



**POLLINO**  
**PLAST**



**IRRIGATION SYSTEMS  
AND MULCH FILMS**



# POLLINO PLAST



The company for the production of plastic products Pollino Plast d.o.o. is located in Simanovci, Serbia, next to the Belgrade - Zagreb highway, 30 km from Belgrade.

The factory is located in the industrial zone and is easily accessible by transportation from the highway and airport.

The production program, intended primarily for agriculture, consists of: box pallets for transport and storage of fruits and vegetables, one-way crates for fruit and vegetables, specialized reusable crates, mulch film, thermo-shrink film, silage film, solarization film, construction foil, drip irrigation pipes, drip irrigation tapes. In addition, the production program includes light non-returnable pallets for transport and storage of goods on the floor with a load capacity of up to 700 kg.

The company has promoted the quality policy of IMS (Integrated Management System), introduced and applied the Quality Management System, Environmental Management System and an Occupational Health and Safety Management System which satisfies the requirements of ISO 9001: 2015 (QMS), ISO 14001: 2015 (EMS) and ISO 45001: 2018 (OHSAS).

The company was founded in 2012. There are currently 45 people employed by Pollino Plast d.o.o. Simanovci.





Rising temperatures and increasing droughts pose a challenge to world agriculture, which requires more and more water. Water is becoming an increasingly deficient resource, so responsible use of water is crucial.

By investing in already existing irrigation systems, but also by building new ones, we could have a better proceeds, increase the production of first-class agricultural crops that are export-oriented, but also the possibility of two harvests during the year.

Drip irrigation can help producers to use 35-65% less water compared to traditional methods. The solution is particularly useful in flat and arid regions where water conservation is of utmost importance.

Depending on how well designed, installed, maintained and operated, a drip irrigation system can be more efficient than other types of irrigation systems, such as surface irrigation or sprinkler irrigation.

Pollino Plast is a company that wants to create perfect conditions for farmers to increase yields, improve the quality of the crops themselves, and save precious water resources. We work to ensure that every drop is used wisely, reducing wastage to a minimum. Solve the problem of increasingly challenging climates with our precision irrigation.



# POLLY ROUND PIPE

**Polly pipes** are pipes with cylindrical drippers for flat terrain and for slopes. The pipes are used for various agricultural crops, they have drippers with double perforation which improves the irrigation itself. The four emission holes located in the opposite position work according to the principle of even irrigation of plant roots "drop by drop", maintain soil moisture, prevent the introduction of impurities, are easy to lay and efficiently irrigate the plant with a smaller amount of water. Pressure Compensating PC pipes are used for irrigation and feeding of orchards with a slope greater than 3%. The self-compensating PC dripper has 2 openings and a sensitive membrane that regulates and maintains a uniform emission at variable inputs pressures. The specific design of the dripper ensures high safety in preventing deposition and clogging, is resistant to chemicals and fertilizers used in agriculture.

## DESCRIPTION

- The double perforation of the dripper allows constant flow due to greater filtration.
- Pipes are resistant to UV radiation, robust and durable.
- Dripper with four emission openings in the opposite position prevent the introduction of impurities, prevent the formation of sediments inside the labyrinth.
- Drippers placed in this way allow for easy laying.
- High resistance to chemicals and fertilizers.
- The dripper inlet filter reduces the risk of clogging caused by the use of hard water.
- The dripper flow points allow quick and easy installation without the need to check the position of the flow points and ensure a complete emptying of the hose at the end of the irrigation cycle.
- Pressure compensation of the dripper is made possible by a silicone membrane, which maintains a constant flow rate when the working pressure varies.
- Suitable for irrigation of multi-seasonal crops, for flat terrains and terrains with slopes and irregular topography.

## TECHNICAL DETAILS

- Dripper type: integral, round with double perforation, PC dripper
- Dripper distance in cm: 20cm, 25cm, 30cm, 33cm, 40cm and 50cm
- Wall thickness in mm: 0.9mm, 1mm, and 1.1mm
- Dripper flow rates in lph: Ø16mm - 2l and 4l. Ø20 - 2l and 4l
- Pipe diameters in mm: Ø16 and Ø20
- Reel length: Ø16 - 400m; 300m; 200m Ø20 - 300m; 200m

## FIELD OF APPLICATION

- Number of seasons: perennial
- Topography: flat and terrains with a gradient greater than 3%.
- Land types: all
- Installation: on the surface
- Examples of pipe use:
  - \* For the production of fruit and vegetable crops
  - \* With irrigation systems outdoors as well as in greenhouses
  - \* Row crops
  - \* For growing flowers
  - \* Vineyards
  - \* Nurseries
  - \* Olive groves





#### Pressure - flow rate ratio

Nominal diameter	Actual Flow rate	Pressure (bar)				
		1	1,5	2	2,5	3
mm	lph a1 bar					
16	1,00	1,00	1,20	1,39	1,59	1,68
	2,00	2,00	2,40	2,80	3,20	3,50
	4,00	4,00	4,85	5,60	6,20	6,75
20	2,00	2,00	2,55	3,05	3,45	3,75
	3,30	3,30	3,63	3,90	4,20	4,45



Integral dripper with double perforation



Pressure Compensating PC dripper

#### Lengths recommended in metres, based on E.U.

16 mm					
Flow (lph)	E.U. (%)	Spaces (cm)			
	lph a1 bar	20	25	30	50
1,00	90	58	68	79	114
	85	70	77	95	139
2,00	90	52	62	73	108
	85	64	71	89	133
4,00	90	33	39	48	69
	85	40	47	58	86

#### Lengths recommended in metres, based on E.U.

20 mm					
Flow lph	E.U. (%)	Spaces (cm)			
	lph a1 bar	20	25	30	50
2,00	90	81	94	111	164
	85	100	116	138	202
3,30	90	66	77	90	131
	85	81	93	110	160



# AQUA STAR

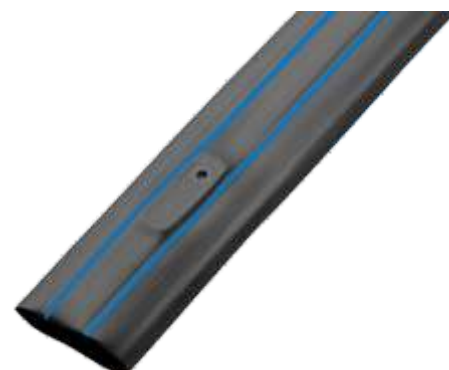
**Aqua Star** is a drip tape that has built in self-cleaning emitters that prevent particles from accumulating inside the drip maze even at the lowest operating pressures. It is made of polyethylene, which guarantees resistance to stretching and the best performance in terms of mechanical strength.

## DESCRIPTION

- A high-quality dripper with a self-cleaning effect ensures an even flow along the entire length of the strip.
- Integrated filter avoids blockages.
- Drip tapes are resistant to UV radiation.
- The special positioning of the filter facing the center of the tape allows the water to enter the labyrinth away from the point of stagnation.
- Suitable for a wide range of crops and soils thanks to the wide flow range, wall thickness and high resistance to the tensioning process.
- A drip irrigation system occupies a smaller area than water channels or sprinklers in the field, providing a larger area for cultivation.
- Drip tapes ensure a homogeneous distribution of fertilizers that are delivered to the root zones of the plants, so the costs of water, fertilizers and labor are significantly lower.

## TECHNICAL DETAILS

- Dripper type: integral, flat/nano
- Dripper spacing in cm: 10cm, 20cm, and 30cm
- Wall thickness: 6mil, 8mil
- Dripper flow rates in lph: 1l, 2l
- Pipe diameters in mm: Ø16, Ø20
- Reel length: 500m, 1000m, 2500m



## FIELD OF APPLICATION

- Number of seasons: 1 year (6mil); 2 years (8mil)
- Topography: flat
- Land types: all
- Placement: On the surface

Examples of pipe use:

- With outdoor irrigation systems
- In greenhouses and greenhouses
- Nurseries
- Vegetables







#### Flow per meter according to pressure

Actual Flow rate (lph)	Pressure (bar)					
	0,5	0,7	1	1,2	1,5	2,0
α 1,0 bar/14,5 psi						
1,00	0,70	0,82	1,00	1,12	1,28	1,43
2,00	1,35	1,65	2,00	2,20	2,50	2,9



#### Recommended lengths in relation to dripper spacing.

16 mm				
Q lph	E.U. (%)	Spaces (cm)		
	lph α 1 bar	10	20	30
1,00	90	95	135	176
	85	115	173	224
2,00	90	60	92	119
	85	85	119	150



# POLLY AQUA TAPE

**POLLY AQUA** tape is a continuous maze with droplets ideal for small distances between vegetable crops in the open field. Therefore, the reduced distance between the drop points and the low flow rate guarantee excellent performance even on very demanding ground.

## DESCRIPTION

- The drip is made by mechanical averaging to reduce the intrusion of mechanical impurities.
- Excellent pressure resistance and minimum thickness.
- Excellent resistance to tightening process.
- Specific labyrinth design allows for long lengths to obtain maximum flow uniformity.
- Excellent irrigation performance even in the early development cycles.
- The double-sided blue marker determines the right side of the output droplets when placing.

## TECHNICAL DETAILS

- Impeccable integrated labyrinth
- Dripper spacing in cm: 10cm, 15cm, 20cm, and 30cm
- Wall thickness: 6mil, 8mil
- Dripper flow rates in lph/m: 0.6, 0.9 and 1.2
- Pipe diameters in mm: Ø16
- Reel length: 500m, 1000m, 3000m
- Recommended working pressure: 0,7 - 1 bar

## FIELD OF APPLICATION

- Number of seasons: 1 year (6mil), 2 years (8mil)
- Topography: flat
- Land types: all
- Placement: On the surface
- With outdoor irrigation systems
- In greenhouses
- Nurseries
- Vegetables
- Planting berry fruits
- Growing flowers
- Row crops







Flow rate in lph/metre, according to spacing and working pressure

Flow rate lph	Pressure in bar	Spacing (cm)			
		10	20	30	40
0,60	0,55	5,4	2,70	1,80	1,40
	0,70	6,00	3,00	2,00	1,50
0,90	0,55	8,00	4,00	2,70	2,00
	0,70	9,00	4,50	3,00	2,30
1,20	0,55	10,70	5,30	3,50	2,70
	0,70	12,00	6,00	4,00	3,00

Lengths recommended in meters, based on E.U.

16 mm						
Flow rate lph	S%	E.U. (%)	Spacing (cm)			
			10	20	30	40
0,60	0	90	114	178	230	277
	0	85	141	220	285	343
0,90	0	90	91	142	181	221
	0	85	113	176	224	274
1,20	0	90	75	117	153	185
	0	85	91	144	189	229

22 mm						
Flow rate lph	S%	E.U. (%)	Spacing (cm)			
			10	20	30	40
0,60	0	90	200	312	404	484
	0	85	247	386	500	600
0,90	0	90	160	249	316	388
	0	85	199	309	391	480
1,20	0	90	131	208	268	324
	0	85	162	257	332	400



# MULCH FILMS

For land covering



For watermelon



For strawberry



Black



Black/White



Black / Silver



Lavanda paulo



For salads



For low tunnels



For Silage



Themo-shink film



Hobby program





**Mulch film** for covering the soil is a protective cover above the ground primarily serves to change the effect of the local climate, and create a suitable micro climate for plants.

When the vegetation cycle is over, **Pollino Plast plastic mulch film** is easily and completely removed because it is **UV stabilized**.

Plastic mulch has become the main technology in growing vegetables and berries. It is a multipurpose use and has been shown to pay off in high value crops. The producer can choose from several types of mulch to achieve different goals based on his needs.

#### **ADVANTAGES OF MULCH FILMS**

1. **EARLIER HARVEST AND VEGETATION EXTENSION**  
faster warming of the soil at the beginning of vegetation
2. **MORE RATIONAL USE OF WATER**  
maintains soil moisture longer
3. **REDUCES SOIL WASHING AND EROSION**  
nutrients-reduces their losses and slows down soil erosion
4. **LAND-IMPACT ON STRUCTURE**  
under the mulch it is more loose and airy
5. **ROOT DEVELOPMENT**  
promote the development and absorption of nutrients from the soil
6. **QUALITY FRUITS (fruit, leaf, flower)**  
prevents contact of fruits and leaves with the ground
7. **WEED CONTROL**  
by controlling the passage of light, affects photosynthesis
8. **HEAT AND COLD INSULATOR**  
helps prevent rapid soil freezing, during the summer it reduces soil heating.
9. **REDUCING THE NUMBER OF INSECTS AND WORM**  
the color of foil repels insects and reduces viruses. White and silver film reflect light.
10. **MULCH FILM COLORS**  
React differently with the light spectrum and have an effect on crops (temperature soil, favorable impact on crop yield, etc.)





## FILM FOR STRAWBERRY - BLACK

If you want to plant strawberries on larger areas, it is recommended to cultivate them in the field, to plant them in simple rows and to install mulch film.

Plastic films are used to increase the heat of the soil, preserve moisture, and prevent the development of weeds. Also, it is good to mention that the evaporation of water from the soil is reduced, the use of herbicides is eliminated, which makes production cheaper, and harvesting is faster and easier.

**Pollino Plast** black mulch film for strawberries stands out for its durability, resistance, and stretchability. it is the best in adhering to the soil surface, does not leave air pockets, warms the soil quickly in winter with minimal solar radiation.

### TECHNICAL CHARACTERISTICS OF MATERIALS

- Type of mulch film: Three-layer
- Type of material: LLDPE (Linear Low Density Polyethylene)
- Elongation at break (%): MD 260 TD 480
- Dart drop (g): 168

### METHOD OF TRANSPORTATION

- The rolls are packed in foil to protect the edges from possible damage during manipulation, then they are placed on the pallet. After packing on pallets, the same is packed with stretch film and the edges of the rolls and the top of the pallet are additionally protected.

### PURPOSE

- The primary purpose is the production of strawberries.



Film color and thickness	Film width	Lifetime	Perforation	Hole size	Arrangement of holes	Packing lenght	Additives
* Black * from 25 µm to 40 µm	*1000 mm (±1%) *1200 mm (±1%) Standard	*1 season (25 µm ±5% µm )  *2 season 30 µm (±5%) and 40 µm (±5%)	* 1 line for single row  * 2 lines for double row	* ø50 mm  * ø80 mm	* 18 cm * 20cm * 30 cm single row  * 30x30 * 30x40 double row	* 50 m (± 1%) small package  * 500 m (±1%) on roll  * 1000 m (±1%) on roll	* UV STABILIZER we obtain the film's resistance to UV radiation  * MASTERBAC we get a certain shade of foil according to the customer's request



## FILM FOR STRAWBERRY - SILVER/BLACK

Through research, our company focuses on sales of the reflective (silver/black) mulch which utilizes the entire light spectrum, there by boosting the available amount of light and heat to plants, resulting in higher strawberry yields.

In addition to its good conductivity properties, this film reflects light and repels insects, which protects plants from viruses.

### TECHNICAL CHARACTERISTICS

- Type of mulch film: Three-layer
- Type of material: LLDPE (Linear Low Density Polyethylene)
- Elongation at break (%): MD 260 TD 480
- Dart drop (g): 168

### METHOD OF TRANSPORTATION

- The rolls are packed in foil to protect the edges from possible damage during manipulation, then they are placed on the pallet. After packing on pallets, the same is packed with stretch film and the edges of the rolls and the top of the pallet are additionally protected.

### PURPOSE

- The primary purpose is the production of strawberries, using silver/black foil provides a greater reflection of light, which enables a higher yield.

Film color and thickness	Film width	Lifetime	Perforation	Hole size	Arrangement of holes	Packing lenght	Additives
* Silver/Black  * from 25 µm to 40 µm	* 1000 mm (±1%) Standard	* 1 season (25( ±5% µm)  * 2 season 30 µm (±5%), 40 µm (±5%)	* 1 line for single row  * 2 lines for double row	* ø50 mm  * ø80 mm	* 18 cm * 20 cm * 30 cm single row foil	* 500 m (±1%) on roll  * 1000 m (±1%) on roll	* UV STABILIZER we obtain the film's resistance to UV radiation  * MASTERBAC we get a certain shade of foil according to the customer's request



## FILM FOR LAND COVERING

Mulching is an effective way of insulating and protecting the delicate root system of plants from harsh weather conditions. It acts as a barrier that improves the nutrient profile of the soil. Mulching also reduces erosion while increasing the soil's ability to retain more moisture. Plastic film for mulch serves to suppress the growth of weeds, warm the soil, protect against leaching of fertilizers, accelerate germination, prevent the occurrence of diseases, increase the effectiveness of fumigation and protect crops from direct contact with the soil. As a more important characteristic, we highlight the **INCREASE AND HIGHER QUALITY OF YIELD**. By changing the plastic mulch film color, barrier properties, thickness and other characteristics, different benefits can be achieved.

### TECHNICAL CHARACTERISTICS

- Type of mulch film: Three-layer
- Type of material: LLDPE (Linear Low Density Polyethylene)
- Elongation at break (%): MD 260 TD 480
- Dart drop (g): 128

### METHOD OF TRANSPORTATION

- The rolls are packed in foil to protect the edges from possible damage during manipulation, then they are placed on the pallet. After packing on pallets, the same is packed with stretch film and the edges of the rolls and the top of the pallet are additionally protected.

### PURPOSE

- Production of vegetables, melons, tomatoes, cucumbers, peppers, zucchini.



Film color and thickness	Film width	Lifetime	Perforation	Hole size	Weight	Packing lenght	Additives
* Black film * Fume film * Silver/Black * 15 $\mu\text{m}$ ( $\pm 5\%$ ) * 20 $\mu\text{m}$ ( $\pm 5\%$ )  * Black/white * 22 $\mu\text{m}$ ( $\pm 5\%$ )	* 800 mm ( $\pm 1\%$ ) * 1000 mm ( $\pm 1\%$ ) * 1200 mm ( $\pm 1\%$ ) Standard	* 1 season 15 $\mu\text{m}$ ( $\pm 5\%$ )  * 1 year 20 $\mu\text{m}$ ( $\pm 5\%$ )	* at the customer's request	* $\varnothing 50$ mm  * $\varnothing 80$ mm	* 20 kg-60 kg for professional producers	* 50 m ( $\pm 1\%$ ) small package * 500 m ( $\pm 1\%$ ) on roll * 1000 m ( $\pm 1\%$ ) on roll * rolls over 3000m	* UV STABILIZER we obtain the film's resistance to UV radiation  * MASTERBAC we get a certain shade of foil according to the customer's request





## GREEN SALAD MULCH FILM

**Pollino Plast** produces foils intended for the production of lettuce in greenhouses, as well as in the open field. With its perforations and its agronomic advantages, it homogenizes and increases the yield. Mulch foils prevent evaporation and ensure optimal soil moisture, which leads to more efficient use of available water. The foil prevents the growth of weeds and protects the plant from contact with the soil, which protects it from dirt and moisture. This drastically reduces the rotting process, and a dry environment is preventively associated with diseases and pests, especially for crops lying on the ground. **Perforation on the mulch film** makes planting easier and reduces the amount of work for producers, makes maximum use of the planting area, and the end result is a uniform head of lettuce.

### TECHNICAL CHARACTERISTICS

- Type of mulch film: Three-layer
- Type of material: LLDPE (Linear Low Density Polyethylene)
- Elongation at break (%): MD 260TD 480
- Dart drop (g): 128

### METHOD OF TRANSPORTATION

- Rolls and packages are wrapped in foil to protect the edges from possible damage during manipulation, then placed on a pallet. After packing on pallets, the same is packed with stretch film and the edges of the rolls and the top of the pallet are additionally protected.

### PURPOSE

- Production of green salad.

Film color and thickness	Film width	Lifetime	Arrangement of holes	Hole size	Number of holes	Packing length	Additives
* Black Film * 20 µm (±5%)	* 2000 mm (± 1%) * 2500 mm (± 1%) * 3000 mm (± 1%) Standard  * 1200 mm (± 1%) at the customer's request	* 1 year (20 ±5%)	* 25x25 standard  * 20x25 * 30x30 at the customer's request	* ø50 mm	* 8-10 holes	* 50 m (± 1%) small packages  * 300 m (± 1%) on roll  * 500 m (± 1%) on roll	* UV STABILIZER we obtain the film's resistance to UV radiation  * MASTERBAC we get a certain shade of foil according to the customer's request



## LOW-TUNNEL FILM

Films for low tunnels are transparent and stabilized against UV radiation, they are very elastic, so they do not crack or get damaged until the end of the growing season, so they can be easily and completely removed from the plot. Given earlier arrival, higher yield, better quality and marketability and certainly higher selling price, this cultivation system ensures a significant reduction of risk and a much higher profit. Low tunnels are installed mechanically or manually, by wrapping the side edges of the foil. Field experience has shown that many plants are suitable for successful production in tunnels. Some of the most commonly cultivated are: watermelons, melons, strawberries, zucchini, cucumbers, cherries, but also common tomatoes and beans.

### TECHNICAL CHARACTERISTICS

- Type of mulch film: Three-layer
- Type of material: LLDPE (Linear Low Density Polyethylene)
- Elongation at break (%): MD 260 TD 480
- Dart drop (g): 128

### METHOD OF TRANSPORTATION

- The rolls are packed in foil to protect the edges from possible damage during handling, then they are placed on the pallet. After packing on pallets, they are packed with stretch film and the edges of the rolls and the top of the pallet are additionally protected.

### THE PURPOSE

- Production of watermelons, melons, strawberries, tomatoes, cucumbers, peppers, lettuce, etc.
- It is ideal for growing ornamental plants and preparing seedlings.



Film color and thickness	Film width	Weight	Lifetime	Goals	Additives
* Transparent film * 15 µm (± 5%)	* 800 mm (±1%) * 1000 mm (±1%) * 1200 mm (±1%) * 1400 mm (±1%)	* 30 - 60 kg for professional producers	* 1 season	* A low foil tunnel is particularly useful to speed up the yield of some vegetables and protect young plants from frost  * Tunnels also provides protection against pests	* UV STABILIZER we obtain the film's resistance to UV radiation  * MASTERBAC we get a certain shade of foil according to the customer's request



## HOBBY PROGRAM

Pollino Plast has launched a hobby program of mulch film and irrigation tapes for gardens and small producers. We pack irrigation tapes in **100m** and **500m**. We pack mulch films in **50m** and **10m** lengths. The differences in foil are in width, thickness and perforation and lengths. Standard mulch film ( for pepper, tomato, cucumber, melon, zucchini) of **20** microns has width differences of **0,8m, 1m** and **1.2m**.

Strawberry foil:

- **1m** width **30** microns single row, hole perforation **20cm**
- **1.2m** wide double row **30** micron thick, perforation **30x30**

Foil for green salad:

- **2m** wide, **20** microns thick, perforation **25x25**
- **2.5m** wide, **20** microns thick, perforation **25x25**
- **3m** wide, **20** microns thick, perforation **25x25**

All features are subject to change at the customer's request.

Mulch film for vegetables	Mulch film for lettuce	Mulch film for strawberries	Labyrinth irrigation tape
<b>Width:</b> 800mm(±1%) 1000mm(±1%) 1200mm(±1%)	<b>Width:</b> 2000mm(±1%) 2500mm(±1%) 3000mm(±1%)	<b>Width:</b> 1000mm(±11%) Single row 1200mm(±11%) Double row	<b>Dripper spacing:</b> 10cm
<b>Thickness:</b> 20µm(±5%)	<b>Thickness:</b> 20µm(±5%)	<b>Thickness:</b> 30µm(±5%)	<b>Wall thickness:</b> 6mil
<b>Color:</b> Black	<b>Color:</b> Black	<b>Color:</b> Black	<b>Dripper flow rate in lph/m:</b> 0,9
<b>Lifetime:</b> 1 year	<b>Lifetime:</b> 1 year	<b>Lifetime:</b> 2 year	<b>Diameter in mm:</b> Ø16
<b>Packaging:</b> 50m	<b>Hole arrangement:</b> 25cmx25cm	<b>Hole arrangement:</b> 20 cm Single row 30cmx30cm Double row	<b>Reel length:</b> 100m
	<b>Hole diameter :</b> Ø50mm	<b>Hole diameter :</b> Ø50mm	<b>Recommended working pressure:</b> 0,7-1 bar
<b>Width:</b> 1200mm(±1%) <b>Packaging:</b> 10m	<b>Packaging:</b> 50m	<b>Packaging:</b> 50m	
		<b>Width:</b> 1200mm(±1%) <b>Packaging:</b> 10m	







## SOLARIZATION FILM

Solarization is a natural method for soil disinfection and pest control without the use of chemical preparations, with the use of water as a heat conductor.

Solarization involves covering the soil with a transparent polyethylene film for four to six weeks during the hottest period of the year, that is, when the soil receives direct solar energy. The foil allows the sun's radiation to be trapped in the ground, heating the top 60 cm of soil to a temperature that is lethal to a wide range of underground pests, including weeds, plant pathogens, nematodes and insects.

When solarization is done correctly, the topsoil is heated up to 60 degrees, depending on the outside temperature. In this process, it is important that the soil is moist, because moisture conducts heat much better than dry soil.

INSTALLATION OF THE FOIL can be done by completely covering the plot that you want to solarize or by forming smaller covering areas of the treated land. When installing over the entire plot, it is important that the film is not punctured anywhere, and that the edges of the film are completely covered with earth so that the heat does not escape through any openings.

### TECHNICAL CHARACTERISTICS

- Type of film: Three-layer
- Type of material: LDPE  
(Low Density Polyethylene)
- Shrinkage on heating (%): MD 25 TD 35
- Dart drop (g): 80

### THE PURPOSE

- to improve soil quality.



Film color and thickness	Film width	Packaging	Lifetime	Properties of used polymers	Benefits of Soil Solarization
* Transparent * 30 $\mu\text{m}$ ( $\pm 9\%$ )	* 4 m ( $\pm 1\%$ ) * 5 m ( $\pm 1\%$ ) * 6 m ( $\pm 1\%$ )	* Weight of rolls (kg): 50 - 150	* 1 season	* Flow index (g/10 min) ISO 1133 : 3.0  * Density (g/cm <sup>3</sup> ): 0.918	* Disease control * Weed control * Nematode control * Increased plant growth response



## THERMO SHRINK FILM

Thermo-shrink film is made of low-density polyethylene. After exposure to temperatures, the film shrinks up to 35%, and adapts its shape to the product it wraps. Thermofoil is used for economic profitability, ease of use, does not leak water, is environmentally safe, can be recycled after use.

### TECHNICAL CHARACTERISTICS

- Type of foil: Three-layer
- Type of material: LDPE (Low Density Polyethylene)
- Material color: white (can be colored)

### PROPERTIES OF USED POLYMERS

- Flow index (g/10min) ISO 1133: 3.0
- Density (g/cm<sup>3</sup>): 0.95

### PROPERTIES OF THERMO-SHRINKABLE FILM

- Shrinkage on heating (%): MD 25 TD 35
- Dart drop (g): 80

### METHOD OF TRANSPORTATION

- The rolls are packed in foil, in order to protect the edges from possible damage during manipulation, then they are placed on the pallet. After the pallet is finished, it is packed with stretch film and the edges of the rolls and the top of the pallet are additionally protected.

### PURPOSE

- The primary purpose of thermal foil is the formation of packages in beer, juice, water bottling plants.

Material color	Film thickness	Film width	Packaging	Additives
* White (can be colored)	* 40 -150 µm (± 9%)	* 350mm - 1800mm (± 1%)	* Inner diameter of the sleeve (mm): 76	* UV STABILIZER: by adding a UV stabilizer, we get the film's resistance to UV radiation  * MASTERBAC: by adding a certain percentage of masterbac we get the desired shade of foil according to the customer's request



**POLLINO**  
**PLAST**

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