

# Polyethylene, Polypropylene & Liquiflex-POE™

## Specifications

### Temperature Range

LLDPE & Liquiflex:  
-40°F to +150°F  
PP:  
-100°F to +400°F

### Vacuum Rating

All: To 28" Hg.

### Diameter Tolerance

LLDPE: ±.004"  
Liquiflex & PP: ±.005"

### Hardness

LLDPE: 50 Shore D  
Liquiflex: 92A  
PP: 95R

### Tube Markings

LLDPE & Liquiflex:  
FW Specifications  
PP: None

### Working Pressure

LLDPE & Liquiflex:  
3:1 Safety Factor  
PP: 4:1 Safety Factor

### Resin Compliance

LLDPE: FDA, NSF51  
Liquiflex & PP: FDA

## Linear Low Density Polyethylene – LLDPE

LLDPE's greatest advantage over low density polyethylene is its superior environmental stress crack resistance (ESCR). Environmental stresses that can shorten the service life of tubing include: chemical exposure, aging, ultraviolet light, connection to barb-type fittings, or high vibration connections with compression fittings. All colors comply with FDA regulation 21 CFR 177.1520(c) for food contact applications. Freelin-Wade has chosen to standardize on linear low density polyethylene and no longer offers low density polyethylene.

## Features

- Greater tensile strength
- High burst pressure
- Superior stress and crack resistance
- Tasteless and odorless
- Puncture resistance
- Impermeable to gasses and moisture
- Superior dielectric properties
- Lightweight

\* Due to LLDPE manufacturing restrictions, color variations require a 3,000 foot minimum.

## Polypropylene

Defies staining, holds out moisture & resists stress cracking. Our stock color is bright white but we can match virtually any color as a variation. When colored, the polypropylene holds its color extremely well in all kinds of environments, including under UV light sources, like bright sunlight. Our polypropylene plastic tubing is both extremely strong and lightweight. The tubing is available coiled, cut to length and in your requested packaging.

## Liquiflex-POE™

Similar to LLDPE with:

- Greater flexibility
- Outstanding fluid handling
- Makes an excellent coil
- Can be bonded

Freelin-Wade has developed a new polyolefin tube that is more flexible than the polyethylene that you've seen before. It has all of the chemical resistant properties of LLDPE and is an excellent choice for conveying liquids. Note that it has low pressure ratings, particularly in warm environments.



## Liquiflex-POE™

Part Number & Color Code	Packaging Unit Size	OD	ID	Wall	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						75°F/25°C	150°F/65°C			
1J-961-___	100' Bag									
1C-961-___	500' Reel	1/4"	1/8"	.062"	01 05 07 10	125 PSI	75 PSI	1.52	.75"	B, PI, C
1A-961-___	1000' Reel									
1J-962-___	100' Bag									
1C-962-___	500' Reel	1/4"	.170"	.040"	01 05 07 10	80 PSI	20 PSI	1.08	1.375"	B, PI, C
1A-962-___	1000' Reel									
1J-963-___	100' Bag									
1A-963-___	500' Reel	3/8"	.245"	.062"	01 05 07 10	75 PSI	35 PSI	2.56	1.5"	B, PI, C
1J-964-___	50' Bag									
1A-964-___	250' Reel	1/2"	3/8"	.062"	01 05 07 10	60 PSI	25 PSI	3.52	2.75"	B, PI, C

Variations Available:

Coiling • Colors • Cutting • Bonding • Printing • Packaging • Sizes

## Polypropylene

Part Number & Color Code	Packaging Unit Size	OD	ID	Wall	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						75°F/25°C	150°F/65°C			
1J-051- ___	100' Bag	1/4"	.170"	.040"	11	325 PSI	150 PSI	1.5	1.25"	PI, C
1A-051- ___	1000' Reel									
1J-052- ___	100' Bag	3/8"	1/4"	.063"	11	350 PSI	135 PSI	3.0	1.75"	PI, C
1A-052- ___	1000' Reel									
1J-053- ___	100' Bag	1/2"	3/8"	.063"	11	250 PSI	125 PSI	4.0	3.25"	PI, C
1A-053- ___	1000' Reel									

Variations Available:

Coiling • Colors • Cutting • Packaging • Jacketing

## Polyethylene (Linear Low Density: LLDPE)

Part Number & Color Code	Packaging Unit Size	OD	ID	Wall	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						75°F/25°C	150°F/65°C			
1J-109- ___	100' Bag	1/8"	.062"	.031"	01 04 05 06 07 08 09 10	305 PSI	120 PSI	.40	1/2"	PI, C
1L-109- ___	250' Box									
1C-109- ___	500' Reel									
1B-109- ___	1000' Reel									
1A-109- ___	2500' Reel									
1J-189- ___	100' Bag	5/32"	.106"	.025"	01 05 06 07 08 10	175 PSI	70 PSI	.46	1"	PI, C
1L-189- ___	250' Box									
1C-189- ___	500' Reel									
1B-189- ___	1000' Reel									
1A-189- ___	2500' Reel									
1J-048- ___	100' Bag	1/4"	.170"	.040"	01 04 05 06 07 08 09 10 12	200 PSI	80 PSI	1.2	1-1/4"	PI, C
1B-048- ___	500' Reel									
1A-048- ___	1000' Reel									
1J-077- ___	100' Bag	5/16"	.187"	.062"	01 05 06 07 08 10	230 PSI	90 PSI	2.5	1-1/2"	PI, C
1A-077- ___	500' Reel									
1J-074- ___	100' Bag	3/8"	.250"	.062"	01 04 05 06 07 08 09 10	190 PSI	75 PSI	2.76	2"	PI, C
1A-074- ___	500' Reel									
1J-076- ___	100' Bag	1/2"	.375"	.062"	01 05 06 07 08 09 10	135 PSI	55 PSI	3.87	2-1/2"	PI, C
1A-076- ___	250' Reel									
1AA-076- ___	500' Reel									
1A-086- ___	100' Reel	5/8"	.500"	.062"	01 10	100 PSI	40 PSI	5	3"	PI, C
1AA-086- ___	300' Reel									

### Metric Sizes

Part Number & Color Code	Packaging Unit Size	OD mm	ID mm	Wall mm	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						75°F/25°C	150°F/65°C			
1J-189- ___	100' Bag	4	2.7	.65	01 05 06 07 08 10	175 PSI	70 PSI	.46	25.2 mm	PI, C
1L-189- ___	250' Box									
1C-189- ___	500' Reel									
1B-189- ___	1000' Reel									
1A-189- ___	2500' Reel									
1J-071- ___	100' Bag	6	4	1	01 07 10	175 PSI	70 PSI	1.1	31.8 mm	PI, C
1B-071- ___	500' Reel									
1A-071- ___	1000' Reel									
1J-072- ___	100' Bag	8	6	1	01 05 07 10	140 PSI	55 PSI	1.5	38 mm	PI, C
1A-072- ___	500' Reel									
1J-073- ___	100' Bag	10	8	1	01 07 10	115 PSI	45 PSI	2.1	51 mm	PI, C
1A-073- ___	500' Reel									
1J-075- ___	100' Bag	12	9	1.5	01 07 10	135 PSI	55 PSI	3.44	63 mm	PI, C
1A-075- ___	250' Reel									
1AA-075- ___	500' Reel									

Variations Available:

Colors • Cutting • Printing • Packaging • Sizes