



1. Chemical product and company identification

Product name	CASTROL AVIATOR S 100
MSDS#	0000001545
Historic MSDS#:	None.
Code	0000001545
Product use	Lubrication of aircraft piston engines - to be used in accordance with engine manufacturers' guidelines.
Manufacturer	Air BP Lubricants Maple Plaza II - 1N Six Campus Drive Parsippany, NJ 07054 U.S.A.
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 (613) 996-6666 CANUTEC (Canada)
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	LC50/LD50
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	Not available.
Proprietary performance additives	proprietary	1-5	None assigned.	Not available.

3. Hazards identification

Physical state	Liquid.
Color	Amber. Clear.
Emergency overview	Caution! Slightly irritating to the skin. Slightly irritating to the eyes. Avoid contact with skin and clothing. Wash thoroughly after handling.
Routes of entry	Skin contact. Eye contact. Inhalation. Ingestion.

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Potential Health Effects

Eyes	Slightly irritating to the eyes.
Skin	Slightly irritating to the skin.
Inhalation	Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.
Ingestion	Causes gastrointestinal irritation and diarrhea.

See toxicological Information (section 11)

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	Wash with soap and water. 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	290 °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/m³ 8 hour(s). Form: OIL MIST, MINERAL

STEL: 10 mg/m³ 15 minute(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

Eyes

Avoid contact with eyes. Chemical splash goggles.

Skin and Body

Avoid contact with skin. Wear suitable protective clothing.

Respiratory

None required; however, use of adequate ventilation is good industrial practice. If heated and ventilation is inadequate, use respirator which will protect against organic vapor.

Hands

Wear suitable gloves.

Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

Physical state	Liquid.
pH	
Odor	Mild.
Odor threshold	Not available.
Color	Amber. Clear.
Boiling point / range	Not available.
Melting point / range	
Pour Point	-27 °C
Specific Gravity	<1
Density	<1 g/cm ³ at 20 °C
Vapor pressure	<0.001 kPa (<0.01 mm Hg) (at 20°C)
Vapor Density (Air = 1)	Not available.
Evaporation rate	Not available.
Solubility	Insoluble in cold water.
LogK _{ow}	Not available.
Viscosity	Kinematic: 232 mm ² /s (232 cSt) at 40°C Kinematic: 19.7 mm ² /s (19.7 cSt) at 100°C
Viscosity Index	97

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 International Agency for Research on Cancer (IARC).
Mutagenic effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a mutagen.
Reproductive effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a reproductive toxin.
Teratogenic effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as teratogenic or embryotoxic.
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.

WHMIS (Canada) Not controlled under WHMIS (Canada).

If listed, this product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations for those regulated products.

Inventories

AUSTRALIAN INVENTORY (AICS): Not determined.

CANADA INVENTORY (DSL): In compliance.

CHINA INVENTORY (IECS): Not determined.

EC INVENTORY (EINECS/ELINCS): In compliance.

JAPAN INVENTORY (ENCS): In compliance.

KOREA INVENTORY (ECL): In compliance.

PHILIPPINE INVENTORY (PICCS): In compliance.

16. Other information

Label Requirements Caution!

Slightly irritating to the skin.
Slightly irritating to the eyes.

History

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Version 2

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05/10/2004.

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.