

WHEN EXCELLENCE
MATTERS

rkw

The smart solution for better results in your greenhouse

POLYDRESS® LP-KEDER
AIR BUBBLE GREENHOUSE FILM



The ultimate greenhouse film

1

Easy installation

Light weight and unique profile locking allow very fast installation

3

High transparency

Approximately 83 % sunlight diffused by about 100 air bubbles per square foot

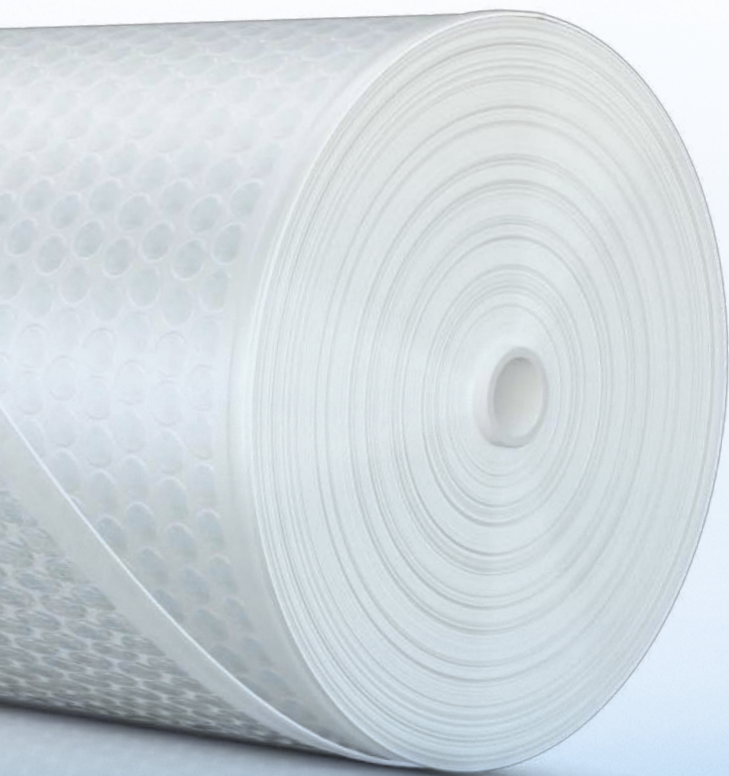
5

UV protection

5-year warranty against UV degradation

Its unique construction prevents any leaks or thermal bridges, so that up to 95 % of the heat radiation is retained. This saves you money. At the same time, the air cushion bubbles (1,000 bubbles per sq. m.) ensure a diffuse interior illumination. The result is an effective prevention of shading and burning from sunlight.

The air bubble greenhouse film Polydress® LP-Keder is a lightweight, tear-resistant material that is easy to cut with a knife and scissors. It simplifies your greenhouse construction and reduces the building time, allowing an installation in record time. Uniform illumination and a favorable microclimate promote plant growth.



2

Energy saving

The unique air bubbles design is engineered to insulate and diffuse sunlight

4

Extreme durability

Proven quality with over 30 years of design expertise and scientific testing

6

Recycling

A polyethylene film that is completely recyclable and is safe to incinerate

POLYDRESS® LP-KEDER

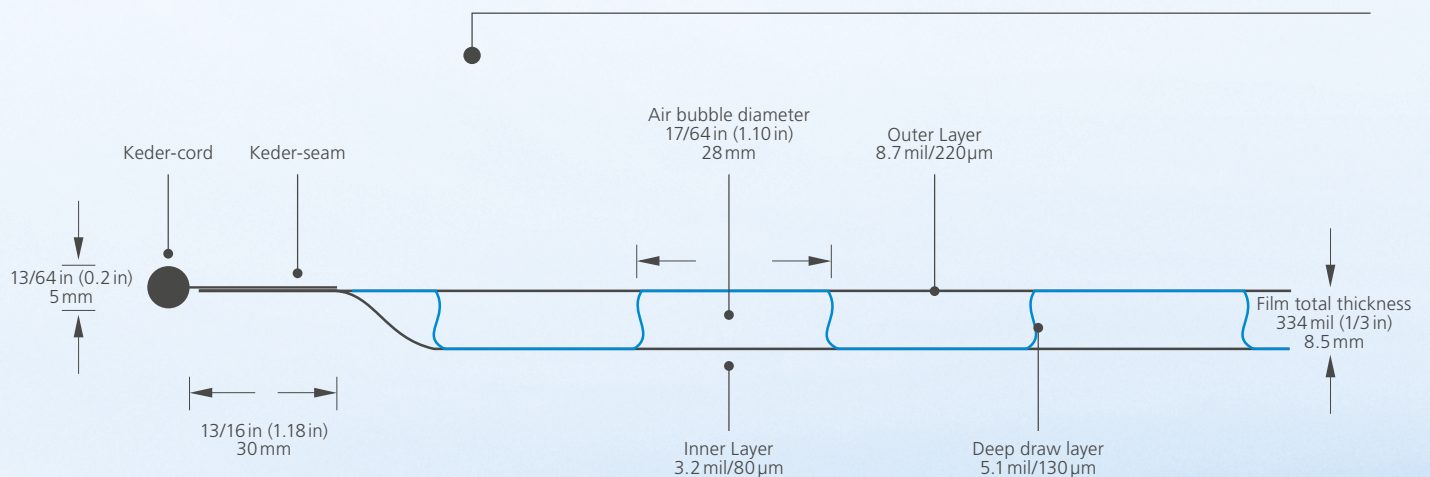
German engineering for better sunlight insulation and diffusion in the greenhouse

This is where success grows

Thanks to a good atmosphere

Polydress® LP-Keder is a flexible material that is easy to cut with a knife or scissors. Whether replacing your existing roofing material or building a new structure, the film's light weight allows for quick and easy installation. Polydress® LP-Keder is utilized in conjunction with the unique profile locking system that makes it easy to exchange older sections for new ones. Never again will you need to use another system or different roofing material.

Blueprint of LP-Keder with welded keder-cord



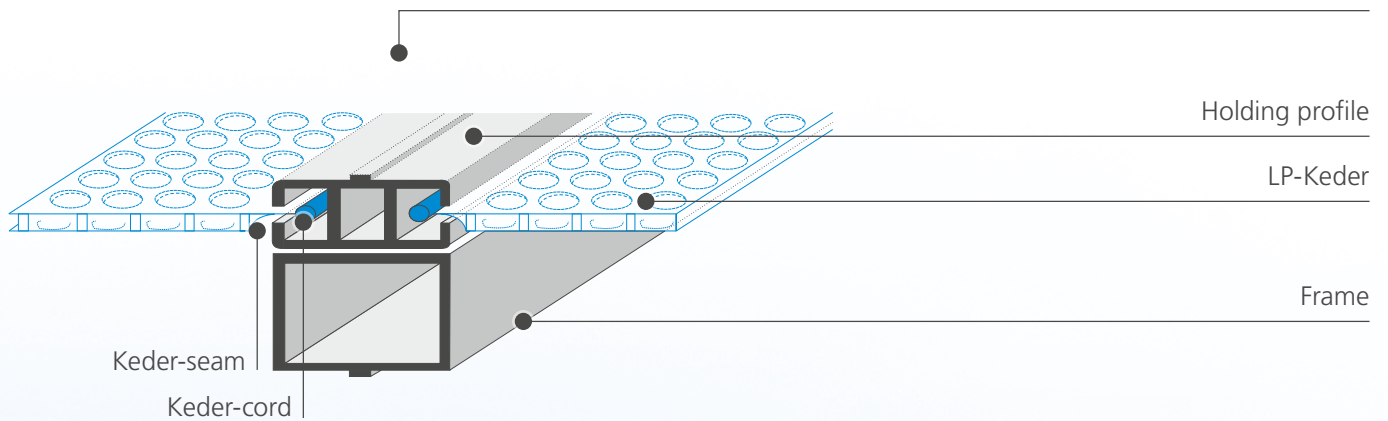
More than 30 years of proven innovation

Polydress® LP-Keder stands for strength and durability within the global greenhouse roofing industry. With over 30 years of design expertise and scientific testing – including tests conducted in the harshest natural climates and weather conditions – Polydress® LP-Keder has proven itself in hailstorms, snowstorms, hurricane-force winds, and severe heat and cold. Whatever the conditions of temperature, moisture type or barometric strain, this system is sure to stand up to them.

POLYDRESS® LP-KEDER

The perfect system for your greenhouse

Blueprint of the layout of LP-Keder and the plastic profile



Intelligent system for easy handling

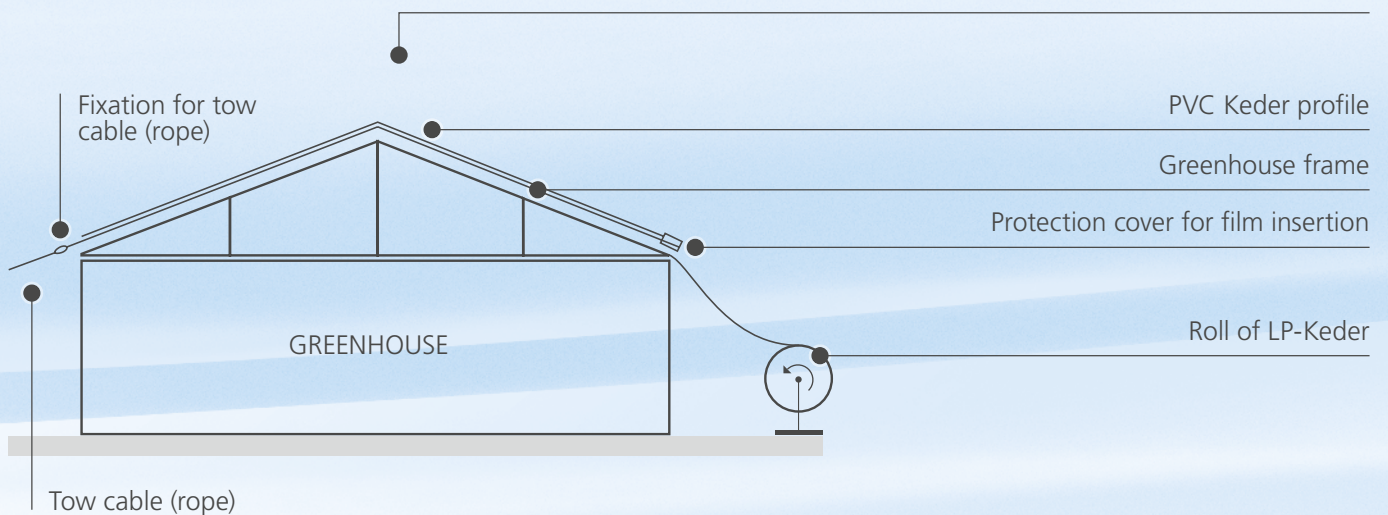
The air bubble greenhouse film is very easy to assemble due to the special features of the keder section and keder channel:

1. Unwind Polydress® LP-Keder from the film roll.
2. Feed the greenhouse film in strips into the unique greenhouse truss profiles.

3. Haul on the pull rope until the desired end point is reached.
4. Finally, simply cut the foil with a knife or scissors.

In case of damage, you can easily replace individual strips. This keeps costs down and promotes sustainability.

Insertion of LP-Keder on the roofing structure of the greenhouse



Guaranteed quality of highest standards

RKW maintains the highest of global manufacturing standards. Each roll is quality checked, marked, and stored for both customer satisfaction and quality, guaranteed. Every single roll of Polydress® LP-Keder can be traced, tracked and quality-guaranteed from manufacturer to end user due to the production code printed on the keder at meter intervals.

“If it isn’t Polydress®, it isn’t quality.”

Significant energy savings

Polydress® LP-Keder simply saves more energy. Its unique German design features plastic air bubbles, that are specifically engineered for thermal insulation and diffusion of sunlight. In combination with the profile attachment, the keder locking mechanism ensures a water and air-tight structure that withstands even the most extreme elements and climates. LP-Keder provides an insulating effect that retains up to 95 % of heat radiation with an impressive R-value of 1.7. This energy efficient design represents significant cost savings for its users.

Energy Savings Table	Product	R (thermal resistance) [(ft ² ·°F·h)/BTU]	U (heat transfer coefficient) [W/(m ² ·K)]
Single glazing and sheeting	Glass covered greenhouse (0.15 in / 4 mm)	1.0	5.8
	PE-Film (7 mil / 180 µm)	1.0	5.9
Double glazing combinations	Polycarbonate greenhouse (0.3 in / 8 mm)	1.6	3.5
	Polyethylene double layer inflated with 2 in / 50 mm air cushion	1.5	3.7
Air Bubble Film	Polydress® LP-Keder Air Bubble Film	1.7	3.3

High transparency

Polydress® LP-Keder guarantees an even light diffusion over the entirety of the structure. LP-Keder uniquely allows a substantial amount of sunlight, approximately 83 % of which is diffused by healthy infrared light, diffusing through more than 100 air bubbles per square foot. The diffused light scatters evenly so as to avoid and eliminate the common difficulties of both shading and burning areas with the structure.

Comparison of different greenhouse covers	Polydress® LP-Keder (8.5 mm / 335 mil)	Standard single layer (clear) PE-Greenhouse cover (180 µm / 7 mil)	Double layer inflated ETFE (clear) films (130 µm / 5 mil + 90 µm / 3.5 mil)	Standard double layer inflated (clear) PE-Greenhouse cover (two 180 µm / 7 mil films)	PLEXIGLAS® Alltop SP double wall panel (16 mm / 630 mil)	Polycarbonate double wall panel (8 mm / 315 mil)	Horticulture glass cover, float glass (4 mm / 157 mil)
Light transmittance (direct/perpendicular e.g. on sunny days)	high 83 %	high 85 %	high/very high 80–90 %	high 80 %	very high 91 %	medium 75 %	very high 90 %
Light transmittance (diffuse, e.g. on clouded days)	high approx. 60–70 %	high approx. 70–80 %	high approx. 80–85 %	medium approx. 50–70 %	very high approx. 80–90 %	medium approx. 50–60 %	very high approx. 80–90 %
Haze	high approx. 50–65 %	medium approx. 25–35 %	low approx. 10 %	medium approx. 30–40 %	very low approx. <5 %	medium approx. 40 %	very low approx. <1 %

The data given is based on literature, empirical measurement and our own experience in the field of greenhouse roofing

Long-term UV protection

RKW guarantees Polydress® LP-Keder with a 5-year warranty against UV degradation. Tested and proven over 30 years, amazingly the films do not change in color or transmission characteristics after being exposed on greenhouses as shown in table below.

Transmission				
Polydress® LP-Keder film:	Transmission direct [%]	Transmission diffuse [%]	Haze [%]	Note
New, not exposed, 2004	81.0	69.3	51.0	analyzed 2004
exposure 9.5 years	77.8	64.9	58.1	analyzed 2004
exposure 17.5 years	76.7	62.9	62.0	analyzed 2004
exposure 23 years	77.4	65.1		analyzed 2014
exposure 25 years	77.4	64.1		analyzed 2014

A new dimension in greenhouse films

Excellent quality in all respects

Trouble-free recycling

Polydress® LP-Keder is a polyethylene film that is completely recyclable and is safe to incinerate. RKK proudly provides recycling centers across Europe where plastic materials are deposited, recycled and then remanufactured into many different high quality products.

Technical data		
Parameter	Value (EN/SI)	Value (US/IMP)
Total thickness/film thickness	8.5 mm/430 µm	1/3 in / 1/64 in (17 mil)
Film width (width of purlin/bow)	1192 mm (4 ft), 1498 mm (5 ft), 1804 mm (6 ft) 1970 mm (2 m), 1985 mm (2 m)	46 15/16 in (4 ft), 58 31/32 in (5 ft), 71 15/64 in (6 ft), 77 9/16 in (6 ft 6 in), 78 5/32 in (6 ft 6 in)
Film length per roll	100 m	328 ft
Weight per sq ft	410 g/m²	1.36 oz/ft²
Roll weight	Approx. 81 kg (at 2 m film width)	178 lb (at 6 ft 6 in film width)
UV stabilization/durability	20920 MJ/m² (500kly) equivalent to 5 years in central Europe at an average annual solar radiation of 4184 MJ/m² (100kly)	1.8 · 106 BTU/ft² (20920 MJ/m²) equivalent to 5 years in central Europe at an average annual solar radiation of 4184 MJ/m² (100kly)
Insulation/R-value/U-value	U-value: 3.3 W/(m² · K)	R-value: 1.7
Light transmission direct (350–1600 nm)	ca. 83 %	ca. 83 %
Light transmission diffuse (350–1600 nm)	ca. 65–75 %	ca. 65–75 %
Light transmission IR (>1600 nm)	ca. <30 %	ca. <30 %
Snow load*	>500 kg/m²	>120 lbs/ft²
Wind load*	>2000 N/m² (>160 km/h windspeed)	>43 lbs/ft² (>100 mph Windspeed)

*Actual wind and snow loads depend on stability of structure and orientation of structure!



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RKW Group is one of the world's leading manufacturers of polyolefin-based film solutions. Our innovative and sustainable films enable customers to improve the daily life of consumers all over the world. We are a market leader in the areas of hygiene and agricultural films as well as films for the food and beverage industries and powdery goods. Moreover, we supply films and nonwovens for the chemical and processing industries as well as the medical, automotive and construction sectors. Our independent family-owned company is headquartered in Mannheim, Germany and employs approximately 2,800 people across 17 locations worldwide.

For more information about RKW, please visit [rkw-group.com](https://www.rkw-group.com)

RKW Agriculture product range

- Silage films and bags
- Round bale and pallet nets
- Round bale films
- Net replacement films
- Stretch films
- Early harvesting films and nonwovens
- Greenhouse films
- Mulch films
- Cover films

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