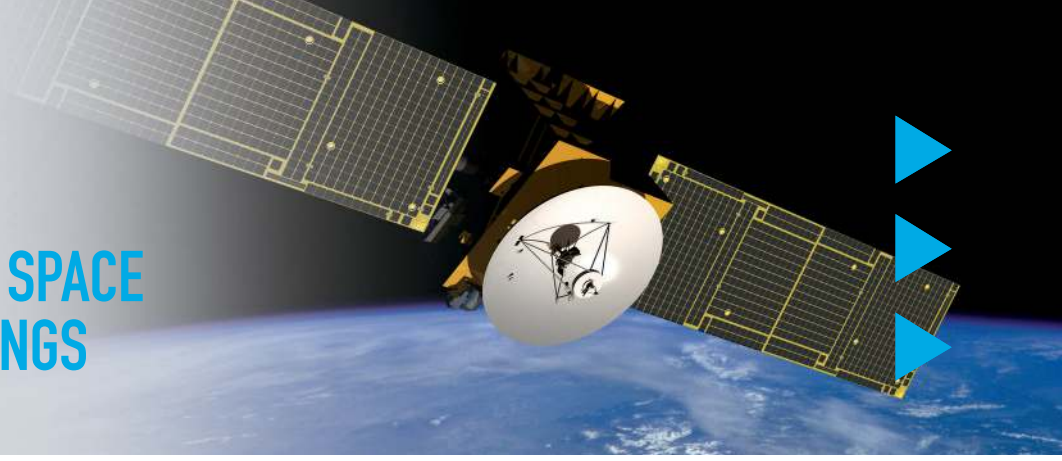


# LORD AEROGLAZE® SPACE AND OPTICAL COATINGS



OUR KEY PARTNERS

**LORD** **socomore**

## APPLICATIONS & VALUE ADDED PRODUCTS



ADDEV Materials is the European distributor of Lord Corporation's Aeroglaze® range of specialist coatings. Recently acquired by Socomore, Aeroglaze® offers proven performance in the most demanding of environments. Key applications include space equipment and optics where light reflectance and thermal emissivity must be managed in difficult conditions, including in vacuums and at extreme temperatures. ADDEV Materials provides delivery and full technical support for the Lord Aeroglaze® range.

Typical application areas include; telescopes, baffles, waveguides, vacuum test chambers, probes, satellites, launch vehicles, aircraft, optics, antennae and radomes.

### COATING SYSTEMS

Applications include the coating of defence ground equipment including vehicles, trucks, backhoes, loaders, bridges, containers, weapons systems and ammunition.

#### Topcoats

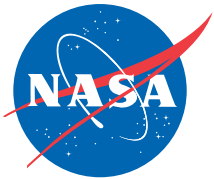
- ▶ Aeroglaze® Z306 and Z307. These moisture cured polyurethanes provide a matt black finish with extreme durability, mar resistance, cleanability and resistance to environmental degradation. Many scientific evaluations of Z306 have established its properties for the high absorption of wavelengths in the visible spectrum (low reflectance), combined with low emissivity in the infra-red spectrum. These properties ensure maximum absorption of stray light & minimum scatter combined with minimum emission of heat which can disturb the light path. Z307 provides essentially the same properties with additional conductivity for the discharge of static electricity.
- ▶ Aeroglaze® A276. Gloss white finish provides extreme durability in harsh environments typical of aerospace and space applications. A276 provides high reflectivity in accordance with space industry requirements.

All Aeroglaze® topcoats perform their functions in vacuums and with low outgassing.

#### Primers

Lord Aeroglaze® primers provide enhanced adhesion and corrosion resistance for a wide variety of substrates used in the space and optical markets including; gold, aluminium, stainless steel, copper, silver, beryllium, magnesium, glass, nickel and FRP. ADDEV Materials also supplies the Lord Chemlok® range of adhesion promoters for a wide variety of challenging substrates. The primers have been tested in combination with the topcoats to ensure that systems meet the technical requirements of the space and optical industries.

- ▶ Aeroglaze® 9924. Wash (etch) primer containing chromates suitable for a wide range of substrates including untreated aluminium, copper, silver, gold, galvanised steel and many other alloys. Note: Restricted from use in the UK/EU due to the REACH Regulation.
- ▶ Aeroglaze® 9947. Wash (etch) primer chromate free suitable for a wide range of substrates including FRP, untreated aluminium, copper, silver, gold, galvanised steel and many other alloys. Allows compliance with regulations such as REACH if chromate pigments are not permitted.
- ▶ Aeroglaze® 9929. Epoxy primer containing chromates is suitable for a wide range of treated metal substrates. This primer additionally conforms to the requirements of Mil-P-23377. Note: Restricted from use in the UK/EU due to the REACH Regulation.
- ▶ Aeroglaze® 9741. Epoxy primer chromate free suitable for a wide range of treated metal substrates. Allows compliance with regulations such as REACH if chromate pigments are not permitted.



## Key Performance and Specification Data

PROPERTY	PRODUCT	FACTOR	PERFORMANCE	SOURCE
Conductivity	» Z307	» Resistance ohms/square	» 100 - 100,000Ω (typically 2800Ω)	» Lord Corporation
Hemispheric reflectance	» Z306	» λ 546nm @ 20° incidence angle	» 0.048	» NASA Heaney 1992
Hemispheric reflectance	» Z306	» λ 5 - 25 μm	» 0.08 - 0.11	» Persky 1999
Outgassing	» Z306 (+ primer 9929)	» TML	» 0.60%	» NASA outgassing section A
Outgassing	» Z306 (+ primer 9929)	» CVCM	» 0.01%	» NASA outgassing section A
Outgassing	» Z306 (+ primer P123)	» TML	» 1.55%	» ESA ECSS-Q-ST-70-02C
Outgassing	» Z306 (+ primer P123)	» CVCM	» 0.00%	» ESA ECSS-Q-ST-70-02C
Outgassing	» Z306 (+ primer P123)	» RML	» 0.47%	» ESA ECSS-Q-ST-70-02C
Outgassing	» Z307 (+ primer 9924)	» TML	» 0.80%	» NASA outgassing section A
Outgassing	» Z307 (+ primer 9924)	» CVCM	» 0.04%	» NASA outgassing section A
Outgassing	» A276	» TML	» 0.99%	» NASA outgassing section A
Outgassing	» A276	» CVCM	» 0.08%	» NASA outgassing section A
Outgassing	» A276	» TML	» 0.57%	» NASA Ellis & Jaworske 2009
Outgassing	» A276	» CVCM	» 0.01%	» NASA Ellis & Jaworske 2009
Solar Absorptance	» Z306	» αs	» 0.96	» NASA Lauder 2005, Henninger 1984
Solar Absorptance	» Z306	» αs	» 0.95	» ESA ECSS-Q-70-09
Solar Absorptance	» A276	» αs	» 0.263	» NASA Lauder 2005, Henninger 1985
Temperature resistance	» Z306		» -150°C to +130°C	» Lord Corporation
Temperature resistance	» Z307		» -150°C to +130°C	» Lord Corporation
Temperature resistance	» A276		» 450K 500hrs in vacuum	» NASA Ellis & Jaworske 2009
Temperature resistance	» A276		» -150°C to +130°C	» Lord Corporation
Thermal Emissivity	» Z306	» εn	» 0.91	» NASA Lauder 2005, Henninger 1986
Total Hemispherical emittance	» Z306	» εn	» 0.9	» ESA ECSS-Q-70-09
Total Hemispherical emittance	» Z306	» εn	» 0.86	» Lord Corporation
Thermal Emissivity	» A276	» εn	» 0.88	» NASA Lauder 2005, Henninger 1987