

MATERIAL SAFETY DATA SHEET

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PRODUCT IDENTIFICATION

Trade Name: Bravo AW 32, 46, 68 **Date Revised: March 2, 2004**
Synonyms/Product Code: N.A.
Chemical Name: Petroleum Mineral Oil
Family Description: A complex combination of hydrocarbons from a petroleum fraction obtained by hydrogen treatment plus additives.
DOT Hazard Class: Not Applicable

NFPA Codes: Health=0, Flammability=1, Reactivity=0

COMPOSITION

<u>Product</u>	<u>CAS Number</u>	<u>Wt%</u>	<u>Occupational Exposure Limits*</u>			<u>Units</u>
			<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other</u>	
Bravo AW 32, 46, 68	Mixture	100	N.A.	N.A.	N.A.	N.A.

Ingredient(s):

Severely Hydrotreated Heavy Naphthenic Distillate	64742-52-2	>99	5	5	10 STEL	mg/m ^{3**}
Additives containing Zinc salt of dialkyl dithiophosphate (ZDDP), 2,6-di-t-butylphenol and polymers	N.A.-P	<1	N.A.	N.A.	N.A.	N.A.

* = 8-Hr. TWA unless otherwise specified.

** = As mineral oil mist.

N.A. = Not Available.

STEL = Short Term Exposure Limit; 15 minutes.

N.A.-P = Information for this component is claimed proprietary by supplier.

PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point 760 mmHg:	N.A.	Melting Point: N.A.
Vapor Pressure mmHg @ 100F:	N.A.	Vapor Density (air=1): N.A.
Solubility in H ₂ O %:	Nil	pH: N.A.
Specific Gravity (H ₂ O):	0.9218	Evaporation Rate:
% Volatile by Volume:	N.A.	(ethyl ether=1) N.A.
Viscosity (method, temp):	32 cSt @ 40C	
Appearance: Light amber liquid		Odor: Slight hydrocarbon odor

N.A. = Not Available

FIRE AND EXPLOSION DATA

Flash Point:	350□	
Flammable Limits in Air % by Vol.:	Lower: N.A.	Upper: N.A.
Autoignition Temperature:	N.A.	
Extinguishing Media:	Dry chemical, foam, carbon dioxide, or water spray.	
Special Fire Fighting Procedure:	Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool. Firefighters should wear self-contained breathing apparatus.	
Unusual Fire or Explosion Hazard:	May ignite when sufficient heat is applied.	

REACTIVITY DATA

Stability:	Stable
Hazardous Polymerization:	Will not occur.
Conditions to Avoid/Incompatibility:	Strong oxidizing agents, heat, spark, flame and build-up of static electricity.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, aldehydes, ketones, and combustion products of sulfur and nitrogen.

HEALTH HAZARD DATA

This product has not been tested as a whole to determine its specific health hazards. The information provided in this section is based on health hazard information on the product components.

Carcinogenicity: NTP: No	IARC Monographs: No	OSHA Regulated: No
Occupational Exposure Limits:	See <u>COMPOSITION</u> section.	

Effects of Overexposure:

Acute:

Eyes:	Mildly irritating to the eyes.
Skin:	May cause slight skin irritation
Inhalation:	The inhalation hazards of the components are negligible to minimally irritating if airborne concentrations are kept below permissible occupational exposure limits. Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation, drowsiness, dizziness, headache and nausea.
Ingestion:	Ingestion of large amounts may cause headache, drowsiness, nausea, vomiting or diarrhea. Aspiration hazard if vomiting occurs.

Chronic: Frequent or prolonged contact may cause skin irritation.

Additional Medical and Toxicological Information: May aggravate preexisting dermatitis. The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence for the carcinogenicity of used oils in experimental animals.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush thoroughly with water for at least 15 minutes, including under the eyelids. Contact a physician immediately, preferably an Ophthalmologist if redness or irritation occurs.

Skin Contact: Remove contaminated clothing. Wash affected areas with soap and water. If irritation occurs, get medical help.

Inhalation: Remove to fresh air. If breathing has stopped, apply artificial respiration. Get immediate medical attention.

Ingestion: Do not induce vomiting. If spontaneous vomiting occurs hold the victim's head lower than hips to prevent aspiration.

SPECIAL PROTECTION INFORMATION

Eye Protection: Remove contact lenses and wear chemical safety goggles where contact with liquid or mist may occur.

Skin Protection: Wear impervious gloves when contact with skin may occur. Use face shield where splashing may occur. Wash with soap and water before eating, drinking or smoking. Launder contaminated before reuse.

Inhalation: Use approved respiratory protective equipment for cleaning large spills or entry into large tanks, vessels or other confined spaces or in situations where exposure may exceed occupational exposure levels.

Ventilation: Provide adequate general and local exhaust ventilation: (1) to keep mist or vapors below occupational exposure levels; and (2) to prevent the formation of an oxygen deficient atmosphere, particularly in a confined space.

SPILL OR LEAK AND DISPOSAL PROCEDURES

Spill Procedures: Remove sources of heat or ignition including internal combustion engines and power tools. Remove spill with vacuum trucks or pump and soak up residue with an absorbent. Use approved respirator where occupational exposure limits may be exceeded.

Waste Disposal: Dispose through a licensed waste disposal company. Follow federal, state and local regulations.

SPECIAL PRECAUTIONS AND COMMENTS

Storage Requirements: Store in tightly closed containers in a dry, cool place, away from sources of heat, ignition or strong oxidizers. Ground and bond all transfer and storage equipment and equip with self closing valves, pressure vacuum bungs and flame arrestors.

SARA TITLE III INFORMATION

Section 311/312 Hazard Categorization

<u>Acute</u>	<u>Chronic</u>	<u>Fire</u>	<u>Pressure</u>	<u>Reactive</u>
X	X			

SARA Hazardous Substances

<u>Ingredient</u>	<u>CAS No.</u>	<u>%, Wt</u>	<u>Sec 313</u>	<u>Sec 302</u>	<u>RQ, lb</u>	<u>TPQ, lb</u>
Zinc Compound	N.A.	<1	X			

Key: Sec 313 = Toxic Chemicals, Section 313
 Sec 302 = Extremely Hazardous Substances (EHS)
 RQ = Reportable Quantity of EHS
 TPQ = Threshold Planning Quantity of EHS

CALIFORNIA PROPOSITION 65 WARNING

Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm may be found in the petroleum products. Although it is possible to sufficiently refine the petroleum products to remove the potential for cancer, we are advising that one or more of the listed chemicals may be present in some detectable quantities. Read and follow directions and use care when handling these petroleum products.

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