TECHNICAL DATASHEET REDUSOL



Product information

Category	Shading paint for greenhouses
Description	ReduSol is a non-toxic, removable liquid shading agent that reflects high levels of solar energy. The coating is developed to reflect sunlight and heat, and so reducing the greenhouse temperature. ReduSol is normally applied in spring or early summer and will last until it is removed with ReduClean.
Properties	• Adjustable shading percentages • Wear and frost-resistant • Easy to remove with ReduClean • Can be combined with other ReduSystems coatings • Free from harmful chemicals
Recommended use	For exterior greenhouse covers
Recommended surface	Suitable for glass, acrylate, polycarbonate and plastic film
Identified users	Industrial – for professional use only

Technical specifications

Physical state	Liquid
Colour	White
Odour	Characteristic
pH	9
Flammability (solid, gas)	Non flammable
Density	1,4 g/cm^3
Viscosity	7800 mPa.s Brookfield RV, spindle 5, 10 rpm, 20°C
Wear resistance	Between 4 and 8 months based on average use. A higher concentration of ReduSol is more wear resistant than a lower concentration. Above average amount or intensity of precipitation will increase the wear of the layer.
More transparent when wet	Yes
Transport regulation (ADR, RID, IMDG, IATA, IDN)	No restrictions

Storage conditions

Packaging	20 kg bucket (= 14,2 L) 1 pallet contains 33 or 44 buckets
Shelf life	Unopened containers have a shelf life of 2 years. Keep only in the original container in a cool, well-ventilated place. Products should be protected against frost (below 0 °C) and overheating (above 35 °C).

This technical datasheet is based on many years of experience. We can not be held liable for any damages resulting from the use of this product or any damages beyond her control. The customer should check, using the means normally available to him, whether the products supplied are suitable for the planned application. If in doubt, consult our technical specialists via sales@redusystems.com.

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Instructions for use

Surface preparation

The surface must be clean and dry before the application of ReduSol. A clean surface improves durability.
Preferably close the irrigation basin during the application of ReduSol.

Weather conditions

- An outside temperature of between 5 and 30 °C
- Wind speed of less than 2 m/s (7 km/h)
- For fast drying: relative humidity (RH) < 80 %
- Do not apply ReduSol to a wet surface or when rain is expected within 6 hours

Equipment

Application should be done by spraying the liquid on the surface:

- By spraying machine
- By hand with a spraygun
- By helicopter

Personal protection

- Safety glasses
- Protective gloves

Quantity

	BUCKETS/HA		HEMISPHERICAL NET SHADING EXCL. GLASS	HEMISPHERICAL GROSS SHADING INCL. GLASS	PERPENDICULAR NET SHADING EXCL. GLASS	
	MACHINE	MANUAL	PAR	PAR	PAR	NIR
ReduSol 20 kg = 14,2 L	25	28	55%	63%	55%	56%
	20	22	48%	57%	48%	47%
	15	17	45%	54%	44%	45%
	10	11	40%	50%	37%	38%
	5	6	31%	43%	23%	25%

The values mentioned are maximum shading values possible and applied in laboratory circumstances. Depending on the application technic, weather and greenhouse type, shading values in practice can differ.

Dilution

Dilute ReduSol with clean water to prepare your spray liquid:
Machine application: 1,000 – 1,500 liter spray liquid per 10.000 m²
Manual application: 1,700 – 2,000 liter spray liquid per 10.000 m²

Drying time

Approximately 5-6 hours at 20 °C. Drying time depends on outside temperature, glass temperature and wind speed. The coating should be dry before nightfall because condensation may damage the layer.

Removal

ReduSol is easy to remove with ReduClean. Spray at least 250 liters of ReduClean per hectare, diluted with 5-7 parts of clean water. Only apply ReduClean when a considerable amount of rain is expected within one week. The rain will wash of the ReduSol layer. Check if the waterways and surroundings are suitable for the inflow of ReduSol.
Do not apply ReduClean on a wet surface or during rain. Use of roof-sprinklers for cooling can cause removal problems.

Effect on crops and environment

Tests

2001 Mardenkro B.V. Environmental impact study: ReduSol gives water a temporary white colour but settles quickly and becomes part of the soil structure in the water.
2014 Groen Agro Control. Effect on irrigation water: No signs of impact on plant growth or root development.

Environmental precautions

Always dilute products with water in the right amount before use. Dispose in a safe manner in accordance with local/national regulations.
If disposing in public water, dispose in a wide river with sufficient capacity.
Apply the coating by machine if possible, this gives a more uniform layer and less loss of product into the environment.
Discharging cleaning water into the watercourse without flow can give turbidity or cause whitening, ensure enough flow.

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