



ULTRATECH
INTERNATIONAL, INC.

Ultra-Containment Wall® M2

Modular, hard-walled system
provides long-term, high-
capacity spill containment



- + Modular wall sections and corners can be easily assembled to form almost any size/shape spill containment area needed.
- + Heavy-duty, 30 mil, textured polyethylene liner provides rugged, impermeable barrier to capture leaks and spills.
- + Creates large, semi-permanent containment areas. Provides much more gallon capacity than shorter walled containment systems.
- + Versatile system can be easily disassembled for reuse at future sites.
- + Unlike some containment systems, the Ultra-Containment Wall is not secured to the substrate so it is perfect use in parking lots, sand, rocky soil, muddy soil, frozen soil or on concrete areas.
- + Made in the USA.
- + **Meets SPCC, EPA Container Storage Regulation 40 CFR 264.175.**



Connector pins allow systems to be setup quickly and easily without the need for special tools or equipment.



Large clips (included) hold the liner in place. Excess liner can be trimmed if desired.

Part#	Wall Height & Description ft. (m)	Dimensions in. (mm)	Weight lbs. (kg)	Max. Fill Height in. (mm)
8896	1 (0.3) - Straight Section	86 x 18 x 12 (2,184.4 x 457.2 x 304.8)	34 (15.4)	12 (305)
8897	1 (0.3) - Corner Section	36.8 x 36.8 x 12 (933.5 x 933.5 x 304.8)	12 (5.4)	12 (305)
8880	2 (0.6) - Straight Section	86 x 24 x 24 (2,184.4 x 609.6 x 609.6)	65 (29.5)	24 (610)
8881	2 (0.6) - Corner Section	36.8 x 19 x 24 (933.5 x 483.6 x 609.6)	19 (8.6)	24 (610)
8883	3 (0.9) - Straight Section	86 x 24 x 36 (2,184.4 x 609.6 x 914.4)	76 (34.5)	36 (914)
8884	3 (0.9) - Corner Section	36.8 x 19 x 36 (933.5 x 483.6 x 914.4)	25 (11.3)	36 (914)

Complete Systems:

Part#	Wall Height ft. (m)	Usable Dimensions ft. (m)	Item Quantity	Containment Cap. gal. (L)	Weight lbs. (kg)	Max. Fill Height in. (mm)
8898	1 (0.3)	15 x 55.7 x 1 (4.6 x 16.8 x 0.3)	20-Straight, 4-Corners, Liner not included	6,211 (23,511.2)	728 (330)	12 (305)
8882	2 (0.6)	15 x 55.7 x 2 (4.6 x 17 x 0.6)	20-Straight, 4-Corners, Liner not included	12,421 (47,018.6)	1,376 (624)	24 (610)
8885	3 (0.9)	15 x 55.7 x 3 (4.6 x 17 x 0.9)	20-Straight, 4-Corners, Liner not included	18,632 (70,529.8)	3,007.5 (1,364.2)	36 (914)



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Ultra-Containment Wall® Assembly Instructions



1. Unpack walls and corners.
2. Inspect for any shipping damage and missing parts.



3. Set up walls and corners in area requiring spill containment.



4. Insert pin at each wall/corner connection.
5. Set up **all** walls and corners. This will insure the correct spacing.



6. Remove walls on side that frac tank/tanker truck/other vehicle will be rolled through.



7. Unroll liner and place over walls.



8. Walk around the containment area so that the liner lays close to the Containment Walls.



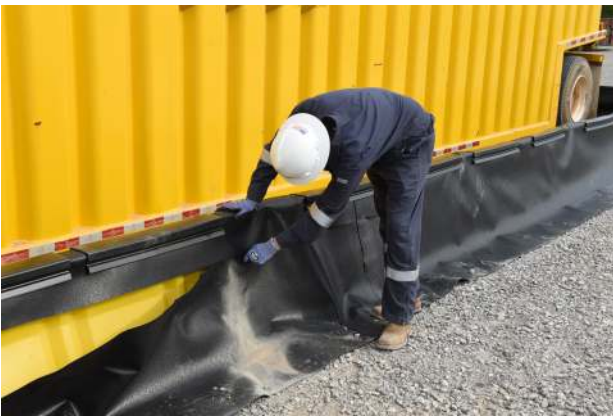
9. Carefully drive/roll container (frac tank, etc) into Containment Wall system.



10. Once truck and/or any other equipment that will not be contained is removed, replace any walls/corners that were removed in step 6.



11. Place clips (two per wall / one per corner) over liner to secure it in place. (NOTE: The clips are designed to fit snugly and may require a fair amount of force to install. A rubber mallet can be helpful).



12. OPTIONAL: If desired, any excess liner material can be trimmed using a sharp utility knife.



13. Your installation/assembly is now complete. The Containment Wall System should be inspected periodically for any leaks or damage.



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.

- 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. CO2).....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	Chlorobenzene.....A
Aliphatic Hydrocarbons.....A	Barium Sulfide.....A	Chloroform.....C
Alkaline.....A	Battery Fluid, Acid.....B	Chloromethane.....C
Allyl Alcohol (96%).....A	Benzaldehyde.....A	Chlorosulfonic 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	Cyclohexanone.....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 Metaphosphate 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	Diglycolic 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

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.



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



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MATERIAL SPECIFICATIONS (LINER)

Material Specifications		
Properties	ASTM Test	Typical Roll Avg.
Appearance		Black & Black/Gray
Thickness, nominal	D 5994	30 mil
Weight		150 lbs/MSF
Asperity Height	D 7466	10 mil
Tensile Strength	D 6693	69 lb/in
Elongation at Film Break ¹	D 6693	350%
Tear Resistance ¹	D 1004	17 lbf
Puncture Resistance	D 4833	36 lbf
Impact Resistance	D 1709	<2520 grams
Volatile Loss	D 1203	<1%
Dimensional Stability	D 1204	<2%
Carbon Black (black layers only)	D 1603	>2.0%
Maximum Static Use Temperature		180°F
Minimum Static Use Temperature		-70°F

The Ultra-Containment Wall liner is a co-extruded textured linear low density polyethylene (LLDPE) geomembrane containing carbon black and ultraviolet inhibitors to ensure protection against harmful UV degradation.

The test values listed in this data sheet are representative of initial production runs. These values may be revised at anytime without notice as additional test data becomes available.

¹ Tests are an average of primary reinforcement directions.

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Ultra-Containment Wall Subgrade Standards

A base shall be prepared on the bottom and slopes of the area to be lined. This base shall be free of all sharp objects, roots, grass and vegetation. Rocks or stones greater than 1/2" should be removed. Unsuitable material found during the pre-installation inspection by the installer shall be removed prior to the installation of the liner.

The base (subgrade) material shall be native materials or materials obtained from a borrow source compacted to a minimum 95% compaction or an approved construction fabric of at least 100 mils thickness, weighing 8 oz. per square yard with a grab tensile strength of at least 275 lbs. per square inch and a Mullen burst strength of at least 450 pounds per square inch, which will provide a finished sub grade suitable for the flexible membrane lining.

Foreign materials, vegetation, protrusions, voids, cracks and other penetrating or raised sources shall be removed from the sloping areas as well as the base. Loose rocks, rubble and other foreign matter shall be collected and deposited in the appropriate site out of the area to be lined. The excavated and filled areas shall be trimmed to elevations and contours shown on the drawings and shall be smooth, uniform and free of all foreign matter, vegetation and sudden changes in grade.

A pre-installation inspection shall be called for and ALL interested parties, including governmental agencies, shall be present for this inspection. Any parties not participating in this inspection shall be construed as accepting the site preparation and will acknowledge this defacto acceptance in writing at the appropriate time.

FINAL SUBGRADE PREPARATION:

The subgrade shall be prepared immediately prior to the placing of the liner. The surface on which the liner is to be placed is to be **firm, clean, dry and smooth**. Anchor trench excavation and any structure seal preparation should be completed before the lining installation begins.

Minimum NRCS Pond Sealing standard subgrade requirement per 521 A Cushion.

A cushion layer shall be placed beneath the liner if the subgrade particles contain sharp angular stones that could damage the liner or particles greater than 3/8-inch for geo-membrane liners and 1/2-inch for GCL's. The cushion may be a 10-oz/sq yd or heavier non-woven geotextile or a layer at least 6 inches thick of soil meeting the particle size and shape requirements of the subgrade. Geotextile cushion material shall meet the requirements of GRI Test Method GT12(a). Follow the manufacturer's recommendations for any additional protective measures.