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MATERIAL SAFETY DATA SHEET (M S D S) Printed : 10/12/98
 For Oils, Greases and Related Lubricating Materials

Revised : 06/25/97

SECTION I - PRODUCT IDENTIFICATION

Manufacturer: CITGO PETROLEUM CORPORATION Information Phone: 405-270-6200
 P.O. BOX 26868 Emergency Phone: 800-424-9300
 915 M.L. KING BLVD. CHEMTREC Phone: 800-424-9300
 OKLAHOMA CITY OK 73126

Trade Name : MYSTIK JT-8 SUPER HEAVY DUTY MOTOR OIL SAE 15W-40
 Product Class: MOTOR OIL

! Hazard Ratings: Health - 1
 ! none -> extreme Fire - 1
 ! 0 ---> 4 Reactivity - 0
 !
 ! HMIS Personal Protection - B

Product Code : 1300B-001
 C.A.S. Number: COMPLEX MIXTURE

SECTION II - HAZARDOUS INGREDIENTS

| Ingredients | CAS # | Weight % | Exposure Limits | | VP mm HG |
|---|---------------|----------|-----------------|----------|-----------|
| | | | ACGIH/TLV | OSHA/PEL | |
| PETROLEUM HYDROCARBON | 64742-54-7 | 50-75 | 5 mg/M3 | 5 | mg/M30 |
| THIS PETROLEUM HYDROCARBON MAY ALSO CONTAIN THE FOLLOWING CAS NUMBERED MATERIALS CAS# 64741-88-4 AND/OR CAS# 64741-89-5. | | | | | |
| PETROLEUM HYDROCARBON | 64742-65-0 | 5-20 | 5 mg/M3 | 5 | mg/M30 |
| THIS PETROLEUM HYDROCARBON MAY ALSO BE REPRESENTED BY CAS# 64742-54-7, 64741-88-4 OR 64741-89-5. | | | | | |
| *PROPRIETARY ADD:5184 | PROPRIETARY | 5-20 | 5 mg/M3 | 5 | mg/M3N/AP |
| PROPRIETARY ADDITIVE 5184 CONTAINS 13.0% ORGANOMETALLIC ZINC COMPOUND THAT MAY BE REPORTABLE UNDER SARA 313. | | | | | |
| *PROPRIETARY ADD:5183 | COMPLEX MIXTU | 1-5 | 5 mg/M3 | 5 | mg/M30 |
| PROPRIETARY ADDITIVE 5183 CONTAINS LESS THAN 6% ORGANOMETALLIC ZINC COMPOUND THAT MAY BE REPORTABLE UNDER SARA 313 REGULATIONS. | | | | | |
| 150 POLYMER SOLUTION | PROPRIETARY | 5-20 | 5 mg/M3 | 5 | mg/M30 |

*** ALL Ingredients in this product are listed in the T.S.C.A. Inventory.

SARA 311/312 CATEGORY - NONE.

SARA 313 - NOT APPLICABLE UNLESS OTHERWISE INDICATED BY AN INGREDIENT IN SECTION II, HAZARDOUS INGREDIENTS, BY MEANS OF AN ASTERISK NEXT TO THE AFFECTED INGREDIENTS AND THE ASSOCIATED FOOTNOTE IN SECTION II STATING "THESE ITEMS ARE LISTED ON THE SARA TITLE III SECTION 313 INVENTORY."

INGREDIENTS ARE PROPRIETARY. POTENTIAL HAZARDS HAVE BEEN EVALUATED AND PERTINENT INFORMATION HAS BEEN INCLUDED IN SECTIONS III-IX. EACH PROPRIETARY MATERIAL IS EITHER: 1. HELD A TRADE SECRET FROM CATO, 2. OSHA-NON-HAZARDOUS OR BELOW 1% IF OSHA HAZARDOUS AND 3. BELOW 0.1% IF POTENTIALLY CARCINOGENIC.

(cont.)

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SECTION II - HAZARDOUS INGREDIENTS (cont.)

-OTHER PRECAUTIONS: (cont.)

* -> These items are listed on the SARA TITLE III Section 313 inventory

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SECTION III - PHYSICAL DATA

| | |
|---|-------------------------------------|
| Boiling Range: EST.>600'F Deg. F | Vapor Density: Heavier than Air. |
| Evap. Rate: Slower than n-Butyl Acetate | Liquid Density: Lighter than Water. |
| Volatiles volume: N/A % | Wgt per gallon: 7.355 Pounds. |
| | Spec. Gravity: 0.88 |

Appearance: AMBER LIQUID
V.O.C.: N/A

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class: 1 Flash Point: 415'F(213'C)COC.LEL: N/AV

-EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL OR FOAM.

-SPECIAL FIREFIGHTING PROCEDURES:
WATER STREAM MAY SPREAD FIRE, USE WATER SPRAY ONLY TO COOL CONTAINERS NOT ON FIRE.

-UNUSUAL FIRE & EXPLOSION HAZARDS:
WILL FORM FLAMMABLE MIXTURES WITH AIR WHEN HEATED TO ABOUT THE FLASH POINT. WILL NOT FLASH SPONTANEOUSLY.

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SECTION V - HEALTH HAZARD DATA

-PERMISSIBLE EXPOSURE LEVEL:

TWA = 5 MG/M3; STEL = 10 MG/M3--AS OIL MIST--RESPIRATORY IRRITANT. SEE SECTION II FOR CONCISE INFORMATION CONCERNING INGREDIENTS HAVING A PEL.
THE PERMISSIBLE EXPOSURE LEVEL FOR PROPRIETARY ADDITIVE 5184 IS FOR OIL MI
THE TLV/PEL LISTED FOR PROPRIETARY ADDITIVE 5183 IS FOR OIL MIST.

-EFFECTS OF OVEREXPOSURE:

INHALATION: NOT EXPECTED TO BE ACUTELY TOXIC BY INHALATION. BREATHING PETROLEUM OIL MIST AT CONCENTRATIONS IN AIR THAT EXCEED THE RECOMMENDED EXPOSURE STANDARD CAN CAUSE RESPIRATORY IRRITATION OR DISCOMFORT. ANY PEL/TLV LISTED IN SECTION II OR V.1, IF ANY, MUST NOT BE EXCEEDED.

SKIN: EXPECTED TO CAUSE NO MORE THAN MINOR SKIN IRRITATION WITH PROLONGED OR REPEATED CONTACT. CAUTION: USED MOTOR OILS HAVE CAUSED SKIN CANCER IN ANIMAL TESTS. AVOID PROLONGED OR REPEATED SKIN CONTACT WITH USED MOTOR OILS.

EYES: EXPECTED TO CAUSE NO MORE THAN MINOR OR TEMPORARY EYE IRRITATION, IF ANY, BASED ON DATA FROM COMPONENTS.

SWALLOWING/INGESTION: MAY CAUSE IRRITATION, NAUSEA OR DIARRHEA. POSSIBLE ASPIRATION HAZARD.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE
(cont.)

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SECTION V - HEALTH HAZARD DATA (cont.)

-EFFECTS OF OVEREXPOSURE: (cont.)

KNOWN, BUT MAY AGGRAVATE PREVIOUSLY EXISTING SKIN DISORDERS. LISTED AS A POTENTIAL CARCINOGEN OR CARCINOGEN? NOT LISTED BY IARC, NTP, OR OSHA.

BASED ON PROPRIETARY ADDITIVE 5184 THIS PRODUCT MAY POSSIBLY CAUSE EYE IRRITATION AND MAY CAUSE ALLERGIC SKIN REACTION. BASED ON PROPRIETARY ADDITIVE 5183 THIS PRODUCT MAY CAUSE EYE IRRITATION AND MAY CAUSE ALLERGIC SKIN REACTION.

-FIRST AID:

INHALATION: IF RESPIRATORY DISCOMFORT OR IRRITATION OCCURS, MOVE PERSON TO FRESH AIR. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION AND GET MEDICAL ATTENTION IMMEDIATELY.

SKIN: WASH EXPOSED PORTION WITH SOAP AND WATER. LAUNDER SOILED CLOTHES BEFORE REUSE.

EYES: IMMEDIATELY FLUSH EYES WITH WATER FOR A MINIMUM OF 15 MINUTES OCCASIONALLY LIFTING THE LOWER AND UPPER LIDS. IF FILM OR IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

SWALLOWING/INGESTION: DO NOT INDUCE VOMITING; CONTACT A PHYSICIAN.

SECTION VI - REACTIVITY DATA

ABILITY: [] Unstable [x] Stable
HAZARDOUS POLYMERIZATION: [] May occur [x] Will not occur

-INCOMPATIBILITY

STRONG OXIDIZERS.

-CONDITIONS TO AVOID:

AVOID CONDITIONS THAT COULD GENERATE AN OIL MIST. DO NOT EXPOSE THE PRODUCT TO STRONG OXIDIZERS OR EXCESSIVE HEAT. AVOID PROLONGED OR REPEATED SKIN CONTACT WITH NEW OR USED PRODUCT.

-HAZARDOUS DECOMPOSITION PRODUCTS:

INCOMPLETE COMBUSTION CAN YIELD CARBON (SMOKE), CARBON MONOXIDE, VARIOUS HYDROCARBONS, OTHER TOXIC GASES, VAPORS OR PARTICULATES POSSIBLE.

SECTION VII - SPILL OR LEAK PROCEDURES

-STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

NOTIFY EMERGENCY RESPONSE PERSONNEL. EVACUATE AREA AND REMOVE IGNITION SOURCES. BUILD DIKE TO CONTAIN FLOW. REMOVE FREE LIQUID, DO NOT FLUSH TO SEWER OR OPEN WATER. PICK UP RESIDUE WITH INERT-ABSORBANT AND PLACE IN CLOSED CONTAINER FOR DISPOSAL.

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SECTION VII - SPILL OR LEAK PROCEDURES (cont.)

-WASTE DISPOSAL METHOD:

EPA HAZARDOUS WASTE? NO, UNLESS OTHERWISE INDICATED. READ FURTHER IN THIS SECTION TO DETERMINE IF OTHER ITEMS NEED TO BE CONSIDERED WHICH MAY AFFECT ALL INFORMATION IN THIS SECTION. EPA HAZARDOUS WASTE CODE NUMBER--NOT APPLICABLE, UNLESS OTHERWISE INDICATED ELSEWHERE IN THIS SECTION. EPA WASTE CHARACTERISTIC OR HAZARD CODE--NOT APPLICABLE, UNLESS OTHERWISE INDICATED ELSEWHERE IN THIS SECTION.

UTILIZE LICENSED WASTE DISPOSAL COMPANY. CONSIDER RECYCLING OR CONTROLLED INCINERATION. UTILIZE PERMITTED INDUSTRIAL WASTE DISPOSAL SITE. FOLLOW ALL LOCAL, STATE AND FEDERAL GUIDELINES. LIQUIDS ARE BANNED FROM LANDFILLING.

SECTION VIII - SPECIAL PROTECTION INFORMATION:

-RESPIRATORY PROTECTION:

UP TO 25 MG/M3, HALF-MASK ORGANIC VAPOR RESPIRATOR. UP TO 50 MG/M3, FULL-FACE ORGANIC VAPOR RESPIRATOR OR FULL-FACE SELF-CONTAINED RESPIRATOR. GREATER THAN 50 MG/M3, FIRE FIGHTING OR UNKNOWN CONCENTRATION, USE SELF-CONTAINED BREATHING APPARATUS WITH POSITIVE PRESSURE.

-VENTILATION:

MAINTAIN LOCAL OR DILUTION VENTILATION TO KEEP AIR CONCENTRATION BELOW 5 MG/M3. REQUEST ASSISTANCE OF SAFETY AND INDUSTRIAL HYGIENE PERSONNEL TO DETERMINE AIR CONCENTRATION.

-PROTECTIVE GLOVES:

FOR PROLONGED CONTACT OR FOR USED MOTOR OIL, USE NITRILE NEOPRENE GLOVES OR OTHER MATERIAL RESISTANT TO PETROLEUM OILS.

-EYE PROTECTION:

SAFETY GLASSES, CHEMICAL GOGGLES OR FACE SHIELD AS APPROPRIATE FOR EXPOSURE.

-OTHER PROTECTIVE EQUIPMENT:

NONE NORMALLY REQUIRED.

SECTION IX - SPECIAL PRECAUTIONS

-PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

STORE CLEAN, DRY, BELOW 120°F (50°C) TO PRESERVE FOR INTENDED USE. DO NOT STORE WITH STRONG OXIDIZERS. STORE AS OSHA CLASS III COMBUSTIBLE LIQUID.

-OTHER PRECAUTIONS:

DOT HAZARDOUS MATERIAL? NO
DOT SHIPPING NAME AND NUMBER - NOT APPLICABLE
DOT HAZARD CLASS - NOT APPLICABLE

RECOMMENDED CONSUMER WARNING

WARNING: CONTAINS PETROLEUM HYDROCARBON LUBRICANT. MAY BE HARMFUL IF INHALED OR SWALLOWED. USE ONLY WITH ADEQUATE VENTILATION. IF INGESTED, DO NOT INDUCE VOMITING; CONTACT A PHYSICIAN. USED MOTOR OIL HAS CAUSED SKIN CANCER IN ANIMAL TESTS. AVOID PROLONGED SKIN CONTACT WITH USED OILS.
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SECTION IX - SPECIAL PRECAUTIONS (cont.)

-OTHER PRECAUTIONS: (cont.)

KEEP AWAY FROM CHILDREN.

RECOMMENDED OSHA WARNING

WARNING: CONTAINS PETROLEUM HYDROCARBON LUBRICANT. MAY BE HARMFUL IF INHALED OR SWALLOWED. USE ONLY WITH ADEQUATE VENTILATION. USED MOTOR OIL HAS CAUSED SKIN CANCER IN ANIMAL TESTS. AVOID PROLONGED SKIN CONTACT WITH USED MOTOR OILS. FIRST AID: INHALATION - REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION AND GET MEDICAL ATTENTION IMMEDIATELY. INGESTION - DO NOT INDUCE VOMITING; CONTACT A PHYSICIAN. EYE CONTACT - FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF FILM OR IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. SKIN CONTACT - WASH EXPOSED PORTIONS WITH SOAP AND WATER.

CAUTION: EMPTY CONTAINERS RETAIN RESIDUE. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE THIS CONTAINER TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION. DO NOT ATTEMPT TO CLEAN. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED, AND PROMPTLY RETURNED TO A DRUM RECONDITIONER.

KEEP AWAY FROM CHILDREN.

REFER TO THE MATERIAL SAFETY DATA SHEET FOR ADDITIONAL INFORMATION.

DISCLAIMER

THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS PUBLICATION HAVE BEEN COMPILED FROM SOURCES BELIEVED TO BE RELIABLE AND TO REPRESENT THE BEST CURRENT OPINION ON THE SUBJECT AT THE TIME OF PUBLICATION. SINCE WE CANNOT ANTICIPATE OR CONTROL THE MANY DIFFERENT CONDITIONS UNDER WHICH THIS INFORMATION OR OUR PRODUCTS MAY BE USED, WE MAKE NO GUARANTEE THAT THE RECOMMENDATIONS WILL BE ADEQUATE FOR ALL INDIVIDUALS OR SITUATIONS. EACH USER OF THE PRODUCT DESCRIBED HEREIN SHOULD DETERMINE THE SUITABILITY OF THE DESCRIBED PRODUCT FOR HIS PARTICULAR PURPOSE AND SHOULD COMPLY WITH ALL FEDERAL, STATE AND LOCAL RULES AND REGULATIONS CONCERNING THE DESCRIBED PRODUCT.

ABBREVIATIONS:

| | | | |
|------|---------------------------|------|-------------------------------------|
| N/A | NOT APPLICABLE | PEL | PERMISSIBLE EXPOSURE LIMIT |
| N/K | NOT KNOWN | TWA | TIME WEIGHTED AVERAGE |
| N/AV | NOT AVAILABLE | TLV | THRESHOLD LIMIT VALUE |
| COC | CLEVELAND OPEN CUP | STEL | SHORT TERM EXPOSURE LIMIT |
| PMCC | PENSKI-MARTENS CLOSED CUP | | |
| G | GRAM | DOT | DEPARTMENT OF TRANSPORTATION |
| MG | MILLIGRAM | OSHA | OCCUPATIONAL SAFETY & HEALTH ADMIN. |

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SECTION IX - SPECIAL PRECAUTIONS (cont.)

-OTHER PRECAUTIONS: (cont.)

| | | |
|-------|--------------------------------------|---|
| M3 | CUBIC METER | SARA SUPERFUND AMEND. & REAUTHORIZ. ACT |
| LD 50 | LETHAL DOSE 50% | |
| LC 50 | LETHAL CONCENTRATION 50% | |
| EPA | ENVIRONMENTAL PROTECTION AGENCY | |
| SAE | SOCIETY OF AUTOMOTIVE ENGINEERS | |
| ISO | INTERNATIONAL STANDARDS ORGANIZATION | |

MAY REQUIRE NOTIFICATION BEFORE SALE IN AUSTRALIA, JAPAN,
KOREA, THE PHILIPPINES AND SWITZERLAND DUE TO COMPONENTS OF
PROPRIETARY ADDITIVE 5183.
