



1. Chemical Product and Company Identification

Product name CASTROL AVIATOR S 80

MSDS# 0000001544

Historic MSDS#: None.

Product Use Lubrication of aircraft piston engines - to be used in accordance with engine manufacturers' guidelines.

Supplier Air BP Lubricants
Maple Plaza II - 1N
Six Campus Drive
Parsippany, NJ 07054
U.S.A.

EMERGENCY HEALTH INFORMATION: 1 (800) 447-8735

EMERGENCY SPILL INFORMATION: 1 (800) 424-9300
CHEMTREC (USA)

OTHER PRODUCT INFORMATION 1 (866) 4 BP - MSDS
(866-427-6737 Toll Free - North America)
email: bpcares@bp.com

2. Composition / information on ingredients

Ingredient Name	CAS #	% by Weight	Exposure Limits
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	60-100	ACGIH (United States). TWA: 5 mg/m ³ 8 hour(s). Form: OIL MIST, MINERAL STEL: 10 mg/m ³ 15 minute(s). Form: OIL MIST, MINERAL OSHA (United States). PEL: 5 mg/m ³ 8 hour(s). Form: OIL MIST, MINERAL None assigned.
Proprietary performance additives	proprietary	1-5	

3. Hazards identification

Physical state Liquid.

Color Amber. Clear.

Emergency Overview

This product has been evaluated and does not require any hazard warning on the label under established regulatory criteria.

Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis. Avoid contact with skin and clothing. Wash thoroughly after handling.

Routes of Entry Skin contact. Eye contact. Inhalation. Ingestion.

POTENTIAL HEALTH EFFECTS

Eyes No significant health hazards identified.

Skin Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis. Used engine oil may contain hazardous components which have the potential to cause skin cancer.

Inhalation Mist: May cause respiratory tract irritation.

Ingestion Causes gastrointestinal irritation and diarrhea.

See Toxicological Information (section 11)

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4. First-aid measures

Eye Contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin Contact	Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

5. Fire-fighting measures

Flammability of the Product	May be combustible at high temperature.
Flash point	246 °C (OPEN CUP) Cleveland. ASTM D-92
Products of Combustion	These products are carbon oxides (CO, CO ₂), oxides of phosphorus.
Unusual fire/explosion hazards	None identified. This material is not explosive as defined by established regulatory criteria.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Protective Clothing (Fire)	Firefighters should wear full bunker gear, including a positive pressure self-contained breathing apparatus.

6. Accidental release measures

Personal Precautions	Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5).
Environmental Precautions and Clean-up Methods	If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent runoff to surface waterways. See Section 13 for Waste Disposal Information.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

7. Handling and storage

Handling	Avoid breathing vapors or spray mists. Avoid contact with eyes. Avoid contact with skin. Wear suitable protective clothing. Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Empty containers may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards.

8. Exposure controls/personal protection

Occupational Exposure Limits

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	ACGIH (United States). TWA: 5 mg/m ³ 8 hour(s). Form: OIL MIST, MINERAL STEL: 10 mg/m ³ 15 minute(s). Form: OIL MIST, MINERAL OSHA (United States). PEL: 5 mg/m ³ 8 hour(s). Form: OIL MIST, MINERAL
Proprietary performance additives	None assigned.

Control Measures	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.
Hygiene measures	Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Personal Protection

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Eyes	Safety glasses with side shields.
Skin and Body	Avoid prolonged or repeated contact with skin. Wear protective clothing if prolonged or repeated contact is likely.
Respiratory	None required; however, use of adequate ventilation is good industrial practice. If heated and ventilation is inadequate, use a NIOSH certified respirator with an organic vapor cartridge and P95 particulate filter.
Hands	Wear protective gloves if prolonged or repeated contact is likely.

Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

Physical state	Liquid.
Odor	Mild.
Color	Amber. Clear.
Pour Point	-24 °C
Specific Gravity	<1
Density	<1 g/cm ³ at 20 °C
Vapor Pressure	<0.001 kPa (<0.01 mmHg) (at 20°C)
Solubility	Insoluble in cold water.
Viscosity	kinematic: 145 mm ² /s (145 cSt) at 40°C kinematic: 14.6 mm ² /s (14.6 cSt) at 100°C
Viscosity Index	99

10. Stability and reactivity

Stability and Reactivity	The product is stable.
Conditions to avoid	Keep away from heat, sparks and flame. Keep away from sources of ignition.
Incompatibility with Various Substances	Reactive with oxidizing agents.
Hazardous Decomposition Products	Products of Combustion: carbon oxides (CO, CO ₂).
Hazardous Polymerization	Will not occur.

11. Toxicological information

Acute toxicity	Toxicity testing not conducted.
Chronic toxicity	

Carcinogenic Effects No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH or the International Agency for Research on Cancer (IARC). No component of this product present at levels greater than 0.1% is identified as a carcinogen by the U.S. National Toxicology Program (NTP) or the U.S. Occupational Safety and Health Act (OSHA).

Mutagenic Effects

Reproductive Effects

Teratogenic effects

Other chronic toxicity data	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.
	Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis.
	Studies have shown that used motor oil causes skin tumors after a long latency period (over one year) in a low percentage of mice (below 10%); when applied to the skin twice a week for their lifetimes. The material was not washed off between applications. A skin cancer risk may exist for people from prolonged or repeated contact with used motor oil in the absence of good personal hygiene.
	In case of contact, wash exposed skin thoroughly with soap and water or use waterless hand cleaners to remove used motor oils from skin. Do not use gasoline, thinners, or solvents. Wear protective clothing

and impervious gloves when working with used motor oils. Remove oil-soaked clothing, including shoes, and thoroughly clean and dry before reuse.

Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhea.

At normal ambient temperatures this product will be unlikely to present an inhalation hazard because of its low volatility. May be harmful by inhalation if exposure to vapor, mists or fumes resulting from thermal decomposition products occurs.

12. Ecological information

Ecotoxicity	Ecological testing has not been conducted on this product by Castrol.
Persistence/degradability	Inherently biodegradable
Mobility	Spillages may penetrate the soil causing ground water contamination.
Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.
Other Ecological Information	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

13. Disposal considerations

Waste Information Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Consult your local or regional authorities.

14. Transport information

International transport regulations

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label	Additional information
DOT Classification	Not regulated.	Not regulated.	Not regulated.			
TDG Classification	Not regulated.	Not regulated.	Not regulated.			
IMDG Classification	Not regulated.	Not regulated.	Not regulated.			
IATA Classification	Not regulated.	Not regulated.	Not regulated.			

15. Regulatory information

U.S. Federal Regulations US INVENTORY (TSCA): In compliance.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR Part 355): This product is not regulated under Section 302 of SARA and 40 CFR Part 355.

SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370): Defined as non-hazardous by OSHA under 29 CFR 1910.1200(d).

SARA 313 toxic chemical notification and release reporting: No products were found.

CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4): This material is not regulated under CERCLA Sections 103 and 107.

State Regulations

No products were found.

California prop. 65: No products were found.

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Inventories

AUSTRALIAN INVENTORY (AICS): Not determined.

CANADA INVENTORY (DSL): In compliance.

CHINA INVENTORY (IECS): Not determined.

EC INVENTORY (EINECS): In compliance.

JAPAN INVENTORY (ENCS): In compliance.

KOREA INVENTORY (ECL): In compliance.

PHILIPPINE INVENTORY (PICCS): In compliance.

16. Other information

Label Requirements

This product has been evaluated and does not require any hazard warning on the label under established regulatory criteria.

Hazardous Material Information System (U.S.A.)

Health	0
Fire Hazard	1
Physical Hazard	0
Personal Protection	Z

National Fire Protection Association (U.S.A.)



HISTORY

Date of issue 04/30/2003.
Date of Previous Issue No Previous Validation.
Prepared by Product Stewardship

Notice to Reader

NOTICE : This Material Safety Data Sheet is based upon data considered to be accurate at the time of its preparation. Despite our efforts, it may not be up to date or applicable to the circumstances of any particular case. We are not responsible for any damage or injury resulting from abnormal use, from any failure to follow appropriate practices or from hazards inherent in the nature of the product.