SAFETY DATA SHEET
Airforce Arctic PG 32

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	Airforce Arctic PG 32
Product number	7670
Internal identification	GHS21641
REACH registration number	n/a Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Airline Oil
Uses advised against	Non specified unless otherwise stated within this MSDS

1.3. Details of the supplier of the safety data sheet

Supplier	Morris Lubricants Castle Foregate Shrewsbury SY1 2EL 08.45 - 17.00 GMT T: (+44)(0)1743 232200 F: (+44)(0)1743 353584 sds@morris-lubricants.co.uk

1.4. Emergency telephone number

Emergency telephone	+44(0)1743 232200 (08.45 - 17.00 GMT)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Not Classified
Classification (67/548/EEC or 1999/45/EC)	Not Classified

2.2. Label elements

Hazard statements	NC Not Classified
Supplemental label information	EUH210 Safety data sheet available on request.

2.3. Other hazards

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This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

1,2-propandiol		**60-100%**
CAS number: 57-55-6	EC number: 200-338-0	REACH registration number: 01-2119456809-23-XXXX

Classification	**Classification (67/548/EEC or 1999/45/EC)**
Not Classified	-

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments If REACH registration numbers do not appear the substance is either exempt from registration, does not meet the minimum volume threshold for registration, the registration date has not yet come due or this information is proprietary.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical attention if any discomfort continues.

Inhalation If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Ingestion Get medical attention if any discomfort continues. Do not induce vomiting.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

4.2. Most important symptoms and effects, both acute and delayed

General information If aspiration into the lungs is suspected, eg when vomitting, admit to hospital immediately.

Inhalation Upper respiratory irritation.

Ingestion May cause discomfort if swallowed.

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact Irritation of eyes and mucous membranes.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

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Specific hazards Heat from fire could result in drums bursting

Hazardous combustion products Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m3. Oxides of carbon. Oxides of nitrogen. Fire may also create other unidentified organic gases some of which may be toxic.

5.3. Advice for firefighters

Protective actions during firefighting Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection, see Section 8. In case of spills, beware of slippery floors and surfaces.

6.2. Environmental precautions

Environmental precautions Contain spillage with sand or earth. Avoid the spillage or runoff entering drains, sewers or watercourses. The product is insoluble in water and will spread on the water surface.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Contain spillage with sand or earth. Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor. Avoid water contacting spilled material or leaking containers. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. In case of spillage on water prevent the spread by use of suitable barrier equipment

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Always remove oil with soap and water or skin cleaning agent, never use organic solvents. Do not use oil-contaminated clothing or shoes, and do not put rags moistened with oil into pockets.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Miscellaneous hazardous material storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

1,2-propandiol

Long-term exposure limit (8-hour TWA): WEL 474 mg/m³ respirable dust

ETHANOL

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Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³
Short-term exposure limit (15-minute): WEL

WEL = Workplace Exposure Limit

Benzotriazole (CAS: 95-14-7)

DNEL	General population - Oral; Long term systemic effects: 0.54 mg/kg/day General population - Dermal; Long term systemic effects: 0.54 mg/kg/day General population - Inhalation; Long term systemic effects: 9.55 mg/m³ Workers - Dermal; Long term systemic effects: 1.08 mg/kg/day Workers - Inhalation; Long term systemic effects: 19 mg/m³
PNEC	- Fresh water; 0.0194 mg/l - Intermittent release; 0.158 mg/l - Marine water; 0.0194 mg/l - Sediment (Freshwater); 0.00375 mg/kg - Sediment (Marinewater); 0.00375 mg/kg - Soil; 0.003 mg/kg - STP; 39.4 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.
Hand protection	The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.
Other skin and body protection	Use barrier creams to prevent skin contact.
Hygiene measures	Use engineering controls to reduce air contamination to permissible exposure level. Wash promptly with soap and water if skin becomes contaminated.
Respiratory protection	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.
Thermal hazards	Not anticipated under normal conditions of use. The product is combustible if heated excessively and an ignition source is applied.
Environmental exposure controls	Do not allow product to contaminate land.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Fluorescent. Pink.

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Odour	Characteristic. Oil-like.
Odour threshold	Not known.
pH	Not applicable.
Melting point	-57°C Pour point
Initial boiling point and range	>320°C @ 101.3 kPa
Flash point	Not applicable.
Evaporation rate	Not relevant.
Upper/lower flammability or explosive limits	Not known.
Other flammability	Product is not flammable but on excessive heating may become combustible.
Vapour pressure	<0.1 kPa @ 20°C
Vapour density	Not determined.
Relative density	1.05 @ 15.6°C
Solubility(ies)	Insoluble in water. Soluble in the following materials: Organic solvents.
Partition coefficient	Not determined. log Kow: > 7 This figure is typical of mineral oil.
Auto-ignition temperature	No specific test data are available.
Decomposition Temperature	Not determined.
Viscosity	32 cSt @ 40°C
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information

Volatile organic compound	The product is a complex mixture, the majority of which would not be classed as a VOC. However it cannot be discounted that trace or low levels of VOC's may be present.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Unlikely to occur under normal conditions of use. Unlikely to occur.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

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Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50}) Not expected to be highly toxic based on information of ingredients. Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50}) Not expected to be highly toxic based on information of ingredients. Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) Not determined. The product is unlikely to present any significant inhalation hazard at ambient temperatures and under normal conditions of use.

Serious eye damage/irritation

Serious eye damage/irritation May cause mild, short lasting discomfort to eyes.

Respiratory sensitisation

Respiratory sensitisation No evidence to suggest the product will be a respiratory sensitiser.

Skin sensitisation

Skin sensitisation Not expected to be a skin sensitizer based on information on components.

Reproductive toxicity

Reproductive toxicity - fertility No data available to suggest the product will cause reproductive toxicity.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Kinematic viscosity > 20.5 mm^2/s. The product viscosity is greater than the upper limit assigned for classification.

General information This product has low toxicity. Only large quantities are likely to have adverse effects on human health.

Inhalation Unlikely to be hazardous by inhalation because of the low vapour pressure of the product at ambient temperature.

Ingestion No harmful effects expected from quantities likely to be ingested by accident.

Skin contact Skin irritation should not occur when used as recommended. Repeated exposure may cause skin dryness or cracking.

Eye contact May cause temporary eye irritation.

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SECTION 12: Ecological Information

Ecotoxicity Based on available data the classification criteria are not met. Not regarded as dangerous for the environment.

12.1. Toxicity

Toxicity Based on available data the classification criteria are not met. Not considered toxic to fish.

Acute toxicity - aquatic invertebrates Based on available data the classification criteria are not met.

12.2. Persistence and degradability

Persistence and degradability The product contains mineral oil which has limited biodegradability in CEC test methods but will biodegrade slowly in aerobic water and sediments and is considered ultimately biodegradable.

Stability (hydrolysis) The product is based on highly refined mineral oils that are considered stable to hydrolysis.

Biodegradation The product is not considered readily biodegradeable, albeit the major constituents are expected to ultimately biodegrade.

Biological oxygen demand Not determined.

Chemical oxygen demand Not determined.

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

Partition coefficient Not determined. log Kow: > 7 This figure is typical of mineral oil.

12.4. Mobility in soil

Mobility The product is non-volatile. The product is insoluble in water and will spread on the water surface.

Henry's law constant Not determined.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information This material and its container must be disposed of as hazardous waste. Dispose of waste via a licensed waste disposal contractor.

Disposal methods Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Dispose of waste via a licensed waste disposal contractor.

Waste class European Waste Catalogue (EWC) number = 13 08 99* (waste not otherwise specified)

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

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14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	Health and Safety at Work etc. Act 1974 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). Control of Substances Hazardous to Health Regulations 2002 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EU legislation	Dangerous Preparations Directive 1999/45/EC. Dangerous Substances Directive 67/548/EEC. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Guidance	Workplace Exposure Limits EH40. Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

Canada - DSL/NDSL
All the ingredients are listed or exempt.

US - TSCA
All the ingredients are listed or exempt.

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Australia - AICS
All the ingredients are listed or exempt.

Korea - KECI
All the ingredients are listed or exempt.

China - IECSC
All the ingredients are listed or exempt.

Philippines – PICCS
All the ingredients are listed or exempt.

New Zealand - NZIOC
All the ingredients are listed or exempt.

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	30/11/2015
Revision	1
SDS number	21641

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