PLASTAR
SAN LUIS

Silobolsa® Premium

Description:

Polyethylene tube bending, made by three-layer coextrusion system composed of virgin raw materials from last generation polyethylene.
It has black on the inside (to prevent transmission of light) and white on the outside (to reflect sunlight and minimize the temperature inside).
It is a product with high resistance to weathering.

Uses

Storage and preservation of dry grain (wheat, corn, soybean, sunflower, sorghum, rice, etc..), Cotton seed, beans, etc., Where it generates a self-modified atmosphere (oxygen concentration decreases and carbon dioxide concentration increases).
It also allows store fodder, fertilizers, malt, bran, etc.

Advantages:

- A very low cost per ton of stored grain.
- Closer location of the storage (either on farm or close to supply & demand area).
- Very efficient handling (turn around time). Quick implementation of commercial sites (+/- 5 weeks to establish 50,000 tons depot).
- Low initial investment (vs. metal and concrete silos).
- More independence (no third party involvement).
- Traceability and classification of your grain regarding quality and commercial identity like cultivars and GMO free commodities.
- Quality preservation: moisture, grade and colour (no fumigation needed).
- Stock control (Stock is visible and can be estimated).
- Equipment is movable (Transportable machinery).
- Long-term storage solution (stores up to 24 months).
- Can be used in all climates: from the heat to the snow.

Administración y Ventas: Jufré 1907 (B1688HBO) Villa Tesei. Buenos Aires, Argentina | Tel.: (54-11) 4459-5577
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Key features:

- Grain bags are especially designed to store dry grains for long periods of time.
- It has stabilizing ultraviolet (UV) in the outer shell which gives excellent resistance to sun degradation.
- It contains elastomeric polymers, achieving a good flexibility that facilitates the positioning and manipulation of the bag.
- The inner layer has Carbon Black, giving black color which prevents the transmission of light inside the bag.
- Excellent mechanical properties, elasticity, very good puncture resistance and high resistance to tearing.
- High impermeability to moisture.
- Designed for shelf life of 24 months in a climate such as the Buenos Aires Area / La Plata whose average solar radiation of 130 Kcal/cm2/año (Kly).

Available products

CODE	DIAMETER (ft)	LENGHT (ft –mt)	STORAGE CAPACITY (tn)
CGS 520	5	200 - 60	55 / 60
CGS 620	6	200 - 60	90 / 100
CGS 6510	6,5	100 - 30	50 / 55
CGS 6515	6,5	150 - 45	75 / 85
CGS 6520	6,5	200 - 60	110 / 120
CGS 6525	6,5	250 - 75	140 / 150
CGS 815	8	150 - 45	120 / 130
CGS 820	8	200 - 60	160 / 170
CGS 825	8	250 - 75	200 / 210
CGD 920	9	200 - 60	190 / 200
CGD 925	9	250 - 75	240 / 250
CGD 1025	10	250 - 75	310 / 320
CGD 1020	10	200 - 60	240 / 250
CGS 920	9	200 - 60	190 / 200
CGS 925	9	250 - 75	240 / 250
CGS 930	9	300 - 90	295 / 305
CGS 1015	10	150 - 45	190 / 200
CGS 1020	10	200 - 60	240 / 250
CGS 1025	10	250 - 75	310 / 320
CGS 1030	10	300 - 90	380 / 390
CGS 1033	10	330 - 100	420 / 425

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Packaging:

Individual packaging in corrugated cardboard box protected by polyethylene shrink and palletizing in different presentations according to the size of the SILOBOLSA ®.
Each box contains a SILOBOLSA, rolls of tape to patch, instructions in multiple languages, security in many languages, stretching rule printed on the box.

Mechanical Properties - Quality of Silobolsa ® film

The process of compaction that occurs during ensiling and storage in a Silobolsa ® requires that the polyethylene film, a material that is resistant to forces of compression and tension generated during this process; therefore mechanical properties such as strength and elongation at break, dart impact and tear resistance have great importance in the performance of the Silobolsa ®.

The technical values Silobolsa ® film are considerably higher compared to the specific requirements and were designed to provide effective protection and storage of silage for two years.

The table below (Mechanical Properties) shows all the individual parameters, one should consider that properties such as dart impact and puncture resistance alone does not account for the unique attributes of quality of the films of the silo, but they play an important role in the assessing the quality of the tube.
The friction coefficient is also of great importance, if it is too high, the folds of the film may slip quickly and if the value is too low, the folds will not easily be separated.

UV stabilizing the film against the destructive effects of sunlight is an important feature to consider in the product, the additives of SILOBOLSA ® provides exposure to the weather in central Argentina for 24 months (and a minimum of 18 months), it is important to consider that solar radiation depends on the geographic region.
If the UV additive is deficient, premature failures can be generated as polyethylene may lose its original properties and could not resist the tensile and compressive forces generated during ensiling and storage.

Using chemicals to control rodents and weeds

If the film is exposed to elemental sulfur and / or certain types of chemicals there is a significant risk that the polyethylene film becomes brittle. The risk of rupture and tear is also higher, particularly when the bag is under tension (full capacity).

The gas permeability is another important property. When filling the SILOBOLSA ® the air inside moves and thus a large amount of oxygen, the residuary is consumed by the grain respiratory process, releasing carbon dioxide and a prompting self-modified atmosphere is generated.

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MECHANICAL PROPERTIES

Property	Method	CGD 920	CGS 920
Thickness (µm)	ASTM 374	212 +/- 5 %	235 +/- 5 %
Dart Impact, (g)	ASTM 1709	> 1000	>1100
Puncture (J/cc)	Internal Method	>4	>4
Elmendorf Tear, DM (g)	ASTM 1922	> 1500	> 1700
Elmendorf Tear, DT(g)	ASTM 1922	> 3200	>3500
Tensile Strength, (MPa) DM	ASTM 882	>24	>24
Tensile Strength,, (MPa) DT	ASTM 882	>24	>24
Elongation at Break, (%) DM	ASTM 882	>900	>900
Elongation at Break, (%) DT	ASTM 882	>1100	>1100
Yield Resistance, (MPa) DM	ASTM 882	12	11,9
Yield Resistance, (MPa) DT	ASTM 882	12	11.5
COF (static ext/ext) (no unit)	ASTM 1894	0,15 – 0,20	0,15 – 0,20

Units:
µm= micron
MPa= MegaPascal
J/cc= Joule/cm^3

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