

CO 2214EN ZnS 8-12

Non-radioactive rain erosion resistant antireflection coating for Zinc Sulphide 8 - 12 μm

DESCRIPTION

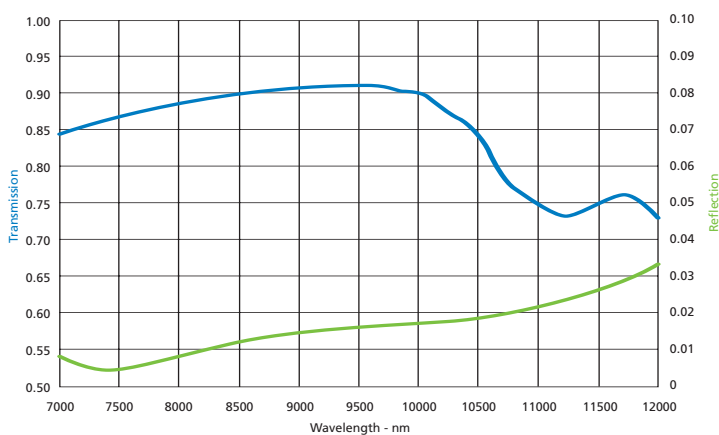
An improved rain erosion resistant coating for external surfaces, offering high transmission in the 8 - 12 μm waveband. It is particularly suitable for dome applications, where the same coating is applied to both faces. This coating does not contain any radioactive materials.

SPECTRAL PERFORMANCE

Transmission values are for a 6 mm thick Zinc Sulphide substrate which has been coated on both surfaces with CO 2214EN.
TRANSMISSION > 91% (average) from 7.8 - 10.2 μm
TRANSMISSION \geq 87% (absolute) from 7.8 - 10.2 μm
TRANSMISSION > 73% (average) from 10.2 - 12.1 μm
TRANSMISSION > 65% (absolute) from 10.2 - 12.1 μm

ENVIRONMENTAL PERFORMANCE

The coating will withstand the following environmental tests which will be carried out on a representative witness piece coated in the same batch.



| | | |
|----------------|-------------|--------------|
| ADHESION | MIL-C-48497 | para 4.5.3.1 |
| | TS1888 | para 5.1 |
| HUMIDITY | MIL-C-48497 | para 4.5.3.2 |
| | TS1888 | para 5.2.1.2 |
| SALT SOLUTION | MIL-C-48497 | para 4.5.5.2 |
| | TS1888 | para 5.2.1.1 |
| WIPER ABRASION | TS1888 | para 5.4.3 |
| | 5000 wipes | |

Rain Erosion Resistance
TRANSMISSION LOSS < 4% (average) from 8.0-11.5 μm
Under the following test conditions:

| | |
|--------------------|--------------------|
| PERIOD OF EROSION: | 1 hour |
| RAIN DROPS: | 2 mm mean diameter |
| IMPACT ANGLE: | 60° to the surface |
| SPEED: | 500 mph/223 m/s |
| RATE OF RAIN: | 25 mm/hour |