

AMSOIL Material Safety Data Sheet

Date Issued/Revised: June 18, 2003
Supersedes: November 13, 2002

Section 1: Product and Company Identification

Manufacturer: AMSOIL, Inc. Telephone:
925 Tower Avenue CHEMTREC (Spill Emergency Only): 1-800-424-9300
Superior, WI 54880 Information: 715-392-7101

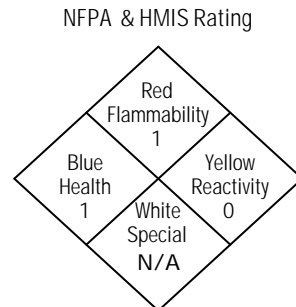
Product Codes	RCE ISO 10	RCF ISO 15	RCG ISO 22	RCH ISO 32	RCI ISO 46	RCJ ISO 68	
Product Codes	RCK ISO 100	RCL ISO 150	RCM ISO 220	RCN ISO 320	RCO ISO 460	RCP ISO 680	RCQ ISO 1000

Product Label Name..... Circulating and AW Gear Oil
Product Use..... LUBRICATING OIL

Section 2: Composition/Information on Ingredients

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

This product is not formulated to contain ingredients that have exposure limits exceeding those established by US agencies.



Section 3: Hazards Identification

POTENTIAL HEALTH EFFECTS: Minor eye, inhalation and skin irritant.
*See Section 11 for toxicological information.

Section 4: First Aid Measures

- EYE:** Flush with water for 15-20 minutes. Seek medical attention if irritation develops.
- SKIN:** Wash immediately with soap and water. Remove contaminated clothing and launder before reuse. Discard shoes and leather articles saturated with the product. Obtain medical advice if irritation occurs.
- INHALATION:** Remove exposed person to fresh air. If breathing is labored give oxygen. If breathing has stopped apply artificial respiration. Get immediate medical attention.
- INGESTION:** DO NOT INDUCE VOMITING. If conscious, give 2 glasses of water. If vomiting does occur, keep head below hips to reduce risk of aspiration. Get immediate medical attention.

Section 5: Fire Fighting Measures

FLAMMABILITY PROPERTIES:

	RCE ISO 10	RCF ISO 15	RCG ISO 22	RCH ISO 32	RCI ISO 46	RCJ ISO 68	
Flash Point	369°F (187°C)	408°F(209°C)	459°F(237°C)	507°F(264°C)	496°F(258°C)	504°F(262°C)	
	RCK ISO 100	RCL ISO 150	RCM ISO 220	RCN ISO 320	RCO ISO 460	RCP ISO 680	RCQ ISO 1000
Flash Point	507°F(264°C)	529°F(276°C)	522°F(272°C)	550°F(288°C)	529°F(276°C)	543°F(284°C)	549°F(287°C)

Method COC ASTM D-92
LFL/UFL.....Not Determined
Auto-ignition TemperatureNot Determined

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, and alcohol foam.

FIREFIGHTING EQUIPMENT: Full bunker gear recommended including a positive pressure self-contained breathing apparatus.

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Section 6: Accidental Release Measures

Isolate spill area. Provide adequate ventilation. Wear appropriate personal protection. Recover free product for recycle and/or disposal. Add sand, earth or other suitable absorbent to spill area. Prevent entry into sewers and waterways. Check under Transportation and Labeling (DOT/CERCLA) and Other Regulator Information Section (SARA) for hazardous substances to determine regulatory reporting requirements for spill.

Section 7: Handling and Storage

HANDLING: Keep containers closed. Avoid contact with eyes, skin or clothing. Wash hands after handling. Empty container may retain product residue which may exhibit hazards of product.

STORAGE: Keep away from heat or flame.

Section 8: Exposure Controls/Personal Protection

VENTILATION: Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.

RESPIRATORY: Use a NIOSH approved respirator when necessary.

SKIN: Use Viton or Nitrile gloves to avoid prolonged or repeated skin contact.

EYE: Use splash goggles or face shield where splashing is expected or can occur.

EXPOSURE LIMITS: The Threshold Limit Value (TLV) of 5 mg/m³ is suggested for oil mist.

Section 9: Physical and Chemical Properties

	RCE ISO 10	RCF ISO 15	RCG ISO 22	RCH ISO 32	RCI ISO 46	RCJ ISO 68
Physical State	Liquid					
Boiling Point	Not Determined					
Freezing/Melting Point	-96°F (-71°C)	-96°F (-71°C)	-96°F (-71°C)	-71°F (-57°C)	-65°F (-54°C)	-60°F (-51°C)
Vapor Pressure	Negligible					
Vapor Density (Air=1)	Not Determined					
Evaporation Rate	Not Determined					
Solubility in Water	Negligible					
Specific Gravity (Water=1)	0.8193	0.8234	0.8319	0.8473	0.8519	0.8565
Density, lb./gal.	6.822	6.930	6.926	7.055	7.093	7.132
Volatility (Volume)	Not Determined					
VOC	Not Determined					
pH	Essentially Neutral					
Odor	Mild, Bland Hydrocarbon Odor					
Odor Threshold	Not Determined					
Appearance	Light Straw Transparent Fluid					
Viscosity, cSt @ 100°C	2.86	3.60	4.65	5.77	7.76	10.32
Viscosity, cSt @ 40°C	10.73	15.12	22.11	30.84	47.24	68.24
Viscosity Index	115	123	130	131	132	137

	RCK ISO 100	RCL ISO 150	RCM ISO 220	RCN ISO 320	RCO ISO 460	RCP ISO 680	RCQ ISO 1000
Physical State	Liquid						
Boiling Point	Not Determined						
Freezing/Melting Point	-54°F (-48°C)	-51°F (-46°C)	-45°F (-43°C)	-40°F (-40°C)	-35°F (-37°C)	-33°F (-36°C)	-27°F (-33°C)
Vapor Pressure	Negligible						
Vapor Density (Air=1)	Not Determined						
Evaporation Rate	Not Determined						
Solubility in Water	Negligible						
Specific Gravity (Water=1)	0.8597	0.8745	0.8772	0.8883	0.8838	0.8849	0.8855
Density, lb./gal.	7.158	7.282	7.305	7.397	7.360	7.368	7.373
Volatility (Volume)	Not Determined						

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VOC	Not Determined						
pH	Essentially Neutral						
Odor	Mild, Bland Hydrocarbon Odor						
Odor Threshold	Not Determined						
Appearance	Light Straw Transparent Fluid						
Viscosity, cSt @ 100°C	13.53	17.59	23.52	31.06	40.27	53.47	70.10
Viscosity, cSt @ 40°C	102.27	147.85	220.81	329.20	478.58	705.67	1061.94
Viscosity Index	132	131	132	131	130	133	132

Section 10: Stability and Reactivity

STABILITY: Stable under moderately elevated temperatures and pressures.

INCOMPATIBILITY: Avoid contact with strong oxidants.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION OF PRODUCT: Toxic oxides of carbon, aldehydes and other products of incomplete combustion.

Section 11: Toxicological Information

ACUTE EXPOSURE

Eye Irritation: Moderate to strong eye irritation. Based on data from components or similar material.

Skin Irritation: Not expected to be a primary skin irritant. Based on data from components or similar material. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, defatting, and cracking of the skin.

Respiratory Irritation: If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract similar to that observed with mineral oil. Based on data from components or similar materials. Under good industrial hygiene practices where all exposure limits are observed, respiratory irritation should not be a problem.

CHRONIC EXPOSURE

Chronic Toxicity: No data available to indicate product present at greater than 1.0% are chronic health hazards.

Carcinogenicity: No data available to indicate product present at greater than 0.1% are a carcinogenic hazard.

Mutagenicity: No data available to indicate product present at greater than 1.0% present a mutagenic or genotoxic hazard.

Reproductive Toxicity: No data available to indicate product present at greater than 1.0% present a reproductive hazard.

Teratogenicity: No data available to indicate product present at greater than 1.0% present a teratogenic hazards.

ADDITIONAL INFORMATION

Exposure Limits: Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter.

Section 12: Ecological Information

No data available on the adverse effects of this product on the environment.

Section 13: Disposal Considerations

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Section 14: Transport Information

This product is not classified as hazardous material for DOT shipping. For further information relative to spills resulting from transportation incidents, refer to the latest DOT Emergency Response Guidebook for Hazardous Materials.

Section 15: Regulatory Information

U.S. Federal Regulations

- OSHA Table Z..... Synthetic Base Stock (mist)
- TSCA Not Applicable
- CERCLA 40 CFR 302.4 Not Applicable
- SARA Title III
 - Section 302 Extremely Hazardous Not Applicable
 - Section 311/312
 - Fire Hazard Yes
 - Reactive Hazard No
 - Release of Pressure..... No
 - Acute Health Hazard Yes
 - Chronic Health Hazard No
 - Section 313 Toxic Chemical Not Applicable

U.S. State Regulations

- California (Prop 65)
 - Does not contain chemicals known to the state of California to cause cancer.

International Regulations

- WHMIS All components listed

Section 16: Other Information

The information and recommendations contained herein are, to the best of AMSOIL's knowledge and belief, accurate and reliable as of the date issued. AMSOIL makes no warranty or guarantee, expressed or implied, of their accuracy or reliability, and AMSOIL shall not be liable for any loss or damage based upon the criteria supplied by the developers of these rating systems, together with AMSOIL's interpretation of the available data.