



Sun Screen[®]

Solar Protector



IMPORTED
FROM UE

Introduction

What causes sunburn fruit?

The energy of sunlight can cause damage to the sunexposed surface layers of fruit. Sunburn is more due to radiative force of the sun than air temperature.

Types of apple sunburn

1. Sunburn necrosis
2. Sunburn browning
3. Photo/oxidative sunburn (or bleaching).



What are spray-on sun protection products?

Leaves and fruit of agricultural crops can be sprayed with suspension of tiny, white mineral particles (or calcium carbonate) to create a film that provides some protection from the damaging effects of sunlight.

Unprotected



Protected



How do they work?

The **mineral particles form** a white film that blocks and reflects some of the direct sunlight to reduce the fruit's surface temperature and the probability of sunburn.

The product forms a film that **absorbs some of the damaging UV radiation** and reflects a small amount of the incoming radiation.

These products must be applied several times during the season to maintain a protective cover on the fruit as it increases in size.

All spray-on sun protection products must be applied before severe summer heat wave conditions occur and applications must be maintained throughout the hot season to maintain coverage on the expanding fruit.

Resellers usually recommend a minimum of three to four applications, separated by seven to 21 days. More frequent applications are likely to provide greater protection.

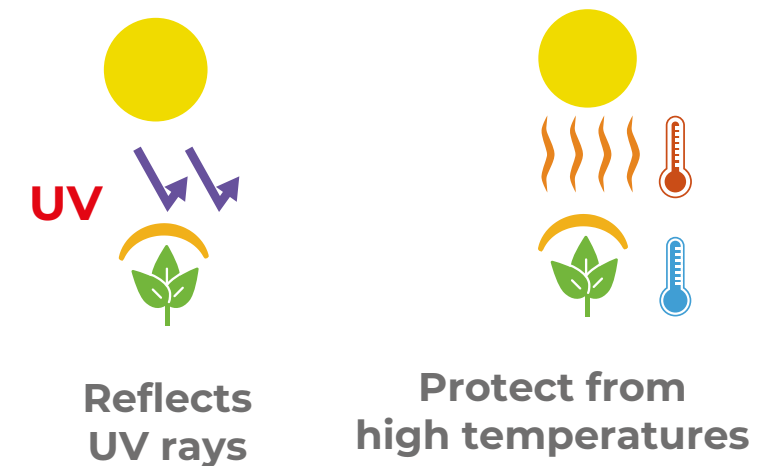
Sunburn effect



Applied product



Quality and health in pre-harvest



Sun Screen[®] Products

Sun Screen[®]

COMPOSITION	%w/w
Ca (CaO)	55,00
Mg (MgO)	0,15

Sun Screen is a solar protector for fruit and vegetables based on Magnesium Oxide in an excipient of Calcium Carbonate, which reduces damage by heat and sunburn stress.



1Kg

5Kg

10Kg

20Kg

Sun Screen[®] Flow

COMPOSITION	%w/v
Calcium (CaO ₂)	34,00
Silicon (CaSiO ₃)	5,00
pH (solution 1%)	7-8

Sun Screen Flow is a micronized calcium carbonate liquid sunscreen and next-generation silicon, designed to provide protection to the plant and fruit during the period of growth, improving the health of the plant and eliminating sunburn.



1L

5L

20L

1000 L

Advantages of spray-on sun protection

- **Less sunburn** allowing better pack-outs of quality fruit.
- **Can be applied** with existing orchard spraying equipment.
- **The particle film products (clay and calcium carbonate) can be tank mixed** with many other common orchard chemicals.
- The particle film products **may inhibit or repel some damaging insect pests.**
- The particle film products **significantly increase reflected sunlight within the tree canopy**, tending to improve the distribution and penetration of sunlight to the deeper shaded parts of the tree.

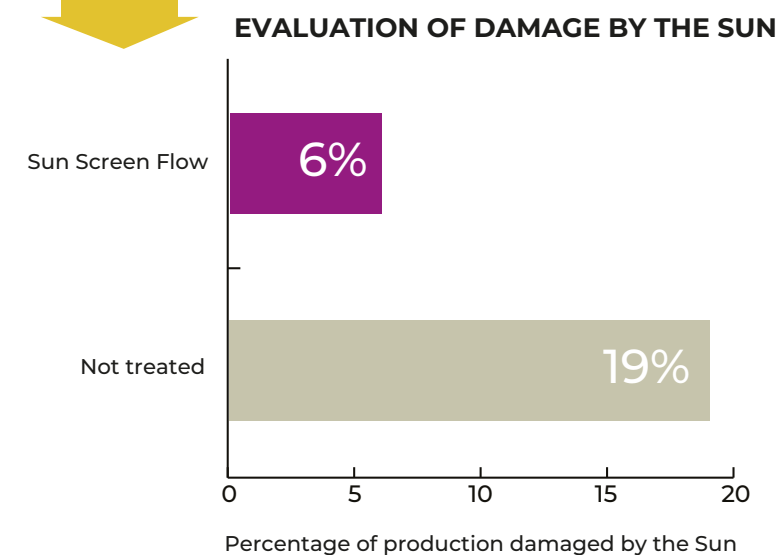


Calcium carbonate-based spray-on sun protection

APPLES



Granny Smith Apples
Application date: 13/05/2016
Damage by sunburn evaluated: 18/7/2016





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