ULTRATECH INTERNATIONAL, INC.

Chemical Compatibility Guide - Molded Polyethylene

For UltraTech Spill Containment Products

This listing was prepared to provide guidance to the chemical compatibility of UltraTech Spill Containment Products which are manufactured and constructed of a molded polyethylene.

Polyethylene is susceptible to attack by some chemicals which may cause stress cracking, swelling, oxidation or may permeate the polyethylene. These reactions may reduce the physical properties of polyethylene.

When considering an UltraTech polyethylene product for use in secondary containment applications, it is important to note that most secondary containment products are designed to hold leaked chemicals for only hours, a day, at most a week.

These secondary containment units would then be cleaned of any chemical. In these short term applications, a greater variety of chemicals may be used with the polyethylene since the exposure time of the chemical to the polyethylene is limited.

A = **Suitable for long term storage at 100 degrees Fahrenheit or less.**

B = **Suitable for short term storage less than one year.**

C = **Do NOT store these chemicals in UltraTech containment products.**

User testing may prove some of these chemicals are suitable for secondary containment applications with an exposure time of one week or less.

Acetaldehyde (40%) ..... A	Aqua Regia C	Carbon Bisulfide C
Acetamide ..... A	Aqueous Alkalies (NaOH) ..... A	Carbon Disulfide C
Acetic Acid (50%) ..... A	Arsenic Acid ..... A	Carbon Monoxide ..... A
Acetic Acid Anhydride ..... B	Barium Carbonate ..... A	Carbon Tetrachloride C
Acetic Ether ..... B	Barium Chloride ..... A	Carbonic Acid (Aq. C02) ..... A
Acetone ..... A	Barium Cyanide ..... A	Caustic (Aqueous) ..... A
Acetylene Tetrabromide ..... B	Barium Hydroxide ..... A	Caustic Potash Sol. (50%) ..... A
Acrylic Emulsions ..... B	Barium Nitrate ..... A	Caustic Soda Sol. (10%) ..... A
Acrylonitrile ..... A	Barium Salts ..... A	Chloroacetic Acid ..... A
Adipic Acid ..... A	Barium Sulfate ..... A	Chlorobezene ..... A
Aliphatic Hydrocarbons ..... A	Barium Sulfide ..... A	Chloroform C
Alkaline ..... A	Battery Fluid, Acid ..... B	Chloromethane C
Allyl Alcohol (96%) ..... A	Benzaldehyde ..... A	Chlorsulfonic Acid (100%) C
Aluminum Chloride (20%) ..... A	Benzene Sulfonic Acid ..... B	Chrome Alum Sat'd ..... A
Aluminum Fluoride ..... A	Benzene ..... B	Chromic Acid (50%) ..... B
Aluminum Hydrogen Solution (10%) ..... A	Benzoic Acid ..... A	Clycolic Acid (All Conc.) ..... A
Aluminum Hydroxide ..... A	Benzyl Alcohol ..... A	Copper Cyanide ..... A
Alums (All Types) ..... A	Benzyl Chloroformate ..... A	Cresylic Acid ..... A
Ammonia (Aqueous) ..... A	Boric Acid Conc. ..... A	Crotonic Aldehyde ..... A
Ammonium Acetate ..... A	Boric Acid Dilute ..... A	Cuprous Chloride Sat'd ..... A
Ammonium Bifluoride ..... A	Borzx Cold Sat'd ..... A	Cyclohenanone ..... B
Ammonium Carbonate (50%) ..... A	Bromine, Liquid C	Cyclohexane ..... A
Ammonium Chloride ..... A	Bromine, Water C	Cyclohexanol ..... A
Ammonium Hydrogen Fluoride (50%) ..... A	Bromobenzene C	Dextrin Sat'd ..... A
Ammonium Hydroxide ..... A	Bromoform C	Dextrose Sat'd ..... A
Ammonium Metaphsophate Sat'd ..... A	Butadiene ..... A	Di Isobutyl Ketone ..... B
Ammonium Nitrate Sat'd ..... A	Butanediol (100%) ..... A	Dibutyl Ether C
Ammonium Persulfate Sat'd ..... A	Butanol ..... A	Dibutyl Sebacate ..... B
Ammonium Phosphate ..... A	Butyl Acetate ..... A	Dibutylphthalate ..... B
Ammonium Salts ..... A	Butyl Alcohol (100%) ..... A	Dichloroacetic Acid ..... B
Ammonium Sulfate Sat'd ..... A	Butyl Phenol C	Dichlorobenzene, Liquid C
Ammonium Sulfide, Sat'd ..... A	Butylene Glycol ..... A	Dichloroethylene C
Ammonium Thiocyanate Sat'd ..... A	Butylene Liquid C	Diesel Fuel ..... B
Amyl Acetate ..... A	Butylene C	Diesel Oil ..... B
Amyl Alcohol (100%) ..... A	Butyric Acid ..... A	Diethanolamine ..... B
Amyl Chloride C	Calcium Carbonate ..... A	Diethyl Carbonate ..... A
Aniline (100%) ..... B	Calcium Chloride ..... A	Diethylene Glycol ..... A
Aniline Hydrochloride ..... B	Calcium Hydroxide ..... A	Digycolic Acid (30%) ..... A
Anti Freeze ..... A	Calcium Hypochlorite ..... A	Dimethyl Formamide ..... B
Antimony Salts ..... A	Calcium Nitrate (50%) ..... A	Dimethylamine ..... B
Antimony Trichloride (90%) ..... A	Calcium Sulfate ..... A	Dinonyl Phthalate C

Continued on next page

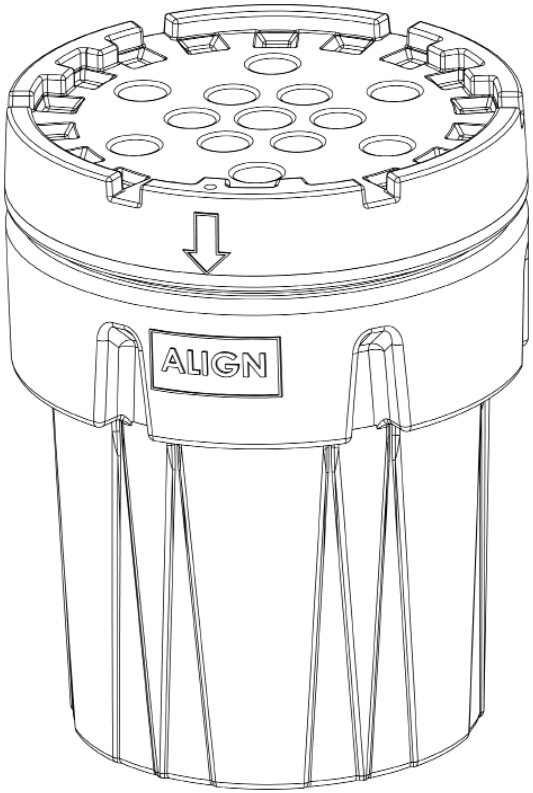
Dioctyl Phthalate	C
Dioxane	A
Diphenyl Oxide	C
Disodium Phosphate	A
Electrolyte	A
Ethanol	A
Ether	C
Ethyl Acetate (100%)	B
Ethyl Alcohol	A
Ethyl Butyrate	B
Ethyl Chloride	C
Ethyl Ether	C
Ethylene Chloride	C
Ethylene Chlorohydrin	A
Ethylene Diamine	A
Ethylene Dichloride	C
Ethylene Glycol	A
Ethylene Oxide	C
Fatty Acids	A
Ferric Sulfate	A
Ferrous Salts	A
Ferrous Sulfate	A
Fluoboric Acid	A
Fluosilicic Acid (All Conc.)	A
Formaldehyde (40%)	A
Formamide	A
Formic Acid (All Conc.)	A
Fuel Oil	A
Furfural (100%)	A
Furfuryl Alcohol	C
Gallic Acid Sat'd	A
Gasoline	A
Gluconic Acid (All Conc.)	A
Glycerine	A
Glycol	A
Heptane	A
Hexane	A
Hydrazone Hydrate	A
Hydrobromic Acid (50%)	A
Hydrochloric Acid (All Conc.)	A
Hydrocyanic Acid Sat'd	A
Hydrofluoric Acid (All Conc.)	A
Hydrofluorisilicic Acid (All Conc.)	A
Hydrogen Bromide (10%)	A
Hydrogen Peroxide (90%)	A
Hydrogen Phosphide (100%)	A
Hydrogen Sulfide	A
Hydroiodic Acid (All Conc.)	A
Hydroquinone	A
Hydrosulfite (10%)	A
Hydroxylamine Sulfate	A
Hydrozine (35%)	A
Hydrozine Hydrochloride	A
Hypochlorous Acid	A
Iso Octane	B
Isopropyl Acetate	A
Isopropyl Alcohol	A
Isopropyl Ether	C
Jet Fuel	B
Kerosene	B
Lactic Acid (All Conc.)	A
Lead Acetate Sat'd	A
Magnesium Carbonate	A
Magnesium Hydroxide	A
Magnesium Nitrate	A
Magnesium Oxide	A
Magnesium Salts	A
Magnesium Sulfate	A
Maleic Acid	A
Methanol	A
Methyl Acetate	A
Methyl Alcohol (100%)	A
Methyl Amine (32%)	A
Methyl Bromide	C
Methyl Chloride	C
Methyl Ethyl Ketone	B
Methyl Isobutyl Ketone	B
Methyl Isopropyl Ketone	B
Methyl Sulfate	A
Methyl Sulfuric Acid (All Conc.)	A
Methylene Chloride	C
Mineral Oils	A
Monochloroacetic Acid Ethyl Ester	A
Monochloroacetic Acid Methyl Ester	A
Mowilith D	A
Naptha	B
Napthalene	B
Nicotine Dilute	A
Nicotinic Acid	A
Nitric Acid (50%)	A
Nitrobenzene	B
Nitrotoluene	B
Octyl Cresol	A
Oleic Acid (All Conc.)	A
Oleum Conc.	C
Oxalic Acid (All Conc.)	A
Palmitic Acid	C
Paraffin Emulsions	A
Perchloric Acid (50%)	A
Perchloroethylene	B
Petroleum Ether	B
Petroleum	A
Phenylhydrazine	C
Phosphoric Acid (All Conc.)	A
Phosphorous (Yellow 100%)	A
Phosphorous Chlorides	B
Phosphorous Pentoxide	A
Photographic Solutions	A
Phthalic Acid (All Conc.)	A
Phthalic Anhydride	A
Pickling Baths	
• Sulfuric Acid	A
• Hydrochloric Acid	A
Picric Acid (1%)	A
Plating Solutions	A
Potassium Aluminum Sulfates (50%)	A
Potassium Bichromate	A
Potassium Borate (10%)	A
Potassium Bromide	A
Potassium Chlorate	A
Potassium Chloride	A
Potassium Chromate	A
Potassium Cyanide	A
Potassium Dichromate (40%)	A
Potassium Ferri Ferro Cyanide Sat'd	A
Potassium Fluoride	A
Potassium Hydroxide	A
Potassium Nitrate Sat'd	A
Potassium Perborate Sat'd	A
Potassium Perchlorate	A
Potassium Phosphates	A
Potassium Sulfate	A
Propanol	A
Propargyl Alcohol (7%)	A
Propionic Acid (50%)	A
Propyl Alcohol	A
Propylene Dichlrode (100%)	A
Propylene Glycol	A
Propylene Oxide	A
Pyridine	B
Selenic Acid	A
Sewage	A
Silicic Acid	A
Silver Nitrate	A
Soda Ash	A
Sodium Acetate Sat'd	A
Sodium Benzoate	A
Sodium Bisulfate (10%)	A
Sodium Bisulfite	A
Sodium Bromate	B
Sodium Chloride	A
Sodium Chlorite	A
Sodium Chromate	A
Sodium Disulfite	A
Sodium Dithionite (10%)	A
Sodium Fluoride Sat'd	A
Sodium Hydroxide Conc	A
Sodium Hypochlorite	A
Sodium Nitrate	A
Sodium Oxalate	A
Sodium Persulfate	A
Sodium Phosphate	A
Sodium Sulfonates	A
Stearic Acid (All Conc.)	A
Succinic Acid	A
Sulfuric Acid (98%)	B
Sulfuric Acid, Fuming	C
Sulfurous Acid	A
Sulfuryl Chloride	C
Tartaric Acid Sat'd	A
Tetrachlorethylene	C
Tetrachloroethane	C
Tetrahydrofurane	C
Tetrahydronaphthalene	C
Thionyl Chloride	C
Titanium Salts	B
Toluene Sulfonic Acid (All Conc.)	B
Toluene	B
Transformer Oil	A
Tributylphosphate	A
Trichloroacetic Acid	B
Trichloroethane	C
Trichloroethylene	C
Tricresyl Phosphate	A
Triethanolamine	A
Trioctyl Phosphate	C
Trisodium Phosphate Sat'd	A
Turpentine Oil	C
Xylene	C

Ultra-Overpack Plus 65

65 GALLON SALVAGE DRUM
Packaging Limitations and Closure Instructions

Designed to Meet 49CFR173.3(c): Salvage Drum Regulations

It is the shipper's responsibility to package and ship this packaging in accordance with prevailing applicable transportation regulations.



UN MARKING:
1H2\X228\S**\USA\M5904

LIMITATIONS:

1. The Ultra-Overpack Plus is approved as a single trip salvage drum.
2. Lid closure for transportation can only be performed once.
3. Gross package weight of the Overpack Plus and lid is not to exceed 503 lbs. (228 Kilograms).
   NOTE: The tare weight of Ultra-Overpack Plus and lid is approximately 40 lbs.
4. Do not fill container above the bottom of the thread.
5. The Ultra-Overpack Plus is not approved for air transport.
6. No free liquids are to be transported. This Ultra-Overpack Plus has been qualified to ship solids only. Use a loose fill absorbent to fill any void areas and absorb any free liquid.
7. Always check the Chemical Compatibility of the material in the Ultra-Overpack Plus. (Contact UltraTech for a Chemical Compatibility Guide.)

CLOSURE INSTRUCTIONS:

1. Place contents into the Ultra-Overpack Plus. Make sure top sealing edge of the Ultra-Overpack Plus is free from debris, cuts or gouges.
2. Place lid onto the Ultra-Overpack Plus and twist the lid in a clockwise direction (approximately 2 complete revolutions) until the lid is "hand tightened."
3. Continue tightening the lid (additional torque may be required) until the arrow on the side of the lid matches up with the alignment bar on the side of the Ultra-Overpack Plus (see picture). NOTE: Additional torque may require the use of a long 2" x 4" board, rebar or a shovel handle. The board, rebar or handle can be placed between the slots on the lid to allow sufficient torque to tighten the arrow to the alignment bar. Silicone lubricant can be sprayed on the gasket to allow tightening the lid without the use of a substrate.

Note: Occasionally temperature and operating conditions can affect tolerances of the Ultra-Overpack Plus 65. If you are unable to tighten the lid so that the Arrow on the lid is aligned within the "Alignment Bar" on the drum, please tighten the lid as far as possible and allow the Ultra- Overpack Plus 65 to sit for 1-2 hours. Then tighten the lid further. The delay allows the gasket to reset and allow further tightening. This can be repeated until the Arrow is within the Alignment Bar.

CAUTION: DO NOT SHIP THE ULTRA-OVERPACK PLUS 65 UNTIL THE ARROW MATCHES UP WITH SOME PORTION OF THE ALIGNMENT BAR.

If you have any questions regarding the packaging limitations or closure instructions please contact us at:

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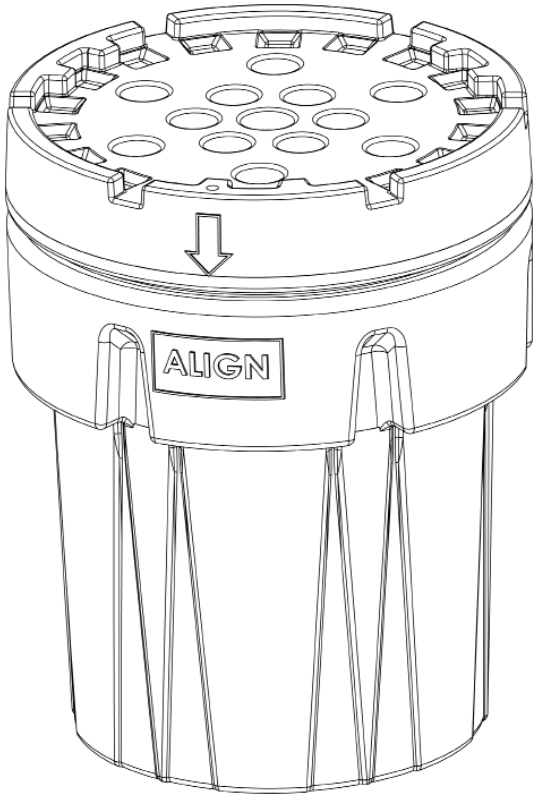
ULTRATECH INTERNATIONAL, INC.

Ultra-Overpack Plus 95

95 GALLON SALVAGE DRUM
Packaging Limitations and Closure Instructions

Designed to Meet 49CFR173.3(c): Salvage Drum Regulations

It is the shipper's responsibility to package and ship this packaging in accordance with prevailing applicable transportation regulations.



UN MARKING:
1H2\X345\S**\USA\M5904

LIMITATIONS:

1. The Ultra-Overpack Plus is approved as a single trip salvage drum.
2. Lid closure for transportation can only be performed once.
3. Gross package weight of the Overpack Plus and lid is not to exceed 760 lbs. (345 Kilograms).
   NOTE: The tare weight of Ultra-Overpack Plus and lid is approximately 48 lbs.
4. Do not fill container above the bottom of the thread.
5. The Ultra-Overpack Plus is not approved for air transport.
6. No free liquids are to be transported. This Ultra-Overpack Plus has been qualified to ship solids only. Use a loose fill absorbent to fill any void areas and absorb any free liquid.
7. Always check the Chemical Compatibility of the material in the Ultra-Overpack Plus. (Contact UltraTech for a Chemical Compatibility Guide.)

CLOSURE INSTRUCTIONS:

1. Place contents into the Ultra-Overpack Plus. Make sure top sealing edge of the Ultra-Overpack Plus is free from debris, cuts or gouges.
2. Place lid onto the Ultra-Overpack Plus and twist the lid in a clockwise direction (approximately 2 complete revolutions) until the lid is "hand tightened."
3. Continue tightening the lid (additional torque may be required) until the arrow on the side of the lid matches up with the alignment bar on the side of the Ultra-Overpack Plus (see picture). NOTE: Additional torque may require the use of a long 2" x 4" board, rebar or a shovel handle. The board, rebar or handle can be placed between the slots on the lid to allow sufficient torque to tighten the arrow to the alignment bar. Silicone lubricant can be sprayed on the gasket to allow tightening the lid without the use of a substrate.

Note: Occasionally temperature and operating conditions can affect tolerances of the Ultra-Overpack Plus 95. If you are unable to tighten the lid so that the Arrow on the lid is aligned within the "Alignment Bar" on the drum, please tighten the lid as far as possible and allow the Ultra- Overpack Plus 95 to sit for 1-2 hours. Then tighten the lid further. The delay allows the gasket to reset and allow further tightening. This can be repeated until the Arrow is within the Alignment Bar.

CAUTION: DO NOT SHIP THE ULTRA-OVERPACK PLUS 95 UNTIL THE ARROW MATCHES UP WITH SOME PORTION OF THE ALIGNMENT BAR.

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ULTRATECH INTERNATIONAL, INC.

Ultra-Overpack Plus® 95 Gallon

MADE IN USA

Screw top Ultra-Overpacks offer the highest UN and DOT certifications available

+ Polypropylene construction provides excellent chemical resistance, including acids, caustics, and corrosives.
+ Easy-to-close screw top lid
+ Convenient, “no-tools required” closures are perfect for clean-up and spill response applications.
+ Nestable design and low tare weight allow convenient storage and reduced transportation costs.
+ The perfect container for spill kits - heavy-duty and rugged yet easy to transport to the spill site.
+ Lids can be tightened using wooden beam (2x4) in molded-in slots.
+ FOB: Mentor, Ohio 44060 USA

Product Details	
Part#	0580
Description	95-Gallon Overpack Plus
Color	Yellow
Top Outside Dia. in. (mm)	32.0
Bottom Outside Dia. in. (mm)	25.0
Outside Height in. (mm)	41.0
Top Inside Dia. in. (mm)	38.5
Bottom Inside Dia. in. (mm)	24.5
Inside Height in. (mm)	38.5
Weight lbs. (kg)	48.0 (21.8)

Specifications	
Drum Lid Closure	Open-Head
Container Type	Overpack & Salvage Drums
Lining	Unlined
Size	95 gal.
Storage Capacity	95 gal. (359.6 L)
Bung Type	No Bung Holes
Drum Type	Plastic
Lid Type	Screw-Top
Sold as	1 each
Composition	Polyethylene
UNSPSC	24112109
UN Marking	1H2/X345/S/**USA/M5904

ULTRATECH INTERNATIONAL, INC.

Ultra-Overpack Plus® 30 Gallon

MADE IN USA

Screw top Ultra-Overpacks offer the highest UN and DOT certifications available

+ Polypropylene construction provides excellent chemical resistance, including acids, caustics, and corrosives.
+ Easy-to-close screw top lid
+ Convenient, “no-tools required” closures are perfect for clean-up and spill response applications.
+ Nestable design and low tare weight allow convenient storage and reduced transportation costs.
+ Built-in slots in lid and body provide added security – use with zip ties for tamper resistance and vandalism prevention.
+ The perfect container for spill kits - heavy-duty and rugged yet easy to transport to the spill site.
+ Lids can be tightened using built-in broom handle or wooden beam (2x4) slots.
+ Molded-in foothold provides additional leverage point - makes tightening and loosening lid quick and easy.
+ FOB: Mentor, Ohio 44060 USA

Product Details	
Part#	0585
Description	30-Gallon Plus
Color	Yellow
Top Outside Dia. in. (mm)	22⅞ (581)
Bottom Outside Dia. in. (mm)	18 (457)
Outside Height in. (mm)	30⅛ (765)
Weight lbs. (kg)	15.0 (7.0)

Specifications	
Drum Lid Closure	Open-Head
Container Type	Overpack & Salvage Drums
Lining	Unlined
Size	30 gal.
Thickness	.125" Thick
Storage Capacity	30 gal. (113.6 L)
Bung Type	No Bung Holes
Drum Type	Plastic
Interior Dimensions	17" Dia. x 28.1" H Interior
Lid Type	Screw-Top
Sold as	1 each
# per Pallet	24
Composition	Polypropylene
UNSPSC	24112109
UN Marking	1H2/X70/S/**USA/+AA10183

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ULTRATECH INTERNATIONAL, INC.

Ultra-Overpack Plus® 20 Gallon

MADE IN USA

Screw top Ultra-Overpacks offer the highest UN and DOT certifications available

+ Polypropylene construction provides excellent chemical resistance, including acids, caustics, and corrosives.
+ Easy-to-close screw top lid
+ Convenient, “no-tools required” closures are perfect for clean-up and spill response applications.
+ Nestable design and low tare weight allow convenient storage and reduced transportation costs.
+ Built-in slots in lid and body provide added security – use with zip ties for tamper resistance and vandalism prevention.
+ The perfect container for spill kits - heavy-duty and rugged yet easy to transport to the spill site.
+ Lids can be tightened using built-in broom handle or wooden beam (2x4) slots.
+ Molded-in foothold provides additional leverage point - makes tightening and loosening lid quick and easy.
+ FOB: Mentor, Ohio 44060 USA

Product Details	
Part#	0587
Description	20-Gallon Plus
Color	Yellow
Top Outside Dia. in. (mm)	21¾ (552)
Bottom Outside Dia. in. (mm)	17¾ (451)
Outside Height in. (mm)	19¼ (489)
Weight lbs. (kg)	12.0 (5.5)

Specifications	
Drum Lid Closure	Open-Head
Container Type	Overpack & Salvage Drums
Lining	Unlined
Size	20 gal.
Thickness	.125" Thick
Storage Capacity	20 gal.
Bung Type	No Bung Holes
Drum Type	Plastic
Interior Dimensions	17.25" Dia. x 17.4" H Interior
Lid Type	Screw-Top
Sold as	1 each
# per Pallet	40
Composition	Polypropylene
UNSPSC	24112109
UN Marking	1H2/X46/S/**USA/+AA10183

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ULTRATECH INTERNATIONAL, INC.

Ultra-Overpack® Plus
20 & 30 Gallon Salvage Drums

Part# 0585 & 0587

Packaging Limitations and Closure Instructions

Designed to Meet 49CFR173.3(c): Salvage Drum Regulations

UN Marking:

20 Gallon (PN 0587): **1H2/X66/S/**/USA/+AA9656**
30 Gallon (PN 0585): **1H2/X100/S/**/USA/+AA9656**
*Note: "**" represents year of manufacture*

It is the shipper's responsibility to package and ship this packaging in accordance with prevailing applicable transportation regulations.

Limitations:

1. The Ultra-Overpack Plus is approved as a single trip salvage drum.
2. Lid closure for transportation can only be performed once.
3. Gross package weight of the Overpack Plus and lid is **not to exceed**:
   a. For the 20 Gallon Overpack Plus (PN 0587): 145 lbs. (66 Kilograms).
   b. For the 30 Gallon Overpack Plus (PN 0585): 220 lbs. (100 Kilograms).
4. The tare weight of Ultra-Overpack Plus and lid is:
   a. For the 20 Gallon Overpack Plus (PN 0587): 11.9 lbs. (5.4 Kilograms).
   b. For the 30 Gallon Overpack Plus (PN 0585): 14.8 lbs. (6.7 Kilograms).
5. Do not fill container above the bottom of the thread.
6. No free liquids are to be transported. This Ultra-Overpack Plus has been qualified to ship solids only. Use a loose fill absorbent to fill any void areas and absorb any free liquid.
7. Always check the chemical compatibility of the material in the Ultra-Overpack Plus. (Contact UltraTech for a chemical compatibility guide.)

Closure Instructions on Back

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Closure Instructions:

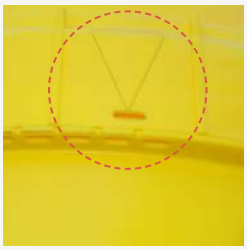
STEP 1: Place contents into the Ultra-Overpack Plus. Make sure top sealing edge of the Ultra-Overpack Plus is free from debris, cuts or gouges.

STEP 2: Place lid onto the Ultra-Overpack Plus and twist the lid in a clockwise direction until the lid is “hand tightened.”

STEP 3: Continue tightening the lid (additional torque may be required) until the hole under the alignment arrow on the lid lines up with the group of holes on the base of the Ultra-Overpack Plus. ⟶

Note: Additional torque may require the use of a long 2” x 4” board, rebar or a shovel handle. The board, rebar or handle can be placed between the slots or through the eyeholes on the lid to allow sufficient torque to tighten the arrow to the alignment holes on the base of the Overpack. Better leverage can also be gained by placing your foot into the recesses on the base of the overpack while tightening the lid. Silicone lubricant can be sprayed on the gasket to allow tightening the lid without the use of a substrate.

Note: Occasionally temperature and operating conditions can affect tolerances of the Ultra-Overpack Plus. If you are unable to tighten the lid so that the hole under the alignment arrow on the lid lines up with the group of holes on the base of the overpack, please tighten the lid as far as possible and allow the Ultra-Overpack Plus to sit for 1-2 hours. Then tighten the lid further. The delay allows the gasket to reset and allow further tightening. This can be repeated until the holes are aligned properly.



STEP 4: To secure the Ultra-Overpack from tampering, you can attach a zip tie through the holes in the lid and the base of the overpack.

CAUTION: DO NOT SHIP THE ULTRA-OVERPACK PLUS 20G or 30G UNTIL THE HOLE UNDER THE ALIGNMENT ARROW ON THE LID MATCHES UP WITH ONE OF THE HOLES ON THE BASE OF THE OVERPACK.

If you have any questions regarding the packaging limitations or closure instructions please contact us.

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ULTRATECH INTERNATIONAL, INC

The Truth About Salvage Drums

There is confusion in the marketplace regarding salvage drums. The term “overpack” has become synonymous with “salvage drum” in recent years, and there are many products on the market, which *look* like salvage drums, but are not.

What is a salvage drum?

Salvage drums are designed to contain packages of hazardous materials that are damaged, defective, or found leaking. The drums are regulated by the Department of Transportation (DOT) under 49 CFR 173.3 (c). If a company or shipper has a leaking package of hazardous material, sorbents, or rags used on a spill or leak, and they wish to ship them across public roads, they must use a salvage drum under the restrictions of 173.3 (c). The salvage drum is larger than the leaking package allowing the leaking package to be placed inside the salvage drum for safe shipment to a disposal or treatment facility. The salvage drum must be compatible with the lading in the leaking package. Shipments that do not follow the DOT Hazardous Materials regulations are shipping illegally and could face fines, typically $250.00 - $25,000.00 per violation, levied by the DOT.

Salvage drums can be made of steel, polyethylene, aluminum, or metal and must pass, at a minimum, standard UN performance requirements for drums shipping solids as well as a three psi, air leakproof test. If a drum meets the requirements as stipulated by DOT under 49 CFR 173.3 (c), then it is to be marked with the appropriate UN markings, proper shipping name of the material, name and address of the consignee, and the words “Salvage Drum.” It is illegal to omit these markings from salvage drums prepared in accordance with 173.3 (c).

What is an overpack?

An overpack is an enclosure used by a single consignee to provide protection or convenience in handling a package or to consolidate two or more packages.

An overpack is used to contain a smaller non-leaking package. The integrity of the inner package has not been breached, and the performance of the entire package still meets DOT requirements. The DOT does not view an overpack as a salvage drum.

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Why is there confusion between overpacks and salvage drums?

Traditionally, many manufacturers have referred to salvage drums as “overpacks.” So the industry has become more familiar with the term overpack than salvage drum and believes that all overpacks must be salvage drums. This is an incorrect assumption. Recently some manufacturers have been offering drums that look like salvage drums but refer to them as “overpacks.” Unless your employees or buyers are very sophisticated on the differences between overpacks and salvage drums under DOT regulations, they may unwittingly purchase these overpacks believing they are buying drums they can use for salvage drum applications. If overpacks that look like salvage drums cost less than salvage drums that could be the first tip that the overpack may not meet the performance standard of a salvage drum.

What is my liability if I use or sell an overpack that is not qualified as a salvage drum for a salvage drum application?

The DOT holds manufacturers responsible to properly design, test and mark the UN/DOT regulated drums and produce them to a standard that ensures performance compliance. Distributors should not sell a drum for a purpose or regulation that it does not meet. Finally, the actual shipper must be knowledgeable enough to use the regulated drums in accordance with the manufacturer’s instructions and DOT/UN regulations. The manufacturer, distributor or shipper can be held liable if they do not meet their obligations under the DOT/UN regulations.

Can “used” salvage drums be reused?

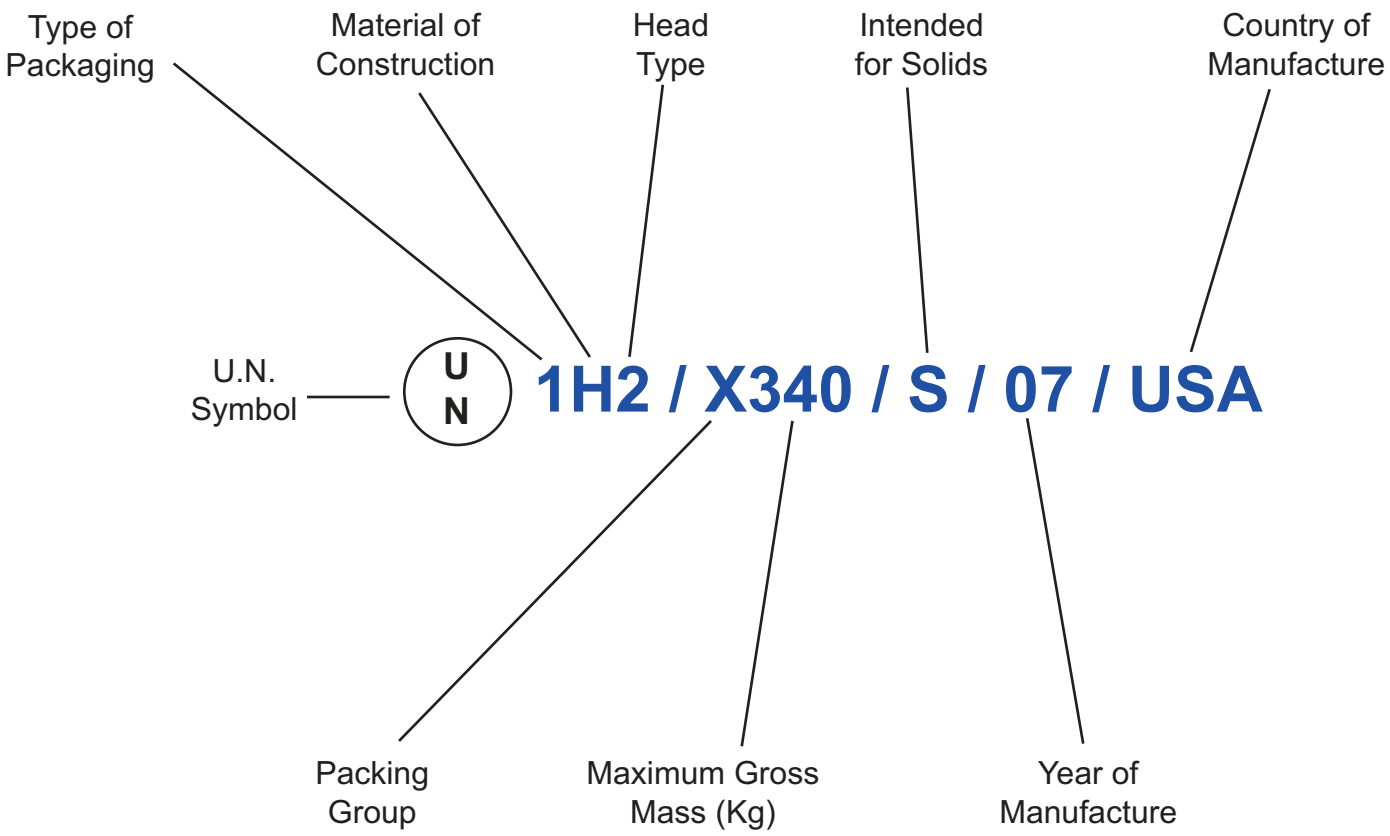
If used more than once, salvage drums are subject to the requirements of 173.28. They must be leak tested, and if they show evidence of a reduction in integrity, they must be reconditioned. Salvage drums that comply with these requirements may be reused or resold. If they have been reconditioned, the reconditioner must mark them. There are other aspects to reconditioning, including minimum wall thickness and age of the unit. If you have an opportunity to purchase and use recycled salvage drums, make sure they have been retested, certified, and marked properly to avoid the risk of non-compliance with DOT regulations in the interest of saving a few bucks.

What should you use for spill kit containers - salvage drums or overpacks?

The most logical choice for a spill kit container would be a salvage drum. While you could save a few dollars buying an overpack or an economy-type container, when you have a spill and start using the sorbents, that drum will not qualify as a salvage drum should you need to ship off the sorbents used in a spill clean-up. Even worse, if you place a leaking package and used sorbents into the overpack or economy-type container you will need to buy a salvage drum large enough to place the container, leaking package, and sorbents into for shipping. Buying a salvage drum for your spill kits initially ensures that when you have a leak or spill, the spill kit you used to hold the sorbents prior to use will also allow you to ship off the leaking packages and used sorbents for treatment, disposal, and recycling. Instead of buying an overpack for the spill kit, then a salvage drum for the clean-up, you will save money and effort by using a salvage drum as your spill kit.

Remember, overpacks overpack non-leaking packages for shipment, salvage drums overpack leaking packages and sorbents for DOT compliant shipments.

HOW TO DECIPHER U.N. MARKINGS ON HAZMAT PACKAGING



What are "Packing Groups"? Packing Groups refer to the degree of danger represented by the material shipped. Packing Group I, denoted by the "X" in the marking group, has the highest degree of hazard; Packing Group II, denoted by a "Z" present the least amount of hazard.

How is the "Packing Group" determined? The Hazardous Materials Table (HMT) is the initial reference point in preparing hazardous materials for transportation, 49 CFR 172.101 (1995). The HMTincludes proper shipping names, hazard classes, identification numbers and packing groups assigned to various materials. It also provides references for packaging and codes for special provisions which may apply to a shipment.

How can you be sure your packaging meets UN standards? Manufacturers, who are responsible for testing, must mark every package that is required to conform to a UN standard, 49 CFR 178.2 and 178.503 (1995). See example of markings for packaging above.

RotoSolutions Test Report
and
Qualification Notice
5/28/2021

Product: 65 Gallon Overpack

Manufacturer and Testing Facility: Rotosolutions Inc. 1401 Jacobson Avenue Ashland Ohio 44805

Drum Unit Tested:							
	Leak Proofness	Drum 1	O5242106	Drum 2	O5242107	Drum 3	O5242108
	Base Drop	Drum 1	O5242109	Drum 2	O5242110	Drum 3	O5242111
	Stack	Drum 1	O5242109	Drum 2	O5242110	Drum 3	O5242111
	Diag. Lid Drop	Drum 1	O5242109	Drum 2	O5242110	Drum 3	O5242111

Objective: To determine the compliance with the applicable regulations for UN 1H2 container for Packing Group1 solid material and 49 CFR 173.3 Salvage drum applications.

Items Tested: One Sample of lot of removable top, open head plastic container. Volumetric capacity of the container is 65 gallons. Material of construction is Linear Low Density Polyethylene (LLDPE) resin, rotationally molded.

TEST	REGUALTION	DESCRIPTION	PERFORMANCE
Drop	UN 6.1.5.3 49 CFR 178.603	1.8 meter, 228KG -18 Celsius. Unit filled with a mixture of sand and vermiculite	Passed
Stacking	UN 6.1.5.6 49 CFR 178.606	3 meters, 690 kg load 24 hours, with a mixture of sand and vermiculite	Passed
Leakproof	UN 6.1.5.4 49 CFR 173.3 (c)(1)	20 kPa 5 minutes	Passed

Conclusion: Part design complies and passes all required testing as called out in the above mentioned regulations. This unit is therefore certified. Unit must be filed and used in accordance to all pertinent DOT and UN regulations. Failure to do so renders the qualification invalid and voids all warranties implied or stated.

Load measured with scale calibrated and maintained by Ashland Scale. Temperature recorded with Amprobe IR608A Infrared Thermomet

Levels Measured with a verified Johnson angle finder. Air pressure measured with a verified Noshok pressure gauge.

Packaging Markings:

1H2\X228\S\21\USA\M5904

Approved By: Ralph Kirkpatrick

Ralph Kirkpatrick, V.P. of Sales, 05/28/2021

Test Document 10004

Rotosolution Test Report
and
Qualification Notice
5/28/2021

Product: 95 Gallon Overpack

Manufacturer and Testing Facility RotoSolutions, Inc., 1401 Jacobson Ave., Ashland, Ohio 44805

Drum Unit Tested:							
	Leak Proofness	Drum 1	O5242101	Drum 2	O5242102	Drum 3	O5242103
	Base Drop	Drum 1	O5242104	Drum 2	O5242105	Drum 3	O5242106
	Stack	Drum 1	O5242104	Drum 2	O5242105	Drum 3	O5242106
	Diag. Lid Drop	Drum 1	O5242104	Drum 2	O5242105	Drum 3	O5242106

Objective: To determine the compliance with the applicable regulations for UN 1H2 container for Packing Group1 solid material and 49 CFR 173.3 Salvage drum applications.

Items Tested: One Sample of lot of removable top, open head plastic container. Volumetric capacity of the container is 95 gallons. Material of construction is Linear Low Density Polyethylene (LLDPE) resin, rotationally molded.

TEST	REGUALTION	DESCRIPTION	PERFORMANCE
Drop	UN 6.1.5.3 49 CFR 178.603	1.8 meter, 345 KG -18 Celsius. Unit filled with a mixture of sand and vermiculite	Passed
Stacking	UN 6.1.5.6 49 CFR 178.606	3 meters, 1035 kg load 24 hours, with a mixture of sand and vermiculite	Passed
Leakproof	UN 6.1.5.4 49 CFR 173.3 (c)(1)	20 kPa 5 Minutes	Passed

Conclusion: Part design complies and passes all required testing as called out in the above mentioned regulations. This unit is therefore certified. Unit must be filed and used in accordance to all pertinent DOT and UN regulations. Failure to do so renders the qualification invalid and voids all warranties implied or stated.

Load measured with scale calibrated and maintained by Ashland Scale. Temperature recorded with Amprobe IR608A Infrared Thermomet

Levels Measured with a verified Johnson angle finder. Air pressure measured with a verified Noshok pressure gauge.

Packaging Markings:

1H2\X345\S\21\USA\M5904

Approved By: Ralph Kirkpatrick

Ralph Kirkpatrick, V.P. of Sales, 05/28/2021

Test Document 10003

Ultra-Overpack Plus 95

SPECIFICATIONS

05.13.13

LID

Description	95 Gallon Overpack Lid
Method of fabrication	Rotationally Molded
Material	Low Density Polyethylene
Pigment	Yellow
Resin	LLDPE
Gasket	Cross Linked Polyethylene Foam
Dimensions	1.5" x 0.625" x 83.5"
Diameter	32.25"
Height	6.375"
Channel width	1.5"
Wall thickness	0.185"
Tare weight	18 lbs.

DRUM

Description	95 Gallon Overpack Drum
Method of fabrication	Rotationally Molded
Material	Low Density Polyethylene
Pigment	Yellow
Resin	LLDPE
Capacity	95 Gallons
Diameter	32.25"
Height	38.5"
Wall thickness	0.145"
Tare weight	30 lbs.

Ultra-Overpack Plus 65

SPECIFICATIONS

05.13.13

LID

Description	65 Gallon Overpack Lid
Method of fabrication	Rotationally Molded
Material	Low Density Polyethylene
Pigment	Yellow
Resin	LLDPE
Gasket	Cross Linked Polyethylene Foam
Dimensions	0.625" x 1.0625" x 70"
Diameter	28.125"
Height	6.125"
Channel width	1"
Wall thickness	0.185"
Tare weight	13.5 lbs.

DRUM

Description	65 Gallon Overpack Drum
Method of fabrication	Rotationally Molded
Material	Low Density Polyethylene
Pigment	Yellow
Resin	LLDPE
Capacity	65 Gallons
Diameter	28.125"
Height	34.5"
Wall thickness	0.145"
Tare weight	26 lbs.