyl phthalate	• Hydrofluorocarbons (HFCs)
• Dioctyl adipate	• Indeno(1,2,3-cd)pyrene
• Dry natural rubber latex (DRL)	• Insecticides
• Dyes or pigments	• Kathon CG
• Endrin	• Kepone
• Epichlorohydrin	• Lead and lead compounds
• Ethylene glycol	• Limonene
• Fluoranthene	• MDI (methyl-di-p-phenylene isocyanate)
• Fluorocarbons	• Melamine
• Formaldehyde	• Mercury + Mercury compounds
• Fumigants and Preservatives	• Methyl bromide
• Fungicides	• Methyl chloroform
• Furans	• Methyl isothiazolinone (MIT)
• Halogenated biphenyl methane compounds	• Methylene chloride
• Halogenated diphenyl methanes	• Methylenedianiline (4,4'-)
• Halogens	• Methylglycol
• HCFC 141 b	• Mirex
• HCFC 142 b	• Monoalkyl tin
• HCFC 22	• naphthalene
• Heptachlor	• N-butyl benzene
• Hexabromobiphenyls	• Nickel
• Hexabromocyclododecane (HBCDD)	• Nitrites

• Nitro musks	• Polychlorinated naphthalene (PCN)
• Nitrosamines	• Polychlorinated terphenyls (PCT)
• N-nitrosamines/N-nitrosamides	• Polycyclic aromatic hydrocarbons
• Nonylphenolethoxylates	• Polycyclic musks
• Novolac Glycidyl Ether (NOGE)	• Polyvinyl chloride (PVC)
• Octabromodiphenylether	• Poly-Vinylidene Dichloride
• Octylphenol	• Pyroxylin
• Octylphenol ethoxylates	• Radioactive substances
• Organoarsenic compounds	• Resorcinol
• Organohalogens	• Semicarbazide
• ortho-Anisidine	• Silicon
• Parabens	• Silicone
• Penta-bromodiphenyl ether (PBDE)	• Strontium chromate
• Perfluoro-alkyl sulfonate	• Stylene
• Perfluorocarbons	• Styrene
• Perfluorocarbons (PFCs; gaseous)	• Sulfur dioxins
• Pesticides	• Sulfur hexafluoride
• Phenol (free)	• Synthetic fungicides, preservatives, and fumigants
• Phenyl-b-naphthylamine	• Tartrazine
• Poly Brominated biphenyl (PBB)	• tert -Butylhydroquinone (TBHQ, tertiary butylhydroquinone)
• Polybrominated biphenyl oxide (PBBO)	• Tetrachloroethylene
• Polybrominated compounds	• Tetrachlorophthalic Anhydride (TCPA)
• Polybrominated diphenyl	• Thiocarbamide
• Polybrominated diphenylethers	• Thiocyanic acid (2-benzothiazolythiomethylester) (TCMTB)
• Polybrominated Fire Retardants	• Thiram (TMTD)
• Polybrominated Terphenyls	• Toluidine
• Polychlorinated biphenyls (PCB)	• Toxaphene
• Polychlorinated compounds	• Tributyl tin

• Tributyl tin oxide	• Triglycerin
• Trichloroethylene	• Triphenyl tin
• Triclosan (polychloro phenoxy phenol)	• Yellow phosphorous

For additional information or questions, contact:	Braskem Sales Person or Technical Service Representative
Email Address:	us_compliance@braskem.com
Product Regulatory Manager:	Jean Sullivan

MOLD-RITE PLASTICS LLC.
1 Plant Street P.O. Box 160
Plattsburgh NY 12901
(518)561-1812
https://www.mrpcap.com

Product Data Sheet

CP0001 Grade

Polypropylene, Impact Copolymer

Product Description

CP0001 is a high flow, high impact polypropylene copolymer grade resin designed for molding applications requiring good balance stiffness, impact resistance and process ability. This grade specification designated by Mold-Rite Plastics covers all copolymer resins that meet the typical value data listed below.

Regulatory Compliance

FDA-21 CFR 177.1520(c) 3.1 for Food & Drug Contact
RoHS Compliant
CONEG/Heavy Metal Compliant
Proposition 65 Compliant
EU Directive 2002/72/EC Compliant

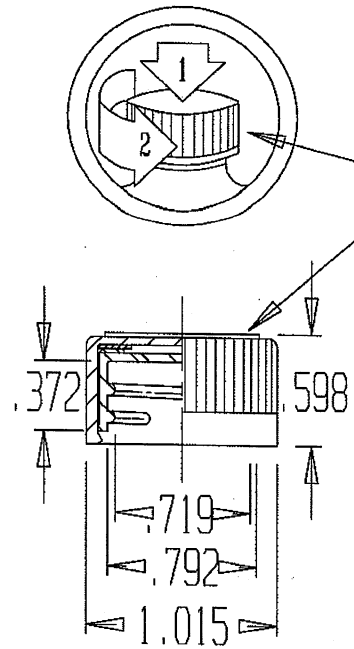
Typical Properties	Method	Typical Value	Unit
Physical			
Density – Specific Gravity	ASTM D 792	.900 - .905	sp gr. 23/23° C
Melt Flow Rate	ASTM D 1238	35.0	g/10 min
Mechanical			
Tensil Strength @ Yield (2 in/min) (50 mm/min)	ASTM D 638	 3,100 – 4,000 21.4 – 27	 PSI MPa
Flexural Modulus (0.05 in/min, 1% Secant, Procedure A) (1 mm/min, 1% Secant, Procedure A)	ASTM D 790	 160,000 – 210,000 1,103 – 1,450	 PSI MPa
Impact			
Notched Izod impact (23 °C, Method A)	ASTM D 256	 1.4 – 2.4 75 – 128	 Ft-lb/in J/m
Thermal			
Heat Deflection (Softening Point) Unannealed DTLU @ 66psi	ASTM D 648	 212 – 225 88 – 107	 °F °C
Processing Range	-----	400 – 500	°F

For further regulatory information contact Mold-Rite Plastics customer service or sales department.

Notes: These are typical properties not to be construed as specifications. Mold-Rite Plastics reserves that right to include any other resin grade that meets that above data values and regulatory requirements.

This product data sheet covers multiple resin formulations and include any other resin grade that meets the above typical data values and regulatory requirements. All listed grades have similar physical, chemical and processing properties. Listed known grades; SG802N; AP5135H; 4820WZ; 6535A; 2535A

REVISIONS			
REV.	DATE	APPROVAL	DESCRIPTION



APPROVED
AUG 26 2005
Quality Assurance
Mold-Rite Plastics

UNCONTROLLED

"T"	"E"	"H"	"A"	"B"
.792	.719	.372	1.015	.598

MATERIAL: POLYPROPYLENE

WEIGHT: 2.6 +/- 1.0 "AVERAGE"

CRC - 20mm Assembled Cap

MOLD-RITE PLASTICS INC.
PLATTSBURGH, NEW YORK

TOLERANCE: +/-.010	DRAWN BY: P.D.T.	
SCALE: FULL	DATE: 3-3-03	DRAWING NO. PIC-20-0

Evaluation of the 20mm PP Continuous Thread Closure on a Wheaton 2 Ounce HDPE Bottle as a Poison Prevention Package with Resecuring Effectiveness For Mold-Rite Plastics, Inc.

May 2, 2005

George Gryger
Mold-Rite Plastics, Inc.
1 Plant Street
Plattsburgh, NY 12901

Dear Mr. Gryger,

Herein is our report titled "Evaluation of the 20mm PP Continuous Thread Closure on a Wheaton 2 Ounce HDPE Bottle as a Poison Prevention Package with Resecuring Effectiveness for Mold-Rite Plastics, Inc."

The test unit was evaluated using the Consumer Product Safety Commission Protocol and Standards. The study indicates the test unit fulfills the requirements senior-resecuring effectiveness as per the current Code of Federal Regulations (C.F.R.) Title 16, Part 1700.

After you have had an opportunity to read the report, I shall be pleased to review it with you.

Sincerely,
PERRITT LABORATORIES, INC.

Richard A. Ward
Vice President
Consumer Product Testing

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I. SUMMARY

Report to:	George Gryger Mold-Rite Plastics, Inc. 1 Plant Street Plattsburgh, NY 12901
Date:	May 2, 2005
Samples of:	20mm PP Continuous Thread Closure on a Wheaton 2 Ounce HDPE Bottle
Contract No.:	1206-016
Samples Received:	January 19, 2005
Submitted by:	George Gryger

Objective

The client submitted the above sample for a study to determine if the unit is in compliance with the Consumer Product Safety Commission's (CPSC) current protocol and standards for poison prevention packaging with resecuring effectiveness as per the Code of Federal Regulations (C.F.R.) Title 16, Part 1700.

Procedures

The protocol for the evaluation of packaging for poison prevention (current C.F.R. Title 16, Part 1700) was strictly adhered to for this study.

Panelists

In the course of this study, 50 children and 100 seniors (50 to 70 year-olds, 70% female) were employed. An additional 100 children (42 to 51 months of age) were employed to test the packages that the seniors reclosed.

Results

Results of the study indicate that **the 20mm PP Continuous Thread Closure on a Wheaton 2 Ounce HDPE Bottle fulfills the standards for poison prevention packaging with resecuring effectiveness** according to current C.F.R. Title 16, Part 1700.

II. INTRODUCTION

Mold-Rite Plastics, Inc. wished to determine if the 20mm PP Continuous Thread Closure on a Wheaton 2 Ounce HDPE Bottle fulfills the Consumer Product Safety Commission's (CPSC) current standards and protocols for poison prevention packaging with resecuring effectiveness set forth in the Code of Federal Regulations Title 16, Part 1700. Perritt Laboratories, Inc., a UKAS accredited laboratory[1] for testing child-resistant packaging according to the CPSC protocol, was requested to evaluate the packaging using the above protocol.

Perritt Laboratories is an independent testing laboratory and has been evaluating child-resistant packaging for both industry and government for over twenty five years. The company is recognized as the leader in the field by virtue of having employed hundreds of thousands of panelists and evaluated thousands of packaging concepts for child-resistance. Perritt Laboratories, Inc. utilizes standard operating procedures (SOP's), along with quality assurance programs in accordance with good laboratory practices (GLP) for non-clinical laboratories.

In the course of this evaluation, the packaging was tested with panels consisting of 50 children (42 to 51 months of age, evenly distributed) obtained from nursery schools, day care centers and civic groups, 100 seniors (50 to 70 year-olds, 70% female), and 100 additional children to test the packages that the seniors reclosed. The data derived from the study were assembled in a meaningful fashion and reviewed to determine whether the packaging met the cited standards for senior-resecuring effectiveness presented herein.

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[1]Perritt Laboratories, Inc. holds accreditation (#1457) from the United Kingdom Accreditation Service (UKAS) for testing packaging for child-resistance according to the Consumer Product Safety Commission's current protocols and standards set forth in the Code of Federal Regulations Title 16, Part 1700.

Organizations accredited by UKAS meet the requirements of EN 45001, ISO Guide 25 and the relevant requirements of the ISO 9000/EN 29000/BS 5750 series of standards, including those of the model described in ISO 9002/EN 29002/BS 5750 Part 2 when acting as suppliers producing test results.

III. PROCEDURE

The following standard and protocol was adhered to in this study.

Protocol

Code of Federal Regulations Title 16, Part 1700:

1700.20 Testing procedure for testing special packaging.

(a) Test protocols - (1) General requirements - (i) Requirements for packaging. As specified in §1700.15(b), special packaging is required to meet the child test requirements and the applicable adult test requirements of this §1700.20.

(ii) Condition of packages to be tested. (A) Tamper-resistant feature. Any tamper-resistant feature of the package to be tested shall be removed prior to testing unless it is part of the package's child-resistant design. Where a package is supplied to the consumer in an outer package that is not part of the package's child-resistant design, one of the following situations applies.

(1) In the child test, the package is removed from the outer package, and the outer package is not given to the child.

(2) In both the adult tests, if the outer package bears instructions for how to open or properly resecure the package, the package shall be given to the test subject in the outer package. The time required to remove the package from the outer packages is not counted in the times allowed for attempting to open and, if appropriate, reclose the package.

(3) In both the adult tests, if the outer package does not bear any instructions relevant to the test, the package will be removed from the outer package, and the outer package is not given to the test subject.

(B) Reclosable packages - adult tests. In both the adult tests, reclosable packages, if assembled by the testing agency, shall be properly secured at least 72 hours prior to beginning the test to allow the materials (e.g., the closure liner) to "take a set." If assembled by the testing agency, torque-dependent closures shall be secured at the same on-torque as applied on the packaging line. Application torques must be recorded in the test report. All packages shall be handled so that no damage or jarring will occur during storage or transportation. The packages shall not be exposed to extreme conditions of heat or cold. The packages shall be tested at room temperature.

(2) Child test - (i) Test subjects. (A) Selection criteria. Use from 1 to 4 groups of 50 children, as required under the sequential testing criteria in Table 1. No more than 20 percent of the children in each group shall be tested at or obtained from any given site. Each group of children shall be randomly selected as to age, subject to the limitations set forth below. Thirty percent of the children in each group shall be of age 42-44 months,

40 percent of the children in each group shall be of age 45-48 months, and 30 percent of the children in each group shall be of age 49-51 months. The children's ages shall be calculated as follows:

(1) Arrange the birth date and test date by the numerical designations for month, day, and year.

(2) Subtract the month, day, year numbers for the birth date from the respective numbers for the test date. This may result in negative numbers for the months or days.

(3) Multiply the difference in years by 12 to obtain the number of months in the difference in years, and add this value to the number of months that was obtained when the birth date was subtracted from the test date. This figure either will remain the same or be adjusted up or down by 1 month, depending on the number of days obtained in the subtraction of the birth date from the test date.

(4) If the number of days obtained by subtracting the days in the birth date from the days in the test date is +16 or more, 1 month is added to the number of months obtained above. If the number of days is -16 or less, subtract 1 month. If the number of days is between -15 and +15 inclusive, no change is made in the number of months.

(B) Gender distribution. The difference between the number of boys and the number of girls in each age range shall not exceed 10 percent of the number of children in that range. The children selected should have no obvious or overt physical or mental handicap. Each child's parent or guardian shall read and sign a consent form prior to the child's participation. (The Commission staff will not disregard the results of tests performed by other parties simply because informed consent for children is not obtained.)

(ii) Test failures. A test failure shall be any child who opens the special packaging or gains access to its contents. In the case of unit packaging, however, a test failure shall be any child who opens or gains access to the number of individual units which constitute the amount that may produce serious personal injury or serious illness, or a child who opens or gains access to more than 8 individual units, whichever number is lower, during the full 10 minutes of testing. The number of units a child opens or gains access to is interpreted as the individual units from which the product has been or can be removed in whole or in part. The determination of the amount of substance that may produce serious personal injury or serious illness shall be based on a 25-pound child. Manufacturers or packagers intending to use unit packaging for a substance requiring special packaging are requested to submit such toxicological data to the Commission's Office of Compliance.

Table 1. Number of Openings: Acceptance (Pass), Continue Testing, and Rejection (Fail) Criteria for the First 5 minutes and the Full 10 minutes of the Children's Protocol Test

Test Panel	Cumulative number of children	Package Openings					
		First 5 minutes			Full 10 minutes		
		Pass	Continue	Fail	Pass	Continue	Fail
1....	50	0 – 3	4 – 10	11+	0 – 5	6 – 14	15+
2....	100	4 – 10	11 – 18	19+	6 – 15	16 – 24	25+
3....	150	11 – 18	19 – 25	26+	16 – 25	26 – 34	35+
4....	200	19 – 30	.....	31+	26 – 40	.....	41+

(iii) Sequential test. The sequential test is initially conducted using 50 children, and, depending on the results, the criteria in Table 1 determine whether the package is either child-resistant or not child-resistant or whether further testing is required. Further testing is required if the results are inconclusive and involves the use of one or more additional groups of 50 children each, up to a maximum of 200 children. No individual shall administer the test to more than 30 percent of the children tested in each group. Table 1 gives the acceptance (pass), continue testing, and rejection (fail) criteria to be used for the first 5 minutes and the full 10 minutes of the children's test. If the test continues past the initial 50-child panel, the package openings shown in Table 1 are cumulative.

(iv) Test procedures. The children shall be divided into groups of two. The testing shall be done in a location that is familiar to the children; for example, their customary nursery school or regular kindergarten. No child shall test more than two special packages. When more than one special package is being tested, each package shall be of a different ASTM type and they shall be presented to the paired children in random order. This order shall be recorded. The children shall be tested by the procedure incorporated in the following test instructions:

Standardized Child Test Instructions

1. Reclosable packages, if assembled by the testing agency, shall be properly secured at least 72 hours prior to the opening described in instruction number 3 to allow the materials, (e.g. the closure liner), to "take a set." Application torques must be recorded in the test report.

2. All packages shall be handled so that no damage or jarring will occur during storage or transportation. The packages shall not be exposed to extreme conditions of heat or cold. The packages shall be tested at room temperature.

3. Reclosable packages shall be opened and properly resecured one time (or more if appropriate), by the testing agency or other adult prior to testing. The opening and resecuring shall not be done in the presence of the children. (In the adult-resecuring test, the tester must not open and resecure the package prior to the test.) If multiple

openings/resecurings are to be used, each of four (4) testers shall open and properly resecure one forth of the packages once and then shall open and properly resecure each package a second, third, fourth, through tenth (or other specified number) time, in the same sequence as the first opening and resecuring. The packages shall not be opened and resecured again prior to testing. The name of each tester and the package numbers that he/she opens and resecures shall be recorded and reported. It is not necessary for the tester to protocol test the packages that they opened and resecured.

4. The child shall have no overt physical or mental handicaps. No child with a permanent or temporary illness, injury, or handicap that would interfere with his/her effective participation shall be included in the test.

5. The testing shall take place in a well-lighted location that is familiar to the children and that is isolated from all distractions.

6. The tester, or another adult, shall escort a pair of children to the test area. The tester shall seat the two children so that there is no visual barrier between the children and the tester.

7. The tester shall talk to the children to make them feel at ease.

8. The children shall not be given the impression that they are in a race or contest. They are not to be told that the test is a game or that it is fun. They are not to be offered a reward.

9. The tester shall record all data prior to, or after, the test so that full attention can be on the children during the test period.

10. The tester shall use a stopwatch(s) or other timing device to time the number of seconds it takes the child to open the package and to time the 5-minute test periods.

11. To begin the test, the tester shall hand the children identical packages and say, "PLEASE TRY TO OPEN THIS FOR ME."

12. If a child refuses to participate after the test has started, the tester shall reassure the child and gently encourage the child to try. If the child continues to refuse, the tester shall ask the child to hold the package in his/her lap until the other child is finished. This pair of children shall not be eliminated from the results unless the refusing child disrupts the participation of the other child.

13. Each child shall be given up to 5 minutes to open his/her package. The tester shall watch the children at all times during the test. The tester shall minimize conversations with the children as long as they continue to attempt to open their packages. The tester shall not discourage the children verbally or with facial expressions. It a child gets frustrated or bored and stops trying to open his/her package, the tester shall reassure the child and gently encourage the child to keep trying (e.g., "please try to open the package").

14. The children shall be allowed freedom of movement to work on their packages as long as the tester can watch both children (e.g., they can stand up, get down on the floor, or bang or pry the package).

15. If a child is endangering himself or others at any time, the test shall be

stopped and the pair of children eliminated from the final results.

16. The children shall be allowed to talk to each other about opening the packages and shall be allowed to watch each other try to open the packages.

17. A child shall not be allowed to try to open the other child's package.

18. If a child opens his/her package, the tester shall say, "THANK YOU," take the package from the child and put it out of the child's reach. The child shall not be asked to open the package a second time.

19. At the end of the 5-minute period, the tester shall demonstrate how to open the package if either child has not opened his or her package. A separate "demo" package shall be used for the demonstration.

20. Prior to beginning the demonstration, the tester shall ask the children to set their packages aside. The children shall not be allowed to continue to try to open their packages during the demonstration period.

21. The tester shall say, "WATCH ME OPEN MY PACKAGE."

22. Once the tester gets the children's full attention, the tester shall hold the demo package approximately two feet from the children and open the package at a normal speed as if the tester were going to use the contents. There shall be no exaggerated opening movements.

23. The tester shall not discuss or describe how to open the package.

24. To begin the second 5-minute period, the tester shall say, "NOW YOU TRY TO OPEN YOUR PACKAGES."

25. If one or both children have not used their teeth to try to open their packages during the first 5 minutes, the tester shall say immediately before beginning the second 5-minute period, "YOU CAN USE YOUR TEETH IF YOU WANT TO." This is the only statement that the tester shall make about using teeth.

26. The test shall continue for an additional 5 minutes or until both children have opened their packages, whichever comes first.

27. At the end of the test period, the tester shall say, "THANK YOU FOR HELPING." If children were told that they could use their teeth, the tester shall say, "I KNOW I TOLD YOU THAT YOU COULD USE YOUR TEETH TODAY, BUT YOU SHOULD NOT PUT THINGS LIKE THIS IN YOUR MOUTH AGAIN." In addition, the tester shall say, "NEVER OPEN PACKAGES LIKE THIS WHEN YOU ARE BY YOURSELF. THIS KIND OF PACKAGE MIGHT HAVE SOMETHING IN IT THAT WOULD MAKE YOU SICK."

28. The children shall be escorted back to their classroom or other supervised area by the tester or another adult.

29. If the children are to participate in a second test, the tester shall have them stand up and stretch for a short time before beginning the second test. The tester shall take care that the children do not disrupt other tests in progress.

(3) Senior-adult panel - (i) Test subjects. Use a group of 100 senior adults. Not more than 24 percent of the senior adults tested shall be obtained from or tested at any

one site. Each group of senior adults shall be randomly selected as to age, subject to the limitations set forth below. Twenty-five percent of the participants shall be 50-54 years of age, 25% of participants shall be 55-59 years of age, and 50% of the participants shall be 60-70 years old. Seventy percent of the participants of ages 50-59 and ages 60-70 shall be female (17 or 18 females shall be apportioned to the 50-54 year age group). No individual tester shall administer the test to more than 35% of the senior adults tested. The adults selected should have no obvious or overt physical or mental disability.

(ii) Screening procedures. Participants who are unable to open the packaging being tested in the first 5-minute time period, are given a screening test. The screening tests for this purpose shall use two packages with conventional (not child-resistant (CR) or "special") closures. One closure shall be a plastic snap closure and the other a continuous threaded (CT) plastic closure. Each closure shall have a diameter of 28 mm ∀18%, and the CT closures shall have been resecured 72 hours before testing at 10 inch-pounds of torque. The containers for both the snap- and CT-type closures shall be round plastic containers, in sizes of 2 ounce ∀ ½ ounce for the CT-type closure and 8 drams ∀ 4 drams for the snap-type closure. Persons who cannot open and close both of the screening packages in 1-minute screening tests shall not be counted as participants in the senior-adult panel.

(iii) SAUE. The senior adult use effectiveness (SAUE) is the percentage of adults who both opened the package in the first (5-minute) test period and opened and (if appropriate) properly resecured the package in the 1-minute test period.

(iv) Test procedures. The senior adults shall be tested individually, rather than in groups of two or more. The senior adults shall receive only such printed instructions on how to open and properly secure the special packaging as will appear on or accompany the package as it is delivered to the consumer. The senior-adult panel is tested according to the procedure incorporated in the following senior-adult panel test instructions:

Test Instructions for Senior Test

The following test instructions are used for all senior tests. If non-reclosable packages are being tested, the commands to close the package are eliminated.

1. No adult with a permanent or temporary illness, injury, or disability which would interfere with his/her effective participation shall be included in the test.

2. Each adult shall read and sign a consent form prior to participating. Any appropriate language from the consent form may be used to recruit potential participants. The form shall include the basic elements of informed consent as defined in 16 CFR 1028.116. Before beginning the test, the tester shall say, "PLEASE READ AND SIGN THIS CONSENT FORM." If an adult cannot read the consent form for any reason (forgot glasses, illiterate, etc.), he/she shall not participate in the test.

3. Each adult shall participate individually and not in the presence of other participants or onlookers.

4. The tests shall be conducted in well-lighted and distraction-free areas.

5. Records shall be filled in before or after the test, so that the tester's full attention is on the participant during the test period. Recording the test times to open and resecure the packages are the only exceptions.

6. To begin the first 5-minute test period, the tester says, "I AM GOING TO ASK YOU TO OPEN AND PROPERLY CLOSE THESE TWO IDENTICAL PACKAGES ACCORDING TO THE INSTRUCTIONS FOUND ON THE CAP." (Specify other instruction locations if appropriate.)

7. The first package is handed to the participant by the tester, who says, "PLEASE OPEN THIS PACKAGE ACCORDING THE DIRECTIONS OF THE CAP." (Specify other instruction locations if appropriate.) If the package contains product, the tester shall say, "PLEASE EMPTY THE (PILLS, TABLETS, CONTENTS, ETC.) INTO THIS CONTAINER." After the participant opens the package, the tester says, "PLEASE CLOSE THE PACKAGE PROPERLY, ACCORDING TO THE INSTRUCTIONS OF THE CAP." (Specify other instruction locations if appropriate)

8. Participants are allowed up to 5 minutes to read the instructions and open and close the package. The tester uses a stopwatch(s) or other timing device to time the opening and resecuring times. The elapsed times in seconds to open the package and to close the package are recorded on the data sheet as two separate times.

9. After 5 minutes, or when the participant has opened and closed the package, whichever comes first, the tester shall take all test materials from the participant. The participant may remove and replace the closure more than once if the participant initiates these actions. If the participant does not open the package and stops trying to open it before the end of the 5-minute period, the tester shall say, "ARE YOU FINISHED WITH THAT PACKAGE, OR WOULD YOU LIKE TO TRY AGAIN?" If the participant indicates that he/she is finished or cannot open the package and does not wish to continue trying, skip to Instruction 13.

10. To begin the second test period, the tester shall give the participant another, but identical, package and say, "THIS IS AN IDENTICAL PACKAGE. PLEASE OPEN IT ACCORDING TO THE INSTRUCTIONS ON THE CAP." (Specify other instruction locations if appropriate.) If the package contains product, the tester shall say, "PLEASE EMPTY THE (PILLS, TABLETS, CONTENTS, ETC.) INTO THIS CONTAINER." After the participant opens the package, the tester says, "PLEASE CLOSE THIS PACKAGE PROPERLY, ACCORDING TO THE INSTRUCTIONS ON THE CAP." (Specify other instruction locations if appropriate.)

11. The participants are allowed up to 1 minute (60 full seconds) to open and close the package. The elapsed times in seconds to open and to close the package are recorded on the data sheet as two separate times. The time that elapses between the opening of the package and the end of the instruction to close the package is not counted as part of the 1-minute test time.

12. After the 1-minute test, or when the participant has opened and closed the package, whichever comes first, the tester shall take all the test materials from the participant. The participant shall not be allowed to handle the package again. If the

participant does not open the package and stops trying to open it before the end of the 1-minute period, the tester shall say, ARE YOU FINISHED WITH THAT PACKAGE, OR WOULD YOU LIKE TO TRY AGAIN?" If the participant indicates that he/she is finished or cannot open the package and does not wish to continue trying, this shall be counted as a failure of the 1-minute test.

13. Participants who do not open the package in the first 5-minute test period are asked to open and close two non-child-resistant screening packages. The participants are given a 1-minute test period for each package. The tester shall give the participant a package and say, "PLEASE OPEN AND PROPERLY CLOSE THIS PACKAGE." The tester records the time for opening and closing, or 61 seconds, whichever is less, on the data sheet. The tester then gives the participant the second package and says, "PLEASE OPEN AND PROPERLY CLOSE THIS PACKAGE." The times to open and resecure or 61 seconds, whichever is less, shall be recorded on the data sheet.

14. Participants who cannot open and resecure both of the non-child-resistant screening packages are not counted as part of the 100-senior panel. Additional participants are selected and tested.

15. No adult may participate in more than two tests per sitting. If a person participates in two tests, the packages tested shall not be the same ASTM type of package.

16. If more adults in a sex or age group are tested than are necessary to determine SAUE, the last person(s) tested shall be eliminated from that group.

(4) Younger-adult panel. (i) One hundred adults, age 18 to 45 inclusive, with no overt physical or mental handicaps, and 70 percent of whom are female, shall comprise the test panel for younger adults. Not more than 35% of adults shall be obtained or tested at any one site. No individual tester shall administer the test to more that 35% of the adults tested. The adults shall be tested individually, rather than in groups of two or more. The adults shall receive only such printed instructions on how to open and properly resecure the special packaging as will appear on the package as it is delivered to the consumer. Five minutes shall be allowed to complete the opening and, if appropriate, the resecuring process.

(ii) Records shall be kept of the number of adults unable to open and of the number of the other adults tested who fail to properly resecure the special packaging. The number adults who successfully open the special packaging and then properly resecure the special packaging (if resecuring is appropriate) is the percent of adult-use effectiveness of the special packaging. In the case of unit packaging, the percent of adult-use effectiveness shall be the number of adults who successfully open a single(unit) package.

(iii) Adult-use effectiveness of not less than 90 percent.

Adult-Resecuring Procedure

1. After the adult participant in either the senior-adult test of 16 CFR 1700.20(a)(3) or the younger-adult test of 16 CFR 1700.20(a)(4) has resecured the package, or at the end of the test period (whichever comes first), the tester shall take the package and place it out of reach. The adult participant shall not be allowed to handle the package again.

2. The packages that have been opened and appear to be resecured by adults shall be tested by children according the child-test procedures to determine if the packages have been properly resecured. The packages are given to the children without being opened or resecured again for any purpose.

3. Using the results of the adult tests and the tests of apparently-resecured package by children, the adult use effectiveness is calculated as follows:

a. Adult use effectiveness.

1. The number of adult opening and resecuring failures, plus the number of packages that were opened by the children during the full 10-minute test that exceeds 20% of the apparently-resecured packages, equals the total number of failures.

2. The total number of packages tested by adults (which is 100) minus the total number of failures equals the percent adult-use effectiveness.

IV. TEST PARAMETERS

The Package

The test package was the 20mm PP Continuous Thread Closure with Tri-Seal F-219 Liner on a Wheaton 2 Ounce HDPE Bottle. For purposes of this test, all of the units tested were half water, and initially applied at 9 inch pounds of torque for a minimum of 72 hours prior to testing. Test packages were opened and closed one time prior to child testing. Senior test packages were not opened prior to testing. Directions to open the package appeared in pictorial form on the closure. A picture of the package appears in Figure 1 of this report.

Panelists

Children (50) as specified were employed to satisfy the Child-Resistant Effectiveness Standard.

Seniors (100) employed in the study satisfied the requirements of the protocol, with ages ranging from 50 to 70 years of age divided into three age groups (50-54, 55-59, and 60-70 years old with 70% female).

An additional 100 children between the ages of 42 and 51 months distributed into three age groups (42-44, 45-48, and 49-51 months, evenly distributed by sex) were employed to determine if the senior-adult panelists properly closed the packages.

Test supervisor(s)

Test supervisor(s) were instructed to conduct the evaluation of the packaging in strict accordance with the current C.F.R. Title 16, Part 1700. To ensure these procedures were adhered to, our complete quality system was followed, including periodic observations throughout the package evaluation.

Figure 1
20mm PP Continuous Thread Closure on a Wheaton 2 Ounce HDPE Bottle

V. RESULTS AND DISCUSSION

Results of this study appear in the tables section of the report. These tables represent a compilation of all data obtained during the study. For clarity in presentation and discussion of this information, the following features will be used as the major points of discussion:

- Child-resistant effectiveness
- Senior-use effectiveness
- Senior-resecuring effectiveness
- Meeting current Code of Federal Regulations Title 16, Part 1700.

Child-resistant effectiveness

Results of the package evaluation by the 50 child panelists appear in Table 1 of the report. From this table it will be noted that 1 child was successful in opening the packaging before demonstration and 3 children were successful in opening the packaging following a demonstration for a total of 4 successful child panelists. This represents a child-resistant effectiveness of 92%.

Senior-use effectiveness

The senior panel consisted of 70 females and 30 males. Results of the senior test appear in Table 2 of this report. A total of 25 of the 25 seniors in the 50 to 54 year old age group were successful in opening the first package and opening and properly closing the second package, 25 of the 25 seniors in the 55 to 59 year old age group were successful, and 50 of the 50 seniors were successful in the 60 to 70 year old age group. The senior-adult-use effectiveness (SAUE) was calculated at 100% minus 3 for a final SAUE of 97% (which includes the resecuring test), for the 100 seniors and 100 children who tested the packages apparently reclosed by the seniors. The exact opening and closing times are given in the Senior Test Packaging Data.

Senior-resecuring effectiveness

A group of 100 children were employed to test the packages that were apparently reclosed by the senior-adults. Results of the senior-resecuring test with children appear in Table 3 of this report. A total of 23 children were successful in opening the apparently reclosed packages. The amount over 20% (100 x .2 = 20) is 3, and is subtracted from the calculated senior-use effectiveness.

Meeting current C.F.R. Title 16, Part 1700.

The 20mm PP Continuous Thread Closure on a Wheaton 2 Ounce HDPE Bottle fulfills the standards for poison prevention packaging with resecuring effectiveness according to current C.F.R. Title 16, Part 1700.

VI. CONCLUSION

The data presented in the report demonstrates that the 20mm PP Continuous Thread Closure on a Wheaton 2 Ounce HDPE Bottle fulfills the requirements for poison prevention packaging with resecuring effectiveness according to the current Code of Federal Regulations Title 16, Part 1700.

Mold-Rite Plastics, Inc.
1206-016
May 2, 2005

EVALUATION OF THE 20MM PP CONTINUOUS THREAD CLOSURE ON A WHEATON 2 OUNCE HDPE BOTTLE AS A CHILD-RESISTANT PACKAGE FOR MOLD-RITE PLASTICS, INC.

Table 1. Package opening test evaluated by children 42 to 51 months of age for child resistant effectiveness.

				Successful Panelists				
				Before Demonstration		After Demonstration		
Age in Months	Males	Females	Total	Males	Females	Males	Females	Total
42-44	7	8	15	0	0	0	0	0
45-48	10	10	**20**	0	0	1	0	**1**
49-51	8	7	15	0	1	1	1	3
Totals	25	25	50	0	1	2	1	4

CHILD-RESISTANT EFFECTIVENESS = 92.00%

CHILD TEST PACKAGE DATA

Client Name: Mold-Rite Plastics, Inc. *Description:* 20mm CT/2 oz.

Contract No#: 1206-016

Package Number	Test Date	Site Code	Tester Code	Birthdate	Age in Months	Sex	Opening Time in Seconds 601=not opened	Method Code
1	4/05/2005	H596	30	6/20/2001	46	M	601	0
2	4/05/2005	H596	30	9/05/2001	43	F	601	0
3	4/05/2005	H596	30	3/22/2001	48	F	601	0
4	4/05/2005	H596	30	4/23/2001	47	M	601	0
5	4/05/2005	H596	31	8/11/2001	44	M	601	0
6	4/05/2005	H596	31	4/24/2001	47	M	601	0
7	4/06/2005	H442	10	4/14/2001	48	M	601	0
8	4/06/2005	H442	10	2/19/2001	50	M	601	0
9	4/06/2005	H442	10	1/25/2001	50	M	601	0
10	4/06/2005	H442	10	8/30/2001	43	F	601	0
11	4/06/2005	H442	30	5/14/2001	47	M	601	0
12	4/06/2005	H442	30	1/18/2001	51	F	89	3
13	4/06/2005	H442	10	6/11/2001	46	M	601	0
14	4/06/2005	H442	10	7/07/2001	45	M	326	1
15	4/06/2005	H442	30	3/29/2001	48	M	601	0
16	4/06/2005	H442	30	12/29/2000	51	F	449	3
17	4/07/2005	H492	10	4/08/2001	48	F	601	0
18	4/07/2005	H492	10	4/10/2001	48	M	601	0
19	4/07/2005	H492	30	6/16/2001	46	M	601	0
20	4/07/2005	H492	30	3/28/2001	48	F	601	0
21	4/07/2005	H492	30	2/15/2001	50	F	601	0
22	4/07/2005	H492	30	1/07/2001	51	M	601	0
23	4/07/2005	H492	10	4/16/2001	48	F	601	0
24	4/07/2005	H492	10	1/11/2001	51	F	601	0
25	4/07/2005	H492	30	3/05/2001	49	M	601	0
26	4/07/2005	H492	30	1/18/2001	51	M	601	0
27	4/12/2005	H368	1	12/28/2000	51	M	420	3
28	4/12/2005	H368	1	2/13/2001	50	M	601	0
29	4/12/2005	H368	1	3/10/2001	49	F	601	0
30	4/12/2005	H368	1	9/21/2001	43	M	601	0
31	4/12/2005	H368	33	4/16/2001	48	F	601	0
32	4/12/2005	H368	33	4/16/2001	48	F	601	0
33	4/13/2005	H288	10	7/17/2001	45	F	601	0
34	4/13/2005	H288	10	7/20/2001	45	F	601	0
35	4/13/2005	H288	10	6/09/2001	46	F	601	0
36	4/13/2005	H288	10	7/07/2001	45	F	601	0
37	4/13/2005	H288	10	3/07/2001	49	M	601	0
39	4/20/2005	H223	15	8/18/2001	44	M	601	0
40	4/20/2005	H223	15	3/30/2001	49	F	601	0
41	4/20/2005	H223	15	8/21/2001	44	M	601	0
42	4/20/2005	H223	15	8/13/2001	44	M	601	0
43	4/20/2005	H223	15	8/05/2001	44	F	601	0
44	4/20/2005	H223	15	8/09/2001	44	F	601	0
45	4/21/2005	H417	15	9/16/2001	43	M	601	0
46	4/21/2005	H417	15	9/16/2001	43	M	601	0
47	4/21/2005	H417	15	10/19/2001	42	F	601	0
48	4/21/2005	H417	15	8/25/2001	44	F	601	0
49	4/26/2005	H168	31	9/20/2001	43	F	601	0
50	4/26/2005	H168	31	3/14/2001	49	F	601	0
51	4/28/2005	H401	15	11/11/2001	42	F	601	0

Mold-Rite Plastics, Inc.
1206-016
May 2, 2005

EVALUATION OF THE 20MM PP CONTINUOUS THREAD CLOSURE ON A WHEATON 2 OUNCE HDPE BOTTLE FOR SENIOR-USE EFFECTIVENESS FOR MOLD-RITE PLASTICS, INC.

Table 2. Package opening test evaluated by adults 50 to 70 years of age for senior use-effectiveness.

		Successful Panelists		
	Panelists Tested	First Opening	Second Opening and Second Closing	Total Failures
50 – 54 years old:				
Females	18	18	18	0
Males	7	7	7	0
Subtotal	25	25	25	0
55 – 59 years old:				
Females	17	17	17	0
Males	8	8	8	0
Subtotal	25	25	25	0
60 – 70 years old:				
Females	35	35	35	0
Males	15	15	15	0
Subtotal	50	50	50	0
TOTAL	100	100	100	0

SENIOR-USE EFFECTIVENESS (SAUE) = 100.00 – 3.00 = 97.00%

SENIOR TEST PACKAGE DATA

Client Name: Mold-Rite Plastics, Inc. *Description:* 20mm CT/2 oz. - 9 IPT

Contract No: 1206-016

Package Number	Test Date	Site Code	Tester Code	Sex	Age	First Opening Fail = 301 sec.	First Closing Stop = 301 sec.	Second Opening Fail = 61 sec.	Second Close Fail = 61 sec.
1	1/28/2005	H892	15	F	68	3	2	2	2
2	1/28/2005	H892	15	F	57	2	2	2	2
3	1/28/2005	H892	15	M	56	3	2	2	2
4	1/28/2005	H892	15	M	55	3	2	2	2
5	1/28/2005	H892	15	M	59	3	2	3	3
6	1/28/2005	H892	15	M	57	5	3	3	2
7	1/28/2005	H892	15	F	52	3	4	3	2
8	1/28/2005	H892	15	F	55	4	3	2	2
9	1/28/2005	H892	15	F	58	2	2	2	2
10	1/28/2005	H892	15	F	55	2	11	3	4
11	1/28/2005	H892	15	F	59	3	2	2	2
12	1/28/2005	H892	15	F	64	2	2	3	2
13	1/28/2005	H892	15	F	70	34	8	20	4
14	1/28/2005	H892	15	F	60	2	2	2	2
15	1/28/2005	H892	15	F	55	3	3	4	2
16	2/02/2005	H643	1	F	64	2	2	2	2
17	2/02/2005	H643	1	F	53	2	3	4	4
18	2/02/2005	H643	1	F	54	2	3	2	8
19	2/02/2005	H643	1	F	69	8	6	3	4
20	2/02/2005	H643	1	F	62	4	12	3	4
21	2/02/2005	H643	1	F	66	3	2	3	5
22	2/02/2005	H643	1	F	63	3	2	4	5
23	2/02/2005	H643	1	F	70	4	3	2	3
24	2/02/2005	H643	1	F	56	6	2	3	3
25	2/02/2005	H643	1	M	64	3	3	2	2
26	2/02/2005	H643	1	F	57	3	2	3	3
27	2/02/2005	H643	1	M	67	6	2	2	2
28	2/02/2005	H643	1	F	64	3	2	2	2
29	2/02/2005	H643	1	M	53	4	3	4	3
30	2/02/2005	H643	1	F	67	15	4	10	4
31	2/02/2005	H643	1	F	70	2	2	6	9
32	2/02/2005	H643	1	F	64	2	2	2	7
33	2/02/2005	H643	1	F	70	3	2	3	5
34	2/07/2005	H712	15	F	57	9	4	7	2
35	2/07/2005	H712	15	F	63	6	4	3	2
36	2/07/2005	H712	15	F	66	3	2	2	2
37	2/07/2005	H712	15	M	64	7	2	2	2
38	2/07/2005	H712	15	M	64	2	2	2	2
39	2/07/2005	H712	15	M	70	5	3	2	2
40	2/07/2005	H712	15	F	57	2	2	2	2
41	2/07/2005	H712	15	F	56	2	2	2	1
42	2/07/2005	H712	15	F	66	3	2	3	2
43	2/07/2005	H712	15	F	64	4	2	4	2
44	2/09/2005	H848	1	F	53	4	22	5	3
45	2/09/2005	H848	1	F	52	3	2	2	3
46	2/09/2005	H848	1	M	64	6	3	3	3
47	2/09/2005	H848	1	F	60	3	2	3	2
48	2/09/2005	H848	1	M	67	3	3	3	3
49	2/09/2005	H848	1	F	54	12	4	3	3
50	2/09/2005	H848	1	F	67	6	3	4	3

SENIOR TEST PACKAGE DATA

Client Name: Mold-Rite Plastics, Inc. *Description:* 20mm CT/2 oz. - 9 IPT

Contract No: 1206-016

Package Number	Test Date	Site Code	Tester Code	Sex	Age	First Opening Fail = 301 sec.	First Closing Stop = 301 sec.	Second Opening Fail = 61 sec.	Second Close Fail = 61 sec.
51	2/09/2005	H848	1	F	54	2	2	2	2
52	2/09/2005	H848	1	F	60	4	2	3	3
53	2/18/2005	H851	10	M	62	3	3	3	2
54	2/18/2005	H851	10	M	59	8	2	4	2
55	2/18/2005	H851	10	M	68	3	2	3	4
56	2/18/2005	H851	10	F	61	4	2	4	2
57	2/18/2005	H851	10	F	60	6	2	10	2
58	2/18/2005	H851	10	M	61	2	2	2	2
59	2/18/2005	H851	10	F	55	3	2	4	3
60	2/18/2005	H851	10	F	70	5	3	3	3
61	2/18/2005	H851	10	M	60	17	4	3	2
62	2/18/2005	H851	10	M	57	6	2	2	3
63	2/18/2005	H851	10	F	65	3	2	3	2
64	2/25/2005	H902	31	F	67	3	2	2	3
65	2/25/2005	H902	31	M	53	15	3	12	2
66	2/25/2005	H902	31	F	57	4	2	4	2
67	2/25/2005	H902	31	F	61	4	5	2	3
68	2/25/2005	H902	31	M	70	4	3	4	3
69	2/18/2005	H851	10	F	68	3	2	3	2
70	2/25/2005	H902	31	F	69	6	3	4	2
71	2/25/2005	H902	31	M	50	1	1	1	1
72	2/25/2005	H902	31	F	60	3	2	3	2
73	2/25/2005	H902	31	F	58	6	4	2	2
74	2/25/2005	H902	31	F	52	4	4	4	3
75	2/25/2005	H902	31	F	54	3	3	3	3
76	2/25/2005	H902	31	F	52	4	3	3	3
77	2/25/2005	H902	31	F	67	37	3	2	3
78	3/07/2005	H895	15	F	58	3	4	3	3
79	3/07/2005	H895	15	F	69	6	3	2	2
80	3/07/2005	H895	15	F	57	2	2	2	2
81	3/07/2005	H895	15	F	52	5	2	2	2
82	3/07/2005	H895	15	F	57	4	2	5	3
83	3/07/2005	H895	15	F	64	3	8	2	2
84	3/07/2005	H895	15	F	70	3	2	3	3
85	3/07/2005	H895	15	M	69	3	2	2	2
86	3/07/2005	H895	1	M	66	2	2	2	2
87	3/07/2005	H895	15	M	62	2	3	2	2
88	3/07/2005	H895	1	M	51	2	2	3	2
89	3/18/2005	H947	30	M	58	8	4	6	4
90	3/18/2005	H947	30	F	50	2	2	1	2
91	3/18/2005	H947	30	M	57	3	3	2	2
92	3/18/2005	H947	30	M	52	11	4	15	4
93	3/18/2005	H947	30	M	50	6	2	2	3
94	3/24/2005	H894	10	M	54	4	3	4	3
95	3/24/2005	H894	10	F	51	6	4	10	3
96	3/24/2005	H894	10	F	53	9	3	8	3
97	3/24/2005	H894	10	F	54	6	2	3	3
98	3/24/2005	H894	10	F	50	5	3	3	3
99	3/24/2005	H894	10	F	54	6	6	3	3
100	3/24/2005	H894	10	F	50	7	2	4	2

EVALUATION OF THE 20MM PP CONTINUOUS THREAD CLOSURE ON A WHEATON 2 OUNCE HDPE BOTTLE AS A CHILD-RESISTANT PACKAGE FOR MOLD-RITE PLASTICS, INC.

Table 3. Senior-reclosed package opening test evaluated by children 42 to 51 months of age for senior-resecuring effectiveness.

				Successful Panelists				
				Before Demonstration		After Demonstration		
Age in Months	Males	Females	Total	Males	Females	Males	Females	Total
42-44	15	15	30	1	3	1	0	5
45-48	20	20	40	1	4	2	1	8
49-51	15	15	30	1	4	5	0	10
Totals	50	50	100	3	11	8	1	23

The amount over 20% (100 x .2 = 20) is 3, and is subtracted from the calculated senior-use effectiveness

S-R CHILD TEST PACKAGE DATA

Client Name: Mold-Rite Plastics, Inc. *Description:* 20mm CT/2 oz.

Contract No#: 1206-016

Package Number	Test Date	Site Code	Tester Code	Birthdate	Age	Sex	Opening Time 601 = Not Opened	Method
1	2/03/2005	H355	30	11/11/2000	51	M	601	0
2	2/03/2005	H355	30	5/19/2001	44	M	601	0
3	2/03/2005	H355	15	3/13/2001	47	F	601	0
4	2/03/2005	H355	15	6/05/2001	44	F	601	0
5	2/03/2005	H355	30	5/09/2001	45	F	601	0
6	2/03/2005	H355	30	4/12/2001	46	M	601	0
7	2/03/2005	H355	15	2/25/2001	47	F	80	3
8	2/03/2005	H355	15	5/15/2001	45	F	601	0
9	2/03/2005	H355	30	8/07/2001	42	F	601	0
10	2/03/2005	H355	30	8/18/2001	42	F	601	0
11	2/03/2005	H355	15	6/23/2001	43	F	601	0
12	2/03/2005	H355	15	11/17/2000	51	F	601	0
13	2/03/2005	H355	30	11/11/2000	51	M	601	0
14	2/03/2005	H355	30	11/25/2000	50	M	56	1
15	2/03/2005	H355	15	3/20/2001	46	F	50	3
16	2/03/2005	H355	15	5/09/2001	45	F	601	0
17	2/10/2005	H128	31	2/05/2001	48	M	601	0
18	2/10/2005	H128	31	3/16/2001	47	M	601	0
19	2/10/2005	H128	30	4/09/2001	46	M	601	0
20	2/10/2005	H128	30	1/06/2001	49	M	601	0
21	2/10/2005	H128	30	11/20/2000	51	M	467	3
22	2/10/2005	H128	30	1/11/2001	49	F	601	0
23	2/10/2005	H128	31	1/06/2001	49	M	601	0
24	2/10/2005	H128	31	7/10/2001	43	M	601	0
25	2/10/2005	H128	30	4/13/2001	46	F	203	3
26	2/10/2005	H128	30	1/10/2001	49	F	601	0
27	2/10/2005	H128	31	8/25/2001	42	F	601	0
28	2/10/2005	H128	31	7/10/2001	43	F	601	0
29	2/10/2005	H128	30	5/13/2001	45	F	601	0
30	2/10/2005	H128	30	6/21/2001	44	F	601	0
31	2/10/2005	H128	31	2/08/2001	48	M	601	0
32	2/10/2005	H128	31	8/04/2001	42	M	428	3
33	2/10/2005	H128	30	12/22/2000	50	M	397	3
34	2/10/2005	H128	30	1/25/2001	49	F	601	0
35	2/10/2005	H128	31	2/26/2001	47	F	312	3
36	2/10/2005	H128	31	2/10/2001	48	M	601	0
37	2/16/2005	H169	7	4/16/2001	46	M	601	0
38	2/16/2005	H169	7	5/12/2001	45	M	601	0
39	2/16/2005	H169	7	7/18/2001	43	F	601	0
40	2/16/2005	H169	7	5/11/2001	45	F	601	0
41	2/16/2005	H169	7	11/30/2000	51	F	601	0
42	2/16/2005	H169	7	12/22/2000	50	M	413	3
43	2/16/2005	H169	7	2/23/2001	48	F	601	0
44	2/16/2005	H169	7	3/01/2001	47	F	601	0
45	2/23/2005	H124	15	2/16/2001	48	F	601	0
46	2/23/2005	H124	15	7/14/2001	43	M	601	0
47	2/23/2005	H124	15	3/07/2001	48	M	601	0
48	2/23/2005	H124	15	2/16/2001	48	M	601	0
49	2/23/2005	H124	15	4/30/2001	46	F	601	0
50	2/23/2005	H124	15	4/09/2001	46	M	601	0

S-R CHILD TEST PACKAGE DATA

Client Name: Mold-Rite Plastics, Inc. *Description:* 20mm CT/2 oz.

Contract No#: 1206-016

Package Number	Test Date	Site Code	Tester Code	Birthdate	Age	Sex	Opening Time 601 = Not Opened	Method
51	2/23/2005	H124	10	4/03/2001	47	M	601	0
52	2/23/2005	H124	10	3/06/2001	48	M	29	3
53	2/23/2005	H124	10	6/05/2001	45	F	601	0
54	2/23/2005	H124	10	2/03/2001	49	M	601	0
55	2/23/2005	H124	15	4/22/2001	46	M	601	0
56	2/23/2005	H124	15	4/16/2001	46	M	601	0
57	2/23/2005	H124	10	4/01/2001	47	M	601	0
58	2/23/2005	H124	10	3/02/2001	48	M	601	0
59	3/03/2005	H194	1	1/02/2001	50	M	601	0
60	3/03/2005	H194	1	5/01/2001	46	F	601	0
61	3/03/2005	H194	1	12/25/2000	50	M	480	1
62	3/03/2005	H194	1	1/18/2001	50	M	430	1
63	3/03/2005	H194	10	4/21/2001	46	M	476	1
64	3/03/2005	H194	10	3/23/2001	47	M	309	1
65	3/03/2005	H194	1	9/05/2001	42	F	601	0
66	3/03/2005	H194	1	2/27/2001	48	F	601	0
67	3/03/2005	H194	1	12/17/2000	51	F	601	0
68	3/03/2005	H194	1	1/15/2001	50	M	601	0
69	3/03/2005	H194	1	8/05/2001	43	M	601	0
70	3/03/2005	H194	1	8/05/2001	43	M	601	0
71	3/08/2005	H502	7	6/05/2001	45	F	116	3
72	3/08/2005	H502	7	4/14/2001	47	F	601	0
73	3/08/2005	H502	7	1/06/2001	50	M	601	0
74	3/08/2005	H502	7	9/09/2001	42	F	42	3
75	3/08/2005	H502	7	5/05/2001	46	F	601	0
76	3/08/2005	H502	7	8/26/2001	42	F	601	0
77	3/23/2005	H225	10	2/09/2001	49	F	118	3
78	3/23/2005	H225	10	1/06/2001	51	F	601	0
79	3/23/2005	H225	10	8/05/2001	44	F	122	3
80	3/23/2005	H225	10	3/15/2001	48	M	601	0
81	3/23/2005	H225	10	9/16/2001	42	F	601	0
82	3/23/2005	H225	10	9/09/2001	42	F	601	0
83	3/23/2005	H225	10	10/05/2001	42	M	601	0
84	3/23/2005	H225	10	8/26/2001	43	F	151	3
85	4/05/2005	H596	30	3/15/2001	49	M	601	0
86	4/05/2005	H596	30	1/12/2001	51	F	272	3
87	4/13/2005	H288	10	10/09/2001	42	M	601	0
88	4/13/2005	H288	10	9/14/2001	43	M	601	0
89	4/13/2005	H288	10	9/10/2001	43	M	601	0
90	4/13/2005	H288	10	9/17/2001	43	M	601	0
91	4/15/2005	H221	1	9/08/2001	43	M	601	0
92	4/13/2005	H288	10	3/05/2001	49	F	601	0
93	4/13/2005	H288	10	1/03/2001	51	F	291	3
94	4/15/2005	H221	1	2/03/2001	50	F	601	0
95	4/15/2005	H221	15	9/17/2001	43	M	601	0
96	4/15/2005	H221	15	2/12/2001	50	F	601	0
97	4/15/2005	H221	1	9/13/2001	43	M	601	0
98	4/15/2005	H221	1	9/27/2001	43	M	185	3
99	4/15/2005	H221	15	2/28/2001	50	F	65	3
100	4/15/2005	H221	15	2/14/2001	50	F	601	0

Mold-Rite Plastics, Inc.
1206-016
May 2, 2005

Test Supervisors

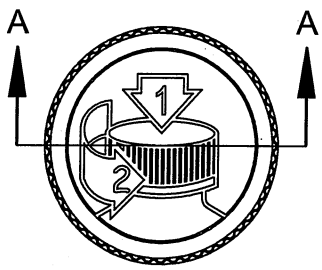
1	-	Shirley Kasper
7	-	Richard Ward
9	-	Anita Burgey
10	-	Elaine Villani
15	-	Marie Gerland
30	-	Kate Adams
31	-	Tina McCullagh

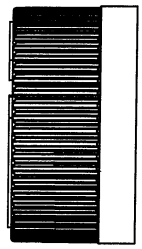
Methods of opening

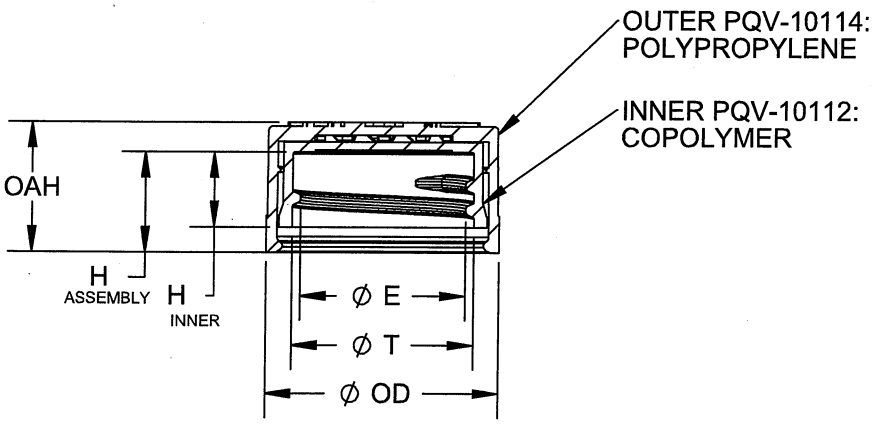
0	-	Not opened
1	-	Correct method
2	-	Used fingernail
3	-	Used fingers
4	-	Used teeth
5	-	Used feet
6	-	Shelled
7	-	Damaged package
8	-	Touched indicator
9	-	Used teeth and fingers
10	-	Banged on floor
11	-	Caused noticeable leakage
12	-	Used bottle as lever

Addendum

Nothing unusual to report.







SECTION A-A
SCALE 1:1

8 THREADS PER INCH, .125 PITCH,
380° FULL DEPTH THREAD

	TOLERANCE	UNITS	
E	±0.010 [0.25]	in [mm]	0.865 [21.97]
T	±0.010 [0.25]	in [mm]	0.950 [24.13]
H (ASSEMBLY)	MINIMUM	in [mm]	0.477 [12.12]
H (INNER)	±0.008 [0.20]	in [mm]	0.388 [9.86]
OD	±0.012 [0.30]	in [mm]	1.217 [30.91]
OAH	±0.012 [0.30]	in [mm]	0.668 [16.97]
PART WEIGHT	±0.60	g	4.10

STATIC TORQUE RECOMMENDATION

10-18 in-lbs

THIS REQUIREMENT MAY VARY DEPENDING UPON BOTTLE MATERIAL, NECK FINISH, AND CAPPING EQUIPMENT

THE CLOSURE DIMENSIONS DEPICTED ARE THOSE WHICH HAVE GENERALLY BEEN FOUND TO BE FUNCTIONAL BASED ON INDUSTRY EXPERIENCE BECAUSE OF VARIABILITY IN GLASS AND PLASTIC CONTAINER FINISHES, EACH CLOSURE/FINISH SYSTEM SHOULD BE INDIVIDUALLY EVALUATED AND TESTED TO ENSURE IT MEETS APPLICABLE PERFORMANCE CRITERIA. SEE QUALITY ASSURANCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

MOLD-RITE, WEATHERCHEM AND STULL TECHNOLOGIES RESERVES THE RIGHT TO REVISE ANY OR ALL SPECIFICATIONS AND REQUIREMENTS

DRAWING TYPE : CUSTOMER

DIMENSIONS ENCLOSED IN ( ) INDICATE REFERENCE DIMENSIONS AND NO TOLERANCE LIMITS ARE ESTABLISHED

TOLERANCES UNLESS OTHERWISE SPECIFIED

DIMENSION (inches)	TOLERANCE	DIMENSION (mm)	TOLERANCE
0-0.787	±0.006	0-20	±0.152
0.788-1.181	±0.008	21-30	±0.203
1.182-2.756	±0.012	31-70	±0.305
2.757-3.937	±0.016	71-100	±0.406
3.938-5.096	±0.020	101-150	±0.508
5.097-7.874	±0.024	151-200	±0.610
7.875-9.843	±0.032	201-250	±0.813

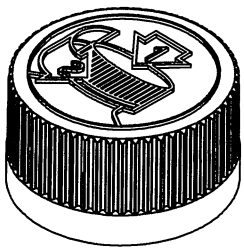
ANGULAR TOLERANCE ± 2°

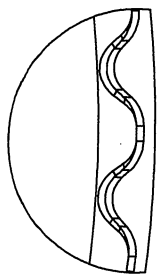
THIRD ANGLE PROJECTION	DISTRIBUTION CODE	DRAWING NAME	24mm-400 PDT CRC PICTO EMBOSSED
SOLIDWORKS	D	DRAWING NUMBER	CQA-10156
DRAWN BY: C.B.	04/13/15	MATERIAL	SEE NOTES
QA APPR:		MODEL NUMBER:10153_01 24mmPDT CRC Assm Master M	
CUSTOMER APPR:		SCALE / SHEET SIZE / SHEET / REV / N/F	

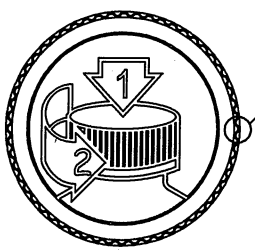
AVAILABLE OPTIONS

REVISION HISTORY

REV	N/P	DATE	REVISION	DE
01	AA	10/20/14	INITIAL DRAWING	C.E







DETAIL RIB
SCALE 10 : 1
(56) EQUISPACED RIBS

THE CLOSURE DIMENSIONS DEPICTED ARE THOSE WHICH HAVE GENERALLY BEEN FOUND TO BE FUNCTIONAL BASED ON INDUSTRY EXPERIENCE BECAUSE OF VARIABILITY IN GLASS AND PLASTIC CONTAINER FINISHES, EACH CLOSURE/FINISH SYSTEM SHOULD BE INDIVIDUALLY EVALUATED AND TESTED TO ENSURE IT MEETS APPLICABLE PERFORMANCE CRITERIA. SEE QUALITY ASSURANCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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DRAWING TYPE : CUSTOMER

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TOLERANCES UNLESS OTHERWISE SPECIFIED

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7.875-9.843	±0.032	201-250	±0.813

ANGULAR TOLERANCE ± 2°

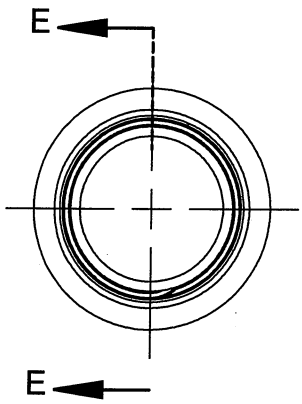
One Company - Unlimited Packaging Possibilities

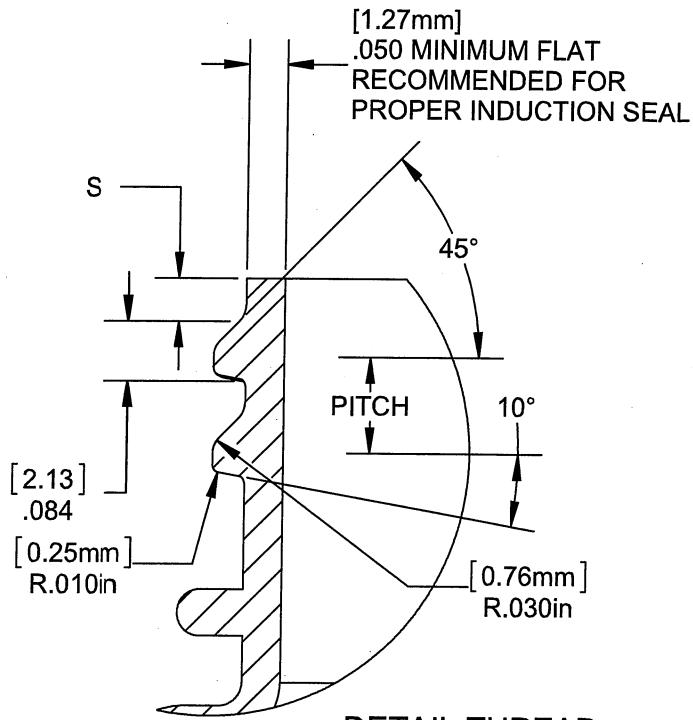
WEATHERCHEM · MRP · STULL

EXPANDED PRODUCT OFFERINGS · MULTIPLE MANUFACTURING LOCATIONS
INDUSTRY LEADING INNOVATION · UNMATCHED CUSTOMER SERVICE

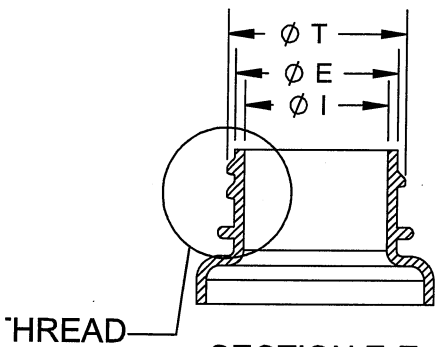
THIRD ANGLE PROJECTION	DISTRIBUTION CODE	DRAWING NAME
SOLIDWORKS	D	24mm-400 PDT CRC PICTO EMBOSSED
DRAWN BY: REFER TO PAGE 1		DRAWING NUMBER CQA-10156
QA APPR: REFER TO PAGE 1		MATERIAL SEE DRAWING
CUSTOMER APPR: REFER TO PAGE 1		SCALE · SHEET SIZE · SHEET · REV · N/F

Recommended Neck Finish

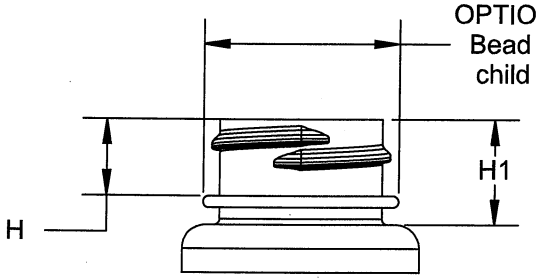




DETAIL THREAD
SCALE 4 : 1



SECTION E-E



	TOLERANCE	UNITS	
E	±0.008 [0.20]	in [mm]	0.847 [21.51]
T	±0.008 [0.20]	in [mm]	0.931 [23.65]
I	MINIMUM	in [mm]	0.516 [13.11]
S	±0.015 [0.38]	in [mm]	0.046 [1.17]
H	MINIMUM	in [mm]	0.396 [10.06]
H1	MINIMUM	in [mm]	0.550 [13.97]
B	MAXIMUM	in [mm]	1.020 [25.91]
TPI			8
PITCH		in [mm]	0.125 [3.18]

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DRAWING TYPE : CUSTOMER

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ANGULAR TOLERANCE ± 2°

PROPRIETARY AND CONFIDENTIAL

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INDUSTRY LEADING INNOVATION · UNMATCHED CUSTOMER SERVICE

THIRD ANGLE PROJECTION

SOLIDWORKS

DISTRIBUTION CODE: D

DRAWN BY: REFER TO PAGE 1

QA APPR: REFER TO PAGE 1

CUSTOMER APPR: REFER TO PAGE 1

DRAWING NAME: 24mm-400 PDT CRC PICTO EMBOSSED

DRAWING NUMBER: CQA-10156

MATERIAL

SCALE	SHEET SIZE	SHEET	REV	N/F

Evaluation of the
24mm CONTINUOUS THREAD CLOSURE
ON AN HDPE ROUND BOTTLE for
Senior-Resecuring Effectiveness
for Mold-Rite Plastics Inc.

PERRITT
LABORATORIES

NAMAS
TESTING
NO. 1457S111

145 South Main Street
Post Office Box 147
Hightstown, NJ 08520 USA
Tel. (609) 443-4848
Fax (609) 443-5293

July 16, 1998

George Gryger
Mold-Rite Plastics Inc.
1 Plant Street
Plattsburgh, NY 12901

Dear Mr. Gryger,

Herein is our report titled "Evaluation of the 24mm CONTINUOUS THREAD CLOSURE ON AN HDPE ROUND BOTTLE for Senior-Resecuring Effectiveness for Mold-Rite Plastics Inc.."

The test unit was evaluated by using the Consumer Product Safety Commission Protocol and Standards. In the study the test unit fulfill the requirements for senior-resecuring effectiveness as per the Code of Federal Regulations (C.F.R.) Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744.

After you have had an opportunity to read the report, I will be pleased to review it with you.

Sincerely,
PERRITT LABORATORIES, INC.

Richard A. Ward
Director of Consumer Product Testing

TABLE OF CONTENTS

I. SUMMARY

Report to:	Mold-Rite Plastics Inc. 1 Plant Street Plattsburgh, NY 12901
Date:	July 16, 1998
Samples of:	24mm CONTINUOUS THREAD CLOSURE ON AN HDPE ROUND BOTTLE
Contract No.:	1206-009
Samples Received:	February 23, 1998
Submitted by:	George Gryger

Objective

The client submitted the above sample for a study to determine if the unit is in compliance with the Consumer Product Safety Commission (CPSC) protocol and standards for senior-resecuring effectiveness as per the Code of Federal Regulations (C.F.R.) Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744.

Procedures

The protocol for the evaluation of packaging for poison prevention (C.F.R. Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744) was strictly adhered to for this study.

Panelists

In the course of this study 100 seniors (50 to 70 year-olds, 70% female) were employed. An additional 100 children were employed to test the packages that the seniors reclosed.

This study does not include a 50 child sequential test panel for child-resistant effectiveness as stipulated in the regulation.

Results

Results of the study indicate that the 24mm CONTINUOUS THREAD CLOSURE ON AN HDPE ROUND BOTTLE fulfill the standards for senior-resecuring effectiveness according to C.F.R. Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744.

II. INTRODUCTION

Mold-Rite Plastics Inc. wished to determine if the 24mm CONTINUOUS THREAD CLOSURE ON AN HDPE ROUND BOTTLE fulfills the Consumer Product Safety Commission's (CPSC) standards and protocols for senior-resecuring effectiveness set forth in the Code of Federal Regulations Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744. Perritt Laboratories, Inc., a NAMAS accredited laboratory[1] for testing child-resistant packaging according to the CPSC protocol, was requested to evaluate the packaging using the above protocol.

Perritt Laboratories, Inc., an independent testing laboratory, has been evaluating child-resistant packaging for both industry and government for over twenty years. The company is recognized as the leader in the field by virtue of having employed hundreds of thousands of panelists and evaluated thousands of packaging concepts for child-resistance. Perritt Laboratories, Inc. utilizes standard operating procedures (SOP's), along with quality assurance programs in accordance with good laboratory practices (GLP) for non-clinical laboratories.

In the course of this evaluation, the packaging was tested with panels consisting of 100 seniors 50 to 70 year-olds, 70% female) and 100 children (42 to 51 months of age, evenly distributed) obtained from nursery schools, day care centers and civic groups. The data derived from the study were assembled in a meaningful fashion and reviewed to determine whether the packaging met the cited standard for poison prevention packaging with resecuring effectiveness presented herein.

---

[1] Perritt Laboratories, Inc. received its updated NAMAS accreditation (#1457 SIII) for testing packaging for child-resistance according to CPSC's final ruling published in the Federal Register, Vol. 60, No. 140, pp. 37710 to 37744 in August of 1995.

NAMAS is the National Measurement Accreditation Service of the United Kingdom. Organizations accredited by NAMAS meet the requirements of EN 45001, ISO Guide 25 and the relevant requirements of the ISO 9000/EN 29000/BS 5750 series of standards, including those of the model described in ISO 9002/EN 29002/BS 5750 Part 2 when acting as suppliers producing test results.

III. PROCEDURE

The following standard and protocol was adhered to in this study.

Protocol

Code of Federal Regulations Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744:

1700.20 Testing procedure for testing special packaging.

(a) Test protocols - (1) General requirements - (i) Requirements for packaging. As specified in § 1700.15(b), special packaging is required to meet the child test requirements and the applicable adult test requirements of this § 1700.20.

(ii) Condition of packages to be tested. (A) Tamper-resistant feature. Any tamper-resistant feature of the package to be tested shall be removed prior to testing unless it is part of the package's child-resistant design. Where a package is supplied to the consumer in an outer package that is not part of the package's child-resistant design, one of the following situations applies.

(1) In the child test, the package is removed from the outer package, and the outer package is not given to the child.

(2) In both the adult tests, if the outer package bears instructions for how to open or properly resecure the package, the package shall be given to the test subject in the outer package. The time required to remove the package from the outer packages is not counted in the times allowed for attempting to open and, if appropriate, reclose the package.

(3) In both the adult tests, if the outer package does not bear any instructions relevant to the test, the package will be removed from the outer package, and the outer package is not given to the test subject.

(B) Reclosable packages - adult tests. In both the adult tests, reclosable packages, if assembled by the testing agency, shall be properly secured at least 72 hours prior to beginning the test to allow the materials (e.g., the closure liner) to "take a set." If assembled by the testing agency, torque-dependent closures shall be secured at the same on-torque as applied on the packaging line. Application torques must be recorded in the test report. All packages shall be handled so that no damage or jarring will occur during storage or transportation. The packages shall not be exposed to extreme conditions of heat or cold. The packages shall be tested at room temperature.

(2) Child test - (i) Test subjects. (A) Selection criteria. Use from 1 to 4 groups of 50 children, as required under the sequential testing criteria in Table 1. No more than 20 percent of the children in each group shall be tested at or obtained from any given site. Each group of children shall be randomly selected as to age, subject to the limitations set

forth below. Thirty percent of the children in each group shall be of age 42-44 months, 40 percent of the children in each group shall be of age 45-48 months, and 30 percent of the children in each group shall be of age 49-51 months. The children's ages shall be calculated as follows:

(1) Arrange the birth date and test date by the numerical designations for month, day, and year.

(2) Subtract the month, day, year numbers for the birth date from the respective numbers for the test date. This may result in negative numbers for the months or days.

(3) Multiply the difference in years by 12 to obtain the number of months in the difference in years, and add this value to the number of months that was obtained when the birth date was subtracted from the test date. This figure either will remain the same or be adjusted up or down by 1 month, depending on the number of days obtained in the subtraction of the birth date from the test date.

(4) If the number of days obtained by subtracting the days in the birth date from the days in the test date is +16 or more, 1 month is added to the number of months obtained above. If the number of days is -16 or less, subtract 1 month. If the number of days is between -15 and +15 inclusive, no change is made in the number of months.

(B) Gender distribution. The difference between the number of boys and the number of girls in each age range shall not exceed 10 percent of the number of children in that range. The children selected should have no obvious or overt physical or mental handicap. Each child's parent or guardian shall read and sign a consent form prior to the child's participation. (The Commission staff will not disregard the results of tests performed by other parties simply because informed consent for children is not obtained.)

(ii) Test failures. A test failure shall be any child who opens the special packaging or gains access to its contents. In the case of unit packaging, however, a test failure shall be any child who opens or gains access to the number of individual units which constitute the amount that may produce serious personal injury or serious illness, or a child who opens or gains access to more than 8 individual units, whichever number is lower, during the full 10 minutes of testing. The number of units a child opens or gains access to is interpreted as the individual units from which the product has been or can be removed in whole or in part. The determination of the amount of substance that may produce serious personal injury or serious illness shall be based on a 25-pound child. Manufacturers or packagers intending to use unit packaging for a substance requiring special packaging are requested to submit such toxicological data to the Commission's Office of Compliance.

(iii) Sequential test. The sequential test is initially conducted using 50 children, and, depending on the results, the criteria in Table 1 determine whether the package is either child-resistant or not child-resistant or whether further testing is required. Further testing is required if the results are inconclusive and involves the use of one or more additional groups of 50 children each, up to a maximum of 200 children. No individual shall administer the test to more than 30 percent of the children tested in each group. Table 1 gives the acceptance (pass), continue testing, and rejection (fail) criteria to be

TABLE 1. - Number of Openings: Acceptance (Pass), Continue Testing, and Rejection (Fail) Criteria for the First 5 minutes and the Full 10 minutes of the Children's Protocol Test

Test Panel	Cumulative number of children	Package openings					
		First 5 minutes			Full 10 minutes		
		Pass	Continue	Fail	Pass	Continue	Fail
1....	50	0-3	4-10	11+	0-5	6-14	15+
2....	100	4-10	11-18	19+	6-15	16-24	25+
3....	150	11-18	19-25	26+	16-25	26-34	35+
4....	200	19-30	.....	31+	26-40	.....	41+

used for the first 5 minutes and the full 10 minutes of the children's test. If the test continues past the initial 50-child panel, the package openings shown in Table 1 are cumulative.

(iv) Test procedures. The children shall be divided into groups of two. The testing shall be done in a location that is familiar to the children; for example, their customary nursery school or regular kindergarten. No child shall test more than two special packages. When more than one special package is being tested, each package shall be of a different ASTM type and they shall be presented to the paired children in random order. This order shall be recorded. The children shall be tested by the procedure incorporated in the following test instructions:

Standardized Child Test Instructions

1. Reclosable packages, if assembled by the testing agency, shall be properly secured at least 72 hours prior to the opening described in instruction number 3 to allow the materials, (e.g. the closure liner), to "take a set." Application torques must be recorded in the test report.

2. All packages shall be handled so that no damage or jarring will occur during storage or transportation. The packages shall not be exposed to extreme conditions of heat or cold. The packages shall be tested at room temperature.

3. Reclosable packages shall be opened and properly resecured one time (or more if appropriate), by the testing agency or other adult prior to testing. The opening and resecuring shall not be done in the presence of the children. (In the adult-resecuring test, the tester must not open and resecure the package prior to the test.) If multiple openings/resecurings are to be used, each of four (4) testers shall open and properly resecure one forth of the packages once and then shall open and properly resecure each package a second, third, fourth, through tenth (or other specified number) time, in the

same sequence as the first opening and resecuring. The packages shall not be opened and resecured again prior to testing. The name of each tester and the package numbers that he/she opens and resecures shall be recorded and reported. It is not necessary for the tester to protocol test the packages that they opened and resecured.

4. The child shall have no overt physical or mental handicaps. No child with a permanent or temporary illness, injury, or handicap that would interfere with his/her effective participation shall be included in the test.

5. The testing shall take place in a well-lighted location that is familiar to the children and that is isolated from all distractions.

6. The tester, or another adult, shall escort a pair of children to the test area. The tester shall seat the two children so that there is no visual barrier between the children and the tester.

7. The tester shall talk to the children to make them feel at ease.

8. The children shall not be given the impression that they are in a race or contest. They are not to be told that the test is a game or that it is fun. They are not to be offered a reward.

9. The tester shall record all data prior to, or after, the test so that full attention can be on the children during the test period.

10. The tester shall use a stopwatch(s) or other timing device to time the number of seconds it takes the child to open the package and to time the 5-minute test periods.

11. To begin the test, the tester shall hand the children identical packages and say, "PLEASE TRY TO OPEN THIS FOR ME."

12. If a child refuses to participate after the test has started, the tester shall reassure the child and gently encourage the child to try. If the child continues to refuse, the tester shall ask the child to hold the package in his/her lap until the other child is finished. This pair of children shall not be eliminated from the results unless the refusing child disrupts the participation of the other child.

13. Each child shall be given up to 5 minutes to open his/her package. The tester shall watch the children at all times during the test. The tester shall minimize conversations with the children as long as they continue to attempt to open their packages. The tester shall not discourage the children verbally or with facial expressions. It a child gets frustrated or bored and stops trying to open his/her package, the tester shall reassure the child and gently encourage the child to keep trying (e.g., "please try to open the package").

14. The children shall be allowed freedom of movement to work on their packages as long as the tester can watch both children (e.g., they can stand up, get down on the floor, or bang or pry the package).

15. If a child is endangering himself or others at any time, the test shall be stopped and the pair of children eliminated from the final results.

16. The children shall be allowed to talk to each other about opening the packages and shall be allowed to watch each other try to open the packages.

17. A child shall not be allowed to try to open the other child's package.

18. If a child opens his/her package, the tester shall say, "THANK YOU," take the package from the child and put it out of the child's reach. The child shall not be asked to open the package a second time.

19. At the end of the 5-minute period, the tester shall demonstrate how to open the package if either child has not opened his or her package. A separate "demo" package shall be used for the demonstration.

20. Prior to beginning the demonstration, the tester shall ask the children to set their packages aside. The children shall not be allowed to continue to try to open their packages during the demonstration period.

21. The tester shall say, "WATCH ME OPEN MY PACKAGE."

22. Once the tester gets the children's full attention, the tester shall hold the demo package approximately two feet from the children and open the package at a normal speed as if the tester were going to use the contents. There shall be no exaggerated opening movements.

23. The tester shall not discuss or describe how to open the package.

24. To begin the second 5-minute period, the tester shall say, "NOW YOU TRY TO OPEN YOUR PACKAGES."

25. If one or both children have not used their teeth to try to open their packages during the first 5 minutes, the tester shall say immediately before beginning the second 5-minute period, "YOU CAN USE YOUR TEETH IF YOU WANT TO." This is the only statement that the tester shall make about using teeth.

26. The test shall continue for an additional 5 minutes or until both children have opened their packages, whichever comes first.

27. At the end of the test period, the tester shall say, "THANK YOU FOR HELPING." If children were told that they could use their teeth, the tester shall say, "I KNOW I TOLD YOU THAT YOU COULD USE YOUR TEETH TODAY, BUT YOU SHOULD NOT PUT THINGS LIKE THIS IN YOUR MOUTH AGAIN." In addition, the tester shall say, "NEVER OPEN PACKAGES LIKE THIS WHEN YOU ARE BY YOURSELF. THIS KIND OF PACKAGE MIGHT HAVE SOMETHING IN IT THAT WOULD MAKE YOU SICK."

28. The children shall be escorted back to their classroom or other supervised area by the tester or another adult.

29. If the children are to participate in a second test, the tester shall have them stand up and stretch for a short time before beginning the second test. The tester shall take care that the children do not disrupt other tests in progress.

(3) Senior-adult panel - (i) Test subjects. Use a group of 100 senior adults. Not more than 24 percent of the senior adults tested shall be obtained from or tested at any one site. Each group of senior adults shall be randomly selected as to age, subject to the limitations set forth below. Twenty-five percent of the participants shall be 50-54 years of age, 25% of participants shall be 55-59 years of age, and 50% of the participants shall be

60-70 years old. Seventy percent of the participants of ages 50-59 and ages 60-70 shall be female (17 or 18 females shall be apportioned to the 50-54 year age group). No individual tester shall administer the test to more than 35% of the senior adults tested. The adults selected should have no obvious or overt physical or mental disability.

(ii) Screening procedures. Participants who are unable to open the packaging being tested in the first 5-minute time period, are given a screening test. The screening tests for this purpose shall use two packages with conventional (not child-resistant (CR) or :special") closures. One closure shall be a plastic snap closure and the other a CT plastic closure. Each closure shall have a diameter of 28 mm ± 18%, and the CT closures shall have been resecured 72 hours before testing at 10 inch-pounds of torque. The containers for both the snap- and Ct-type closures shall be round plastic containers, in sizes of 2 ounce ± ½ ounce for the CT-type closure and 8 drams ± 4 drams for the snap-type closure. Persons who cannot open and close both of the screening packages in 1-minute screening tests shall not be counted as participants in the senior-adult panel.

(iii) SAUE. The senior adult use effectiveness (SAUE) is the percentage of adults who both opened the package in the first (5-minute) test period and opened and (if appropriate) properly resecured the package in the 1-minute test period.

(iv) Test procedures. The senior adults shall be tested individually, rather than in groups of two or more. The senior adults shall receive only such printed instructions on how to open and properly secure the special packaging as will appear on or accompany the package as it is delivered to the consumer. The senior-adult panel is tested according to the procedure incorporated in the following senior-adult panel test instructions:

Test Instructions for Senior Test

The following test instructions are used for all senior tests. If non-reclosable packages are being tested, the commands to close the package are eliminated.

1. No adult with a permanent or temporary illness, injury, or disability which would interfere with his/her effective participation shall be included in the test.

2. Each adult shall read and sign a consent form prior to participating. Any appropriate language from the consent form may be used to recruit potential participants. The form shall include the basic elements of informed consent as defined in 16 CFR 1028.116. Before beginning the test, the tester shall say, "PLEASE READ AND SIGN THIS CONSENT FORM." If an adult cannot read the consent form for any reason (forgot glasses, illiterate, etc.), he/she shall not participate in the test.

3. Each adult shall participate individually and not in the presence of other participants or onlookers.

4. The tests shall be conducted in well-lighted and distraction-free areas.

5. Records shall be filled in before or after the test, so that the tester's full attention is on the participant during the test period. Recording the test times to open and resecure the packages are the only exceptions.

6. To begin the first 5-minute test period, the tester says, "I AM GOING TO ASK YOU TO OPEN AND PROPERLY CLOSE THESE TWO IDENTICAL PACKAGES ACCORDING TO THE INSTRUCTIONS FOUND ON THE CAP." (Specify other instruction locations if appropriate.)

7. The first package is handed to the participant by the tester, who says, "PLEASE OPEN THIS PACKAGE ACCORDING THE DIRECTIONS OF THE CAP." (Specify other instruction locations if appropriate.) If the package contains product, the tester shall say, "PLEASE EMPTY THE (PILLS, TABLETS, CONTENTS, ETC.) INTO THIS CONTAINER." After the participant opens the package, the tester says, "PLEASE CLOSE THE PACKAGE PROPERLY, ACCORDING TO THE INSTRUCTIONS OF THE CAP." (Specify other instruction locations if appropriate)

8. Participants are allowed up to 5 minutes to read the instructions and open and close the package. The tester uses a stopwatch(s) or other timing device to time the opening and resecuring times. The elapsed times in seconds to open the package and to close the package are recorded on the data sheet as two separate times.

9. After 5 minutes, or when the participant has opened and closed the package, whichever comes first, the tester shall take all test materials from the participant. The participant may remove and replace the closure more than once if the participant initiates these actions. If the participant does not open the package and stops trying to open it before the end of the 5-minute period, the tester shall say, "ARE YOU FINISHED WITH THAT PACKAGE, OR WOULD YOU LIKE TO TRY AGAIN?" If the participant indicates that he/she is finished or cannot open the package and does not wish to continue trying, skip to Instruction 13.

10. To begin the second test period, the tester shall give the participant another, but identical, package and say, "THIS IS AN IDENTICAL PACKAGE. PLEASE OPEN IT ACCORDING TO THE INSTRUCTIONS ON THE CAP." (Specify other instruction locations if appropriate.) If the package contains product, the tester shall say, "PLEASE EMPTY THE (PILLS, TABLETS, CONTENTS, ETC.) INTO THIS CONTAINER." After the participant opens the package, the tester says, "PLEASE CLOSE THIS PACKAGE PROPERLY, ACCORDING TO THE INSTRUCTIONS ON THE CAP." (Specify other instruction locations if appropriate.)

11. The participants are allowed up to 1 minute (60 full seconds) to open and close the package. The elapsed times in seconds to open and to close the package are recorded on the data sheet as two separate times. The time that elapses between the opening of the package and the end of the instruction to close the package is not counted as part of the 1-minute test time.

12. After the 1-minute test, or when the participant has opened and closed the package, whichever comes first, the tester shall take all the test materials from the participant. The participant shall not be allowed to handle the package again. If the participant does not open the package and stops trying to open it before the end of the 1-minute period, the tester shall say, ARE YOU FINISHED WITH THAT PACKAGE, OR WOULD YOU LIKE TO TRY AGAIN?" If the participant indicates that he/she is finished or cannot open the package and does not wish to continue trying, this shall be counted as a failure of the 1-minute test.

13. Participants who do not open the package in the first 5-minute test period are asked to open and close two non-child-resistant screening packages. The participants are given a 1-minute test period for each package. The tester shall give the participant a package and say, "PLEASE OPEN AND PROPERLY CLOSE THIS PACKAGE." The tester records the time for opening and closing, or 61 seconds, whichever is less, on the data sheet. The tester then gives the participant the second package and says, "PLEASE OPEN AND PROPERLY CLOSE THIS PACKAGE." The times to open and resecure or 61 seconds, whichever is less, shall be recorded on the data sheet.

14. Participants who cannot open and resecure both of the non-child-resistant screening packages are not counted as part of the 100-senior panel. Additional participants are selected and tested.

15. No adult may participate in more than two tests per sitting. If a person participates in two tests, the packages tested shall not be the same ASTM type of package.

16. If more adults in a sex or age group are tested than are necessary to determine SAUE, the last person(s) tested shall be eliminated from that group.

(4) Younger-adult panel. (i) One hundred adults, age 18 to 45 inclusive, with no overt physical or mental handicaps, and 70 percent of whom are female, shall comprise the test panel for younger adults. Not more than 35% of adults shall be obtained or tested at any one site. No individual tester shall administer the test to more that 35% of the adults tested. The adults shall be tested individually, rather than in groups of two or more. The adults shall receive only such printed instructions on how to open and properly resecure the special packaging as will appear on the package as it is delivered to the consumer. Five minutes shall be allowed to complete the opening and, if appropriate, the resecuring process.

(ii) Records shall be kept of the number of adults unable to open and of the number of the other adults tested who fail to properly resecure the special packaging. The number adults who successfully open the special packaging and then properly resecure the special packaging (if resecuring is appropriate) is the percent of adult-use effectiveness of the special packaging. In the case of unit packaging, the percent of adult-use effectiveness shall be the number of adults who successfully open a single(unit) package.

(iii) Adult-use effectiveness of not less than 90 percent.

Adult-Resecuring Procedure

1. After the adult participant in either the senior-adult test of 16 CFR 1700.20(a)(3) or the younger-adult test of 16 CFR 1700.20(a)(4) has resecured the package, or at the end of the test period (whichever comes first), the tester shall take the package and place it out of reach. The adult participant shall not be allowed to handle the package again.

2. The packages that have been opened and appear to be resecured by adults shall be tested by children according the child-test procedures to determine if the packages have been properly resecured. The packages are given to the children without being opened or resecured again for any purpose.

3. Using the results of the adult tests and the tests of apparently-resecured package by children, the adult use effectiveness is calculated as follows:

a. Adult use effectiveness.

1. The number of adult opening and resecuring failures, plus the number of packages that were opened by the children during the full 10-minute test that exceeds 20% of the apparently-resecured packages, equals the total number of failures.

2. The total number of packages tested by adults (which is 100) minus the total number of failures equals the percent adult-use effectiveness.

The Package

The test package was the 24mm CONTINUOUS THREAD CLOSURE ON AN HDPE ROUND BOTTLE. For purposes of this test, all of the units tested were empty, and initially applied at 9 inch pounds of torque at a minimum of 72 hours prior to testing. Directions to open the package read: OPEN - PUSH DOWN & TURN -- CLOSE TIGHTLY. A picture of the package appears in Figure 1 of this report.

Panelists

Seniors (100) employed in the study satisfied the requirements of the protocol, with ages ranging from 50 to 70 years of age divided into three age groups (50-54, 55-59, and 60-70 years old with 70% female).

An additional 100 children (ages 42-51 months old, evenly distributed) were employed to determine if the senior-adult panelists properly closed the packages.

Test supervisor(s)

Test supervisor(s) were instructed to conduct the evaluation of the packaging in strict accordance with the C.F.R. Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744. To ensure these procedures were adhered to, our complete quality system was followed, including periodic observations throughout the package evaluation.

24mm CONTINUOUS THREAD CLOSURE
ON AN HDPE ROUND BOTTLE
Figure 1

IV. RESULTS AND DISCUSSION

Results of this study appear in the tables section of the report. These tables represent a compilation of all data obtained during the study. For clarity in presentation and discussion of this information, the following features will be used as the major points of discussion:

* Senior-use effectiveness
* Senior-resecuring use effectiveness
* Meeting C.F.R. Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744.

Senior-use effectiveness

The senior panel consisted of 70 females and 30 males. Results of the senior test appear in Table 1 of this report. A total of 25 of the 25 seniors in the 50 to 54 year old age group were successful in opening the first package and opening and properly closing the second package, 25 of the 25 seniors in the 55 to 59 year old age group were successful, and 50 of the 50 seniors were successful in the 60 to 70 year old age group. The senior-use effectiveness was calculated at 100 minus 0 for a final senior-use effectiveness, including the resecuring test, of 100 for the 100 seniors and 100 children who tested the packages apparently resecured by the seniors. The exact opening and closing times are given in the Senior Test Packaging Data.

Senior-resecuring use effectiveness

A group of 100 children were employed to test the packages that were apparently resecured by the senior-adults. Results of the senior-resecuring test with children appear in Table 2 of this report. A total of 14 children were successful in opening the apparently resecured packages. The amount over 20% (100 x .2 = 20) is 0, and is subtracted from the calculated senior-use effectiveness.

Meeting C.F.R. Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744.

The 24mm CONTINUOUS THREAD CLOSURE ON AN HDPE ROUND BOTTLE fulfill the standards for senior-resecuring effectiveness according to C.F.R. Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744.

V. CONCLUSION

The data presented in the report demonstrates that the 24mm CONTINUOUS THREAD CLOSURE ON AN HDPE ROUND BOTTLE fulfill the requirements for senior-resecuring effectiveness according to the Code of Federal Regulations Title 16, Part 1700, with final rule changes cited in the Federal Register, Vol. 60, No. 140, Friday, July 21, 1995, pp. 37710 to 37744.

Evaluation of the 24mm CONTINUOUS THREAD CLOSURE ON AN HDPE ROUND BOTTLE for senior-use effectiveness for Mold-Rite Plastics Inc..

Table 1. Package opening test evaluated by adults 50 to 70 years of age for senior-use effectiveness.

	Panelists Tested	Successful Panelists	
		First Opening	Second Opening and Second Closing
50 - 54 years old:			
Female	18	18	18
Male	7	7	7
Subtotal	**25**	**25**	**25**
55 - 59 years old:			
Female	17	17	17
Male	8	8	8
Subtotal	**25**	**25**	**25**
60 - 70 years old:			
Female	35	35	35
Male	15	15	15
Subtotal	**50**	**50**	**50**

SENIOR-USE EFFECTIVENESS = 100 - 0 = 100%

SENIOR TEST PACKAGE DATA

CLIENT NAME: Mold-Rite Plastics Inc.
DESCRIPTION: 24mm C.T./HDPE Round
CONTRACT NO. 1206-009

July 16, 1998

PACKAGE NUMBER	TEST DATE	SITE CODE	INTER-VIEWER	SEX	AGE	FIRST OPENING FAIL = 301 SEC	FIRST CLOSING STOP = 301 SEC	SECOND OPENING FAIL = 61 SEC	SECOND CLOSING FAIL = 61 SEC
1	4/01/98	C290	14	M	66	5	2	3	1
2	4/01/98	C290	14	F	62	3	1	1	1
3	4/01/98	C290	14	F	62	2	1	4	1
4	4/01/98	C290	14	M	69	4	2	2	1
5	4/01/98	C290	14	F	62	3	1	2	1
6	4/01/98	C290	14	F	60	2	1	1	2
7	4/02/98	C267	17	M	70	5	2	7	3
8	4/02/98	C267	17	F	50	6	2	4	2
9	4/02/98	C267	17	M	69	5	2	5	3
10	4/03/98	C293	16	F	52	7	2	4	2
11	4/03/98	C293	16	F	64	4	2	4	1
12	4/03/98	C293	16	M	70	7	3	6	3
13	4/03/98	C293	16	F	56	4	2	3	2
14	4/03/98	C293	16	F	59	5	3	4	2
15	4/03/98	C293	16	F	59	7	3	6	3
16	4/03/98	C293	16	F	65	8	4	5	2
17	4/03/98	C293	16	F	60	5	2	4	2
18	4/03/98	C293	16	F	63	4	2	3	2
19	4/03/98	C293	16	F	67	4	3	4	2
20	4/03/98	C293	16	F	60	6	2	5	2
21	4/03/98	C293	16	F	65	4	3	4	2
22	4/03/98	C293	16	M	70	8	4	6	2
23	4/03/98	C293	16	F	61	4	2	4	2
24	4/03/98	C293	16	M	60	7	2	4	1
25	4/01/98	C292	29	M	69	3	2	3	2
26	4/01/98	C292	29	F	54	3	2	3	2
27	4/01/98	C292	29	M	65	4	2	2	1
28	4/01/98	C292	29	M	62	3	2	3	2
29	4/01/98	C292	29	F	70	2	1	2	1
30	4/03/98	C293	16	M	69	4	3	4	2
31	4/03/98	C293	16	F	52	6	2	4	2
32	4/06/98	C936	16	F	70	4	2	4	2
33	4/06/98	C936	16	F	65	6	2	4	2
34	4/06/98	C936	16	F	64	5	3	4	2
35	4/06/98	C936	16	F	67	8	2	7	2
36	4/06/98	C936	16	F	67	9	2	4	2
37	4/06/98	C936	16	F	70	5	3	5	2
38	4/06/98	C936	16	M	67	4	2	3	2
39	4/06/98	C936	16	F	64	4	3	3	2
40	4/06/98	C936	16	M	70	3	2	3	2
41	4/06/98	C936	16	M	67	3	2	2	2
42	4/06/98	C936	16	F	69	4	2	4	1
43	4/06/98	C936	16	F	70	4	2	4	2
44	4/06/98	C936	16	M	70	5	3	2	1
45	4/06/98	C936	16	F	70	6	4	3	2
46	4/06/98	C936	16	F	65	3	2	3	2
47	4/06/98	C936	16	F	70	4	3	4	2
48	4/06/98	C936	16	F	68	3	2	3	2
49	4/06/98	C936	16	F	65	3	2	3	1
50	4/06/98	C936	16	F	65	4	3	4	2
51	4/06/98	C936	16	F	70	6	2	3	2

SENIOR TEST PACKAGE DATA

CLIENT NAME: Mold-Rite Plastics Inc.
DESCRIPTION: 24mm C.T./HDPE Round
CONTRACT NO. 1206-009

July 16, 1998

PACKAGE NUMBER	TEST DATE	SITE CODE	INTER-VIEWER	SEX	AGE	FIRST OPENING FAIL = 301 SEC	FIRST CLOSING STOP = 301 SEC	SECOND OPENING FAIL = 61 SEC	SECOND CLOSING FAIL = 61 SEC
52	4/06/98	C936	16	F	66	8	2	4	2
53	4/06/98	C936	16	F	67	3	2	3	2
54	4/06/98	C936	16	F	64	4	2	3	1
55	4/06/98	C936	16	M	58	3	2	3	2
56	4/08/98	C295	17	F	64	7	2	4	2
57	4/08/98	C295	17	F	70	8	2	4	2
58	4/08/98	C295	17	F	70	4	2	3	1
59	4/08/98	C295	17	F	58	6	3	6	2
60	5/08/98	C992	29	F	53	2	2	2	2
61	5/08/98	C992	29	M	51	2	2	2	2
62	5/08/98	C992	29	M	54	2	2	2	2
63	5/08/98	C992	29	M	54	3	2	2	2
64	5/08/98	C992	29	F	54	2	2	2	2
65	5/08/98	C992	29	M	50	2	2	2	2
66	5/08/98	C992	29	F	50	2	3	2	2
67	5/08/98	C992	29	F	52	2	2	2	2
68	5/08/98	C992	29	M	50	2	2	2	2
69	5/08/98	C992	29	F	53	2	2	2	2
70	5/08/98	C992	29	F	58	2	2	2	2
71	5/08/98	C992	29	M	55	2	2	2	2
72	5/08/98	C992	29	M	53	2	2	2	2
73	5/08/98	C992	29	M	52	2	2	2	1
74	5/08/98	C992	29	F	52	2	2	2	1
75	5/08/98	C992	29	F	55	2	1	2	1
76	5/08/98	C992	29	M	56	2	1	2	1
77	5/08/98	C992	29	F	55	2	1	2	1
78	5/30/98	C303	17	F	53	6	3	4	2
79	5/30/98	C303	17	M	58	5	2	4	2
80	5/30/98	C303	17	F	59	4	2	3	2
81	5/30/98	C303	17	F	53	6	3	4	2
82	5/30/98	C303	17	M	55	7	4	3	2
83	5/30/98	C303	17	F	56	5	2	3	2
84	5/30/98	C303	17	F	53	6	2	4	2
85	5/30/98	C303	17	F	52	4	2	3	2
86	5/30/98	C303	17	F	52	3	2	3	2
87	5/30/98	C303	17	F	59	11	4	3	2
88	5/30/98	C303	17	F	52	5	3	4	2
89	5/30/98	C303	17	F	58	7	4	5	2
90	5/30/98	C303	17	F	52	5	3	4	2
91	5/30/98	C303	17	F	59	4	2	3	2
92	5/30/98	C303	17	F	56	7	3	4	2
93	5/30/98	C303	17	F	55	4	2	3	2
94	5/30/98	C303	17	F	55	6	2	4	2
95	5/30/98	C303	17	F	58	4	2	3	2
96	5/30/98	C303	17	M	59	4	3	4	2
97	5/30/98	C303	17	M	58	6	3	4	3
98	5/30/98	C303	17	M	58	4	2	3	2
99	6/03/98	C297	17	F	57	5	2	4	2
100	6/03/98	C297	17	F	52	4	2	4	1

Evaluation of the 24mm CONTINUOUS THREAD CLOSURE ON AN HDPE ROUND BOTTLE for senior-resecuring effectiveness for Mold-Rite Plastics Inc..

Table 2. Senior-resecured package opening test evaluated by children 42 to 51 months of age for senior-resecuring effectiveness.

Age in Months	M	F	Total	Successful Panelists Before Demo. M	Before Demo. F	After Demo. M	After Demo. F	Total
42-43	15	15	**30**	1	1	1	0	**3**
45-48	20	20	**40**	5	0	0	0	**5**
49-51	15	15	**30**	3	1	1	1	**6**
Totals	**50**	**50**	**100**	**9**	**2**	**2**	**1**	**14**

The amount over 20% (100 x .2 = 20) is **0**, and is subtracted from the calculated senior-use effectiveness.

CHILD TEST - PACKAGE DATA

CLIENT NAME: Mold-Rite Plastics Inc.
DESCRIPTION: Senior-resecured
CONTRACT NO. 1206-009

July 16, 1998

PACKAGE NUMBER	TEST DATE	SITE CODE	INTER-VIEWER	BIRTH DATE	AGE MON.	SEX	OPENING SECONDS 601=NOT OPENED	METHOD
1	4/08/98	C837	14	7/02/94	45	F	601	0
2	4/08/98	C837	14	9/18/94	43	M	601	0
3	4/08/98	C837	14	5/30/94	46	F	601	0
4	4/08/98	C837	14	9/08/94	43	M	601	0
5	4/09/98	C572	16	1/10/94	51	F	601	0
6	4/09/98	C572	16	12/25/93	51	F	601	0
7	4/09/98	C572	16	6/26/94	45	F	601	0
8	4/09/98	C572	16	3/07/94	49	F	601	0
9	4/09/98	C572	16	3/21/94	49	M	601	0
10	4/09/98	C572	16	1/12/94	51	M	601	0
11	4/09/98	C572	16	1/19/94	51	M	601	0
12	4/09/98	C572	16	7/19/94	45	M	120	3
13	4/09/98	C572	16	2/27/94	49	M	86	3
14	4/09/98	C572	16	6/25/94	45	M	601	0
15	4/14/98	C541	29	2/22/94	50	M	601	0
16	4/14/98	C541	29	8/01/94	44	M	30	1
17	4/14/98	C541	29	4/02/94	48	M	601	0
18	4/14/98	C541	29	6/18/94	46	M	601	0
19	4/14/98	C541	14	9/20/94	43	F	61	3
20	4/14/98	C541	14	2/25/94	50	F	121	3
21	4/14/98	C541	14	4/09/94	48	M	601	0
22	4/14/98	C541	14	2/28/94	50	F	601	0
23	4/15/98	C852	16	1/04/94	51	M	601	0
24	4/15/98	C852	16	2/04/94	50	M	601	0
25	5/01/98	C836	16	2/17/94	50	M	601	0
26	5/01/98	C836	16	3/18/94	49	M	601	0
27	5/01/98	C836	16	11/06/94	42	M	601	0
28	5/01/98	C836	16	11/14/94	42	M	601	0
29	5/01/98	C836	16	10/28/94	42	M	601	0
30	5/01/98	C836	16	5/04/94	48	M	601	0
31	5/01/98	C647	17	11/12/94	42	M	601	0
32	5/01/98	C647	17	7/02/94	46	M	601	0
33	5/01/98	C647	17	1/26/94	51	F	601	0
34	5/01/98	C647	17	7/01/94	46	M	601	0
35	5/01/98	C647	17	7/01/94	46	M	601	0
36	5/01/98	C647	17	7/14/94	46	M	601	0
37	5/01/98	C647	17	5/05/94	48	M	601	0
38	5/01/98	C647	17	2/27/94	50	M	601	0
39	5/04/98	C773	29	5/25/94	47	M	601	0
40	5/04/98	C773	29	8/02/94	45	M	40	1
41	5/04/98	C800	14	3/15/94	50	M	216	3
42	5/04/98	C800	14	4/21/94	48	M	136	3
43	5/04/98	C800	14	9/26/94	43	M	323	3
44	5/04/98	C800	14	2/13/94	51	M	338	3
45	5/18/98	C102	29	9/08/94	44	M	601	0
46	5/18/98	C102	29	9/10/94	44	M	601	0
47	5/18/98	C102	29	6/01/94	48	M	204	1
48	5/18/98	C102	29	9/02/94	45	M	601	0
49	5/18/98	C102	29	9/12/94	44	F	601	0
50	5/18/98	C102	29	3/15/94	50	F	601	0

CHILD TEST - PACKAGE DATA

CLIENT NAME: Mold-Rite Plastics Inc.
DESCRIPTION: Senior-resecured
CONTRACT NO. 1206-009

July 16, 1998

PACKAGE NUMBER	TEST DATE	SITE CODE	INTER-VIEWER	BIRTH DATE	AGE MON.	SEX	OPENING SECONDS 601=NOT OPENED	METHOD
51	5/18/98	C102	29	9/09/94	44	F	601	0
52	5/18/98	C102	29	5/05/94	48	F	601	0
53	5/18/98	C102	29	8/11/94	45	M	195	1
54	5/18/98	C102	29	9/20/94	44	F	601	0
55	5/18/98	C102	29	9/14/94	44	M	601	0
56	5/18/98	C102	29	7/17/94	46	M	601	0
57	5/18/98	C102	29	2/09/94	51	M	601	0
58	5/18/98	C102	29	4/15/94	49	M	601	0
59	5/18/98	C102	29	2/03/94	51	M	176	1
60	5/18/98	C102	29	2/04/94	51	F	441	1
61	7/08/98	C071	16	9/06/94	46	F	601	0
62	5/18/98	C102	29	3/15/94	50	F	601	0
63	5/18/98	C102	29	6/22/94	47	M	601	0
64	5/18/98	C102	29	9/26/94	44	F	601	0
65	5/18/98	C102	29	3/08/94	50	F	601	0
66	6/18/98	C853	16	10/22/94	44	F	601	0
67	6/18/98	C853	16	10/10/94	44	F	601	0
68	6/18/98	C853	16	7/13/94	47	F	601	0
69	6/18/98	C853	16	10/07/94	44	F	601	0
70	6/18/98	C853	16	10/07/94	44	F	601	0
71	6/18/98	C853	16	11/03/94	43	M	601	0
72	6/18/98	C853	16	11/16/94	43	M	601	0
73	6/18/98	C853	16	11/18/94	43	F	601	0
74	6/18/98	C853	16	9/02/94	46	F	601	0
75	6/18/98	C853	16	3/17/94	51	F	601	0
76	6/18/98	C853	17	10/09/94	44	M	601	0
77	6/18/98	C853	17	10/17/94	44	M	601	0
78	6/18/98	C853	17	12/05/94	42	F	601	0
79	6/18/98	C853	17	11/15/94	43	F	601	0
80	6/18/98	C853	17	6/26/94	48	F	601	0
81	6/18/98	C853	17	11/27/94	43	F	601	0
82	6/18/98	C853	17	11/11/94	43	F	601	0
83	6/18/98	C853	17	9/27/94	45	F	601	0
84	6/18/98	C853	16	3/14/94	51	F	601	0
85	6/18/98	C853	16	6/30/94	48	F	601	0
86	6/23/98	C046	17	3/10/94	51	F	601	0
87	6/23/98	C046	17	4/22/94	50	F	601	0
88	6/23/98	C046	17	5/12/94	49	F	601	0
89	6/23/98	C046	17	6/18/94	48	F	601	0
90	6/23/98	C046	17	6/20/94	48	M	601	0
91	6/23/98	C046	17	7/14/94	47	F	601	0
92	6/23/98	C046	17	8/11/94	46	F	601	0
93	6/23/98	C046	17	11/12/94	43	F	601	0
94	6/24/98	C775	17	7/08/94	48	F	601	0
95	6/24/98	C775	17	7/03/94	48	F	601	0
96	6/25/98	C522	17	7/15/94	47	F	601	0
97	6/25/98	C522	17	7/01/94	48	F	601	0
98	6/25/98	C522	17	6/18/94	48	F	601	0
99	6/25/98	C522	17	8/02/94	47	F	601	0
100	6/25/98	C522	17	10/06/94	45	F	601	0

Test Supervisors

1	-	Shirley Kasper
2	-	Betty Rousseau
3	-	Susan Jakober
4	-	Linda Contiliano
5	-	Lissa Perritt
6	-	Scott Perritt
7	-	Richard Ward
8	-	Kelley Dippold
9	-	Anita Burgey
10	-	Elaine Villani
12	-	Paula Giannotti
14	-	Susan Davies
15	-	Marie Gerland
16	-	Helen Lambert
17	-	Joyce Osborne
19	-	Norma Swale
26	-	Carol Biddenger
27	-	Jody Kloch
28	-	Susan Pazornick

Methods of opening

0	-	Not opened
1	-	Correct method
2	-	Used fingernail
3	-	Used fingers
4	-	Used teeth
5	-	Used feet
6	-	Shelled
7	-	Damaged package
8	-	Touched indicator
9	-	Used teeth and fingers
10	-	Banged on floor
11	-	Caused noticeable leakage

Addendum

MOLD-RITE PLASTICS LLC.
1 Plant Street P.O. Box 160
Plattsburgh NY 12901
(518)561-1812
https://www.mrpcap.com

Product Data Sheet

MRPWH01 White

Product Description

This specification designated by Mold-Rite Plastics covers all colorants that meet the typical value data listed below.

Regulatory Compliance

FDA – Title 21 CFR Section 170-199 for Food & Drug Contact
RoHS Compliant
CONEG/Heavy Metal Compliant
Proposition 65 Compliant

Typical Properties	Typical Value
Density	.90
Melt Index	30
Pellets	Standard
Recommended Let Down Ratio	50:1
Carrier Resin	PP
Estimated Heat Stability	450-500 °F
Visual Evaluation	Excellent
Additives	None
DE Tolerance	< 2.00

For further regulatory information, contact Mold-Rite Plastics customer service or sales department.

Notes: These are typical properties not to be construed as specifications. Mold-Rite Plastics reserves that right to include any other colorant that meets that above data values and regulatory requirements.
This product data sheet covers multiple colorant formulations that meet the above typical data values and regulatory requirements. All listed formulas have similar physical, chemical and processing properties. Listed known formulas; Polymer Concentrates – 10536, Penn Color 60W5221

SANCAP
liner technology, inc

PRODUCT DATA SHEET
HS 035 HEAT SEAL// 25 WHITE LINED PULP

MRP Description - (P21)HS035.025 PLP R SFYP

PRODUCT DESCRIPTION

Description: A paper-backed aluminum foil coated with a clear heat sealable coating blend of high molecular weight ethylene and vinyl acetate copolymers wax bonded to white lined board.

FDA Status: Complies with Federal Regulations of H.E.W., FDA, sections 175.105, 175.300, 176.170, 176.180, 176.200, 177.1350, 178.3710, 182.1, 182.90, and 186.173. It is entered in SANCAP Liner's food master file FMF 166 and drug master file DMF 2518.

PHYSICAL AND CHEMICAL PROPERTIES

1.	**Color**	Aluminum
2.	**Thickness, mils**	
	a) Overall	28.80 - 33.78
	b) Heat Seal Coating	1.50 - 3.00
	c) Aluminum Foil	0.31 - 0.38
	d) Paper	2.60 - 3.00
	e) Wax	0.90 - 1.10
	f) White Lined Pulp	23.50 - 26.50
3.	**Basis Wt. Lbs./Ream 3000 ft.^{2}**	
	a) Overall	316.80 - 372.40
	b) Heat Seal Coating	20.7 - 41.9
	c) Aluminum Foil	13.3 - 16.2
	d) Paper	33.3 - 36.8
	e) Wax	13.5 - 16.5
	f) White Lined Pulp	236.0 - 261.0
4.	**Heat Seal Coating**	
	a) Melting Point °F	150 - 160
	b) Blocking Point °F	130 – 135
5.	**Gas Transmission: cc/cin^2/24hrs/1atm**	
	a) Oxygen	nil
6.	**Water Vapor Transmission**	
	a) gm/cin^2/24hrs/100°F/90%RH	Near zero

PRODUCT NAME: HS035 HEAT SEAL//25 WHITE LINED PULP
REV. 050311

RECOMMENDED STORAGE CONDITIONS

The material should be stored in well-ventilated area (temp. 60° - 80°F; RH – 40% - 60%). Material and lined closures are heat sensitive. Storage or shipping temperatures should not be in excess of 105°F. Curling, blocking, splitting, or foil separation may result. If material becomes chilled, it should be stored under the recommended conditions until stabilized. Avoid storing closure liner materials over 60 days. Metal foil is prone to corrosion.

SUGGESTED PRODUCT USES

Material is an induction heat sealable tamper indicating innerseal which can be used for over-the-counter drug products on Polyethylene, Glass*, PET, PVC, Polystyrene and Polypropylene.

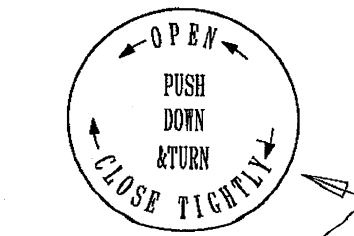
Dry Products	**Fruit Juices**
Milk	**Glass Cleaner**
Peroxide	**Spices**

Product applications listed above are a partial listing and do not cover all suitable applications. These are suggestions for general categories and user must test for suitability for their specific product. Not suitable for products containing oil.

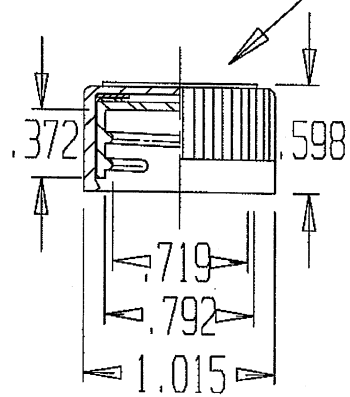
Glass must be treated for proper adhesion.

16125 Armour St. N.E. Alliance, Ohio 44601 330-821-1166 Fax: 330-821-0364 Toll Free: 800-966-7262
www.sancapliner.com

REVISIONS			
REV.	DATE	APPROVAL	DESCRIPTION



PDT DESIGN
.022 HIGH



APPROVED
AUG 26 2005
Quality Assurance
Mold-Rite Plastics

UNCONTROLLED

"T"	"E"	"H"	"A"	"B"
.792	.719	.372	1.015	.598

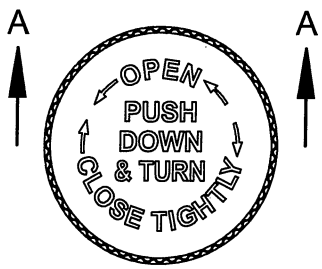
MATERIAL: POLYPROPYLENE

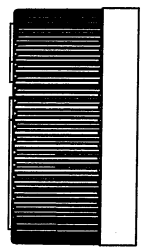
WEIGHT: 2.6 +/- 1.0 "AVERAGE"

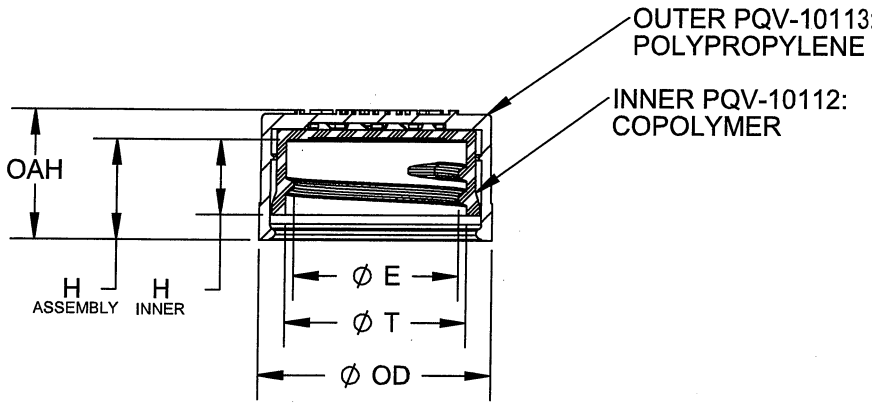
PDT - 20mm Assembled Cap

MOLD-RITE PLASTICS INC.
PLATTSBURGH, NEW YORK

TOLERANCE: +/-.010	DRAWN BY: P.D.T.	
SCALE: FULL	DATE: 3-3-03	DRAWING NO. PDT-20-0







SECTION A-A
SCALE 1:1

8 THREADS PER INCH, .125 PITCH,
380° FULL DEPTH THREAD

	TOLERANCE	UNITS	
E	±0.010 [0.25]	in [mm]	0.865 [21.97]
T	±0.010 [0.25]	in [mm]	0.950 [24.13]
H (ASSEMBLY)	MINIMUM	in [mm]	0.477 [12.12]
H (INNER)	±0.008 [0.20]	in [mm]	0.388 [9.86]
OD	±0.012 [0.30]	in [mm]	1.217 [30.91]
OAH	±0.012 [0.30]	in [mm]	0.668 [16.97]
PART WEIGHT	±0.60	g	4.10

STATIC TORQUE RECOMMENDATION

10-18 in-lbs

THIS REQUIREMENT MAY VARY DEPENDING UPON BOTTLE MATERIAL, NECK FINISH, AND CAPPING EQUIPMENT

THE CLOSURE DIMENSIONS DEPICTED ARE THOSE WHICH HAVE GENERALLY BEEN FOUND TO BE FUNCTIONAL BASED ON INDUSTRY EXPERIENCE BECAUSE OF VARIABILITY IN GLASS AND PLASTIC CONTAINER FINISHES, EACH CLOSURE/FINISH SYSTEM SHOULD BE INDIVIDUALLY EVALUATED AND TESTED TO ENSURE IT MEETS APPLICABLE PERFORMANCE CRITERIA. SEE QUALITY ASSURANCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

MOLD-RITE, WEATHERCHEM AND STULL TECHNOLOGIES RESERVES THE RIGHT TO REVISE ANY OR ALL SPECIFICATIONS AND REQUIREMENTS

DRAWING TYPE : CUSTOMER

DIMENSIONS ENCLOSED IN ( ) INDICATE REFERENCE DIMENSIONS AND NO TOLERANCE LIMITS ARE ESTABLISHED

TOLERANCES UNLESS OTHERWISE SPECIFIED

DIMENSION (inches)	TOLERANCE	DIMENSION (mm)	TOLERANCE
0-0.787	±0.006	0-20	±0.152
0.788-1.181	±0.008	21-30	±0.203
1.182-2.756	±0.012	31-70	±0.305
2.757-3.937	±0.016	71-100	±0.406
3.938-5.096	±0.020	101-150	±0.508
5.097-7.874	±0.024	151-200	±0.610
7.875-9.843	±0.032	201-250	±0.813

ANGULAR TOLERANCE ± 2°

PROPRIETARY AND CONFIDENTIAL

THIRD ANGLE PROJECTION		DISTRIBUTION CODE	D
DRAWN BY:	C.B.	04/13/15	
QA APPR:			
CUSTOMER APPR:			

DRAWING NAME: 24mm-400 PDT CRC PDT EMBOSSED

DRAWING NUMBER: CQA-10155

MATERIAL: POLYPROPYLENE

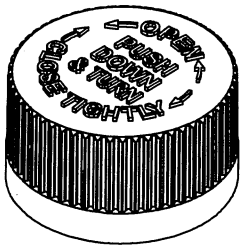
MODEL NUMBER:10153_01 24mmPDT CRC Assm Master M

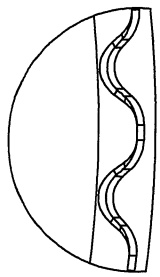
SCALE	SHEET SIZE	SHEET	REV	N/F

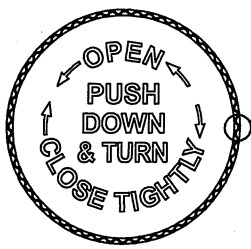
AVAILABLE OPTIONS

REVISION HISTORY

REV	N/P	DATE	REVISION	DE
01	AA	10/20/14	INITIAL DRAWING	C.E







DETAIL RIB
SCALE 10 : 1
(56) EQUISPACED RIBS

THE CLOSURE DIMENSIONS DEPICTED ARE THOSE WHICH HAVE GENERALLY BEEN FOUND TO BE FUNCTIONAL BASED ON INDUSTRY EXPERIENCE BECAUSE OF VARIABILITY IN GLASS AND PLASTIC CONTAINER FINISHES, EACH CLOSURE/FINISH SYSTEM SHOULD BE INDIVIDUALLY EVALUATED AND TESTED TO ENSURE IT MEETS APPLICABLE PERFORMANCE CRITERIA. SEE QUALITY ASSURANCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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DRAWING TYPE : CUSTOMER

DIMENSIONS ENCLOSED IN ( ) INDICATE REFERENCE DIMENSIONS AND NO TOLERANCE LIMITS ARE ESTABLISHED

TOLERANCES UNLESS OTHERWISE SPECIFIED

DIMENSION (inches)	TOLERANCE	DIMENSION (mm)	TOLERANCE
0-0.787	±0.006	0-20	±0.152
0.788-1.181	±0.008	21-30	±0.203
1.182-2.756	±0.012	31-70	±0.305
2.757-3.937	±0.016	71-100	±0.406
3.938-5.096	±0.020	101-150	±0.508
5.097-7.874	±0.024	151-200	±0.610
7.875-9.843	±0.032	201-250	±0.813

ANGULAR TOLERANCE ± 2°

PROPRIETARY AND CONFIDENTIAL

One Company - Unlimited Packaging Possibilities

weatherchem · MRP · STULL

EXPANDED PRODUCT OFFERINGS · MULTIPLE MANUFACTURING LOCATIONS
INDUSTRY LEADING INNOVATION · UNMATCHED CUSTOMER SERVICE

THIRD ANGLE PROJECTION

SOLIDWORKS

DISTRIBUTION CODE: D

DRAWN BY: REFER TO PAGE 1

QA APPR: REFER TO PAGE 1

CUSTOMER APPR:

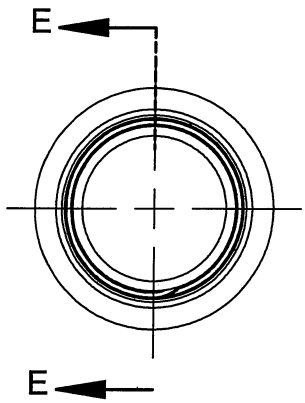
DRAWING NAME: 24mm-400 PDT CRC PDT EMBOSSED

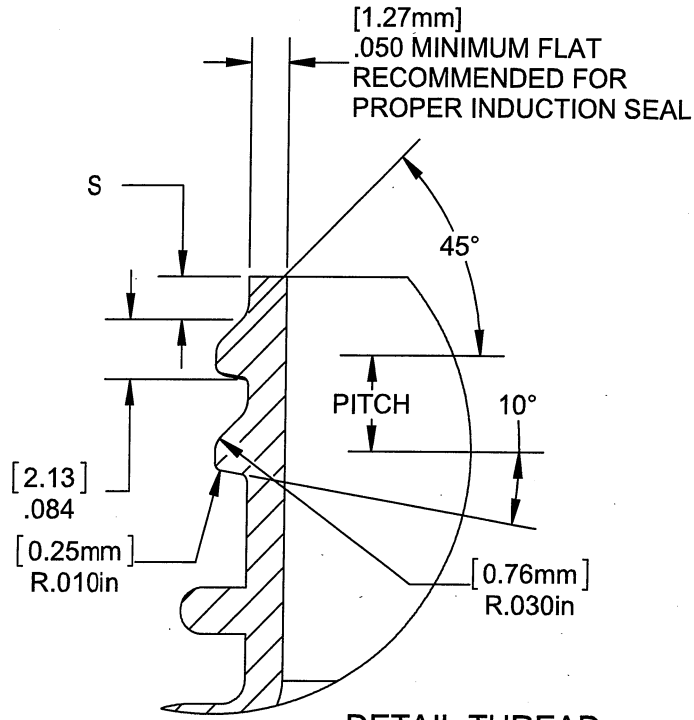
DRAWING NUMBER: CQA-10155

MATERIAL: SEE DRAWING

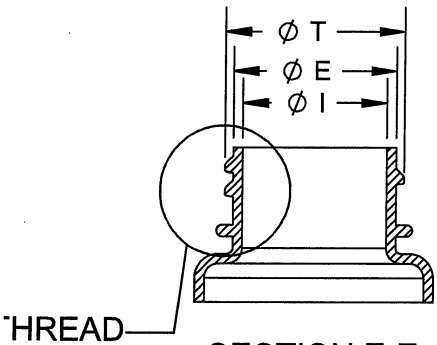
SCALE	SHEET SIZE	SHEET	REV	N/F

Recommended Neck Finish

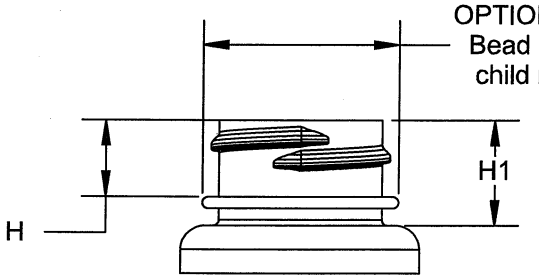




DETAIL THREAD
SCALE 4 : 1



SECTION E-E



Ø B
OPTIONAL construction:
Bead NOT required for
child resistant closure
function

	TOLERANCE	UNITS	
E	±0.008 [0.20]	in [mm]	0.847 [21.51]
T	±0.008 [0.20]	in [mm]	0.931 [23.65]
I	MINIMUM	in [mm]	0.516 [13.11]
S	±0.015 [0.38]	in [mm]	0.046 [1.17]
H	MINIMUM	in [mm]	0.396 [10.06]
H1	MINIMUM	in [mm]	0.550 [13.97]
B	MAXIMUM	in [mm]	1.020 [25.91]
TPI			8
PITCH		in [mm]	0.125 [3.18]

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INDUSTRY LEADING INNOVATION · UNMATCHED CUSTOMER SERVICE

THIRD ANGLE PROJECTION	DISTRIBUTION CODE	DRAWING NAME
SOLIDWORKS	D	24mm-400 PDT CRC PDT EMBOSSED
DRAWN BY: REFER TO PAGE 1		DRAWING NUMBER CQA-10155
QA APPR: REFER TO PAGE 1		MATERIAL
CUSTOMER APPR:		SCALE · SHEET SIZE · SHEET · REV · N/F