



# AeroShell Fluid 2XN

## *Corrosion inhibited mineral oil for aircraft engine preservation*

AeroShell Fluid 2XN is a corrosion preventative concentrate from which AeroShell Fluid 2F was blended; the blending proportions are one part AeroShell Fluid 2XN to three parts AeroShell Oil 100. In general, operators should obtain supplies blended ready for use in engines, unless the use of the concentrate is specified.

### DESIGNED TO MEET CHALLENGES

#### Main Applications

AeroShell Fluid 2XN is primarily used as an ingredient of AeroShell Fluid 2F, but can be used undiluted to provide additional protection for piston engines after run-out on AeroShell Fluid 2F, by spraying exhaust ports, rocker arms, accessories.

For aircraft gas turbine engines a mixture of one part of AeroShell Fluid 2XN to three parts of AeroShell Turbine Oil 2 is required. Detailed instructions for inhibiting turbines are given in specification MIL-E-5607F.

The ashless anti-corrosion additive package together with the highly refined mineral base oil protects the engine by minimising the effects of humidity and neutralising the acidic components of engine oil oxidation and, in piston engines, the combustion byproducts as well.

#### Specifications, Approvals & Recommendations

- MIL-C-6529C Type I
- DTD900/4913A (Obsolete) (British)
- AIR 1503/B Type B Concentrate (French) equivalent
- NATO Code C-608
- Joint Service Designation ZX-21

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

#### Typical Physical Characteristics

| Properties                                        |                            | Method                         | MIL-C-6529 C Type I | Typical |
|---------------------------------------------------|----------------------------|--------------------------------|---------------------|---------|
| Oil Type                                          |                            |                                |                     | Mineral |
| Kinematic viscosity                               | @37.8°C mm <sup>2</sup> /s | ASTM D445                      | Report              | 285     |
| Kinematic viscosity                               | @98.9°C mm <sup>2</sup> /s | ASTM D445                      | Report              | 22      |
| Density                                           | @15°C kg/m <sup>3</sup>    | ASTM D4052                     | -                   | 900     |
| Volatility                                        | %                          | FED-STD-791 M.3480             | 3 max               | <0.52   |
| Viscosity (after elimination of volatile content) | mm <sup>2</sup> /s         | FED-STD-791 M.304/305 and 9101 | 90 – 110            | 105     |
| Viscosity Index                                   |                            | FED-STD-791 M.9111             | 95 min              | 100     |
| Flash Point (COC)                                 | °C                         | FED-STD-791 M.1103             | 204 min             | 276     |
| Pour point                                        | °C                         | FED-STD-791 M.201              | -12.2 max           | -17     |
| Carbon residue                                    | %m                         | FED-STD-791 M.5001             | 2.0 max             | 0.5     |
| Lead Corrosion                                    | @149°C                     | FED-STD-791 M.5321             | 70 max              | 30      |
| Ash                                               | %                          | FED-STD-791 M.5421             | 0.015 max           | 0.01    |
| Copper corrosion                                  | @100°C                     | FED-STD-791 M.5325             | 2A max              | Passes  |

| Properties                         | Method | MIL-C-6529 C Type I | Typical           |
|------------------------------------|--------|---------------------|-------------------|
| Rust protection (humidity cabinet) |        | Must pass           | Passes MIL-C-6529 |
| High/ Low Temperature Stability    |        | Must pass           | Passes MIL-C-6529 |
| HBr Neutralisation                 |        | Must pass           | Passes MIL-C-6529 |

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

## Health, Safety & Environment

- **Health and Safety**

This product is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from <https://www.epc.shell.com>

- **Protect the Environment**

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

## Additional Information

- **Advice**

Advice on applications not covered here may be obtained from your Shell representative.