

U. S. OIL & REFINING CO.

M A T E R I A L S A F E T Y D A T A S H E E T

Page 1 of 6

**MIDGRADE UNLEADED
GASOLINE**

MSDS No. 11311020

Revised 8/12/98

U. S. OIL & REFINING CO.
3001 Marshall Ave.
Tacoma, WA 98421

EMERGENCY ASSISTANCE:
COMPANY: (253) 383-1651
CHEMTREC: (800) 424-9300

IMPORTANT: Read this MSDS before handling or disposing of this product.
Pass this information on to employees, customers and product users.

1. GENERAL

Trade Name: AUTOMOTIVE GASOLINE
Other Names: MIDGRADE UNLEADED GASOLINE

Chemical Family: HYDROCARBON
Generic Name: PETROLEUM NAPHTHAS (BLENDED)
DOT Shipping Name: GASOLINE, 3, UN1203, II

NFPA Hazard Rating: HEALTH: 1
FIRE: 3
REACTIVITY: 0
SPECIAL:

2. PRODUCT COMPONENTS

| Component | CAS Number | Percent |
|---|------------|---------|
| GASOLINE IS A COMPLEX MIXTURE OF HYDROCARBONS PRODUCED BY PROCESSING CRUDE OIL. IT CONTAINS PRIMARILY ALIPHATIC, OLEFINIC AND AROMATIC HYDROCARBONS IN THE RANGE OF C ₄ -C ₁₀ . | 8006-61-9 | 100 |

COMPONENTS INCLUDE:

| | | |
|---------------------------|-----------|-------|
| 1. TOLUENE | 108-88-3 | 0-10% |
| 2. XYLENE | 1330-20-7 | 0-10% |
| 3. BENZENE | 71-43-2 | 0-5% |
| 4. 1,2,4-TRIMETHYLBENZENE | 95-63-6 | 0-5% |
| 5. ETHYLBENZENE | 100-41-4 | 0-3% |
| 6. N-HEXANE | 110-54-3 | 0-3% |
| 7. CYCLOHEXANE | 110-82-7 | 0-1% |
| 8. NAPHTHALENE | 71-20-3 | 0-1% |

3. OCCUPATIONAL EXPOSURE LIMITS

| Substance | Value | Time/Type | Date | Source |
|-----------|---------|-------------|------|--------|
| GASOLINE | 300 PPM | 8 Hr PEL | 1989 | OSHA |
| | 500 PPM | 15 Min STEL | 1989 | OSHA |
| BENZENE | 1 PPM | 8 Hr PEL | 1989 | OSHA |
| | 5 PPM | 15 Min STEL | 1989 | OSHA |

4. HEALTH INFORMATION

HEALTH STUDIES HAVE SHOWN THAT MANY PETROLEUM HYDROCARBONE POSE POTENTIAL HAEALTH RISKS WHICH MAY VARY FROM PERSON TO PERSON. AS A PRECAUTION EXPOSURE TO LIQUIDS, VAPORS, MISTS OR FUMES SHOULD BE MINIMIZED.

HIGH VAPOR CONCENTRATIONS (GREATER THAN 1000 PPPM) ARE IRRITATING TO EYES AND THE RESPIRATORY TRACT, AND MAY CAUSE HEADACHES, DIZZINESS, ANESTHESIA, DROWSINESS, UNCONSCIOUSNESS, AND OTHER CENTRAL NERVOUS SYSTEM EFFECTS, INCLUDING DEATH.

WARNING: CONCENTRATED, PROLONGED OR DELIBERATE INHALATION OF THIS PRODUCT MAY CAUSE BRAIN OR NERVOUS SYSTEM DAMAGE. PROLONGED AND REPEATED EXPOSURE OF PREGNANT ANIMALS TO HIGH LEVELS OF TOLUENE (>1500 PPM) HAS BEEN REPORTED TO CAUSE FETAL DEVELOPMENTAL EFFECTS.

PROLONGED AND REPEATED SKIN CONTACT WITH THIS PRODUCT TENDS TO REMOVE SKIN OILS, POSSIBLY LEADING TO IRRITATION AND DERMATITIS.

PRODUCT CONTACTING THE EYES MAY CAUSE EYE IRRITATION.

THIS PRODUCT MAY CONTAIN UP TO 5 WEIGHT PERCENT BENZENE. BENZENE CAN CAUSE ANEMIA AND OTHER BLOOD DISEASES, INCLUDING LEUKEMIA (CANCER OF THE BLOOD-FORMING SYSTEM), AFTER PROLONGED AND REPEATED EXPOSURES AT HIGH CONCENTRATIONS (50-500 PPM). IT HAS ALSO CAUSED FETAL DEFECTS IN TESTS ON LABORATORY.

CONTAINS LIGHT HYDROCARBON COMPONENTS. LIFETIME STUDIES BY THE AMERICAN PETROLEUM INSTITUTE HAVE SHOWN THAT KIDNEY DAMAGE AND KIDNEY CANCER CAN OCCUR IN MALE RATS AFTER PROLONGED EXPOSURE AT ELEVATED CONCENTRATIONS OF TOTAL GASOLINE. KIDNEYS OF MICE AND FEMALE RATS WERE UNAFFECTED. THE U.S. EPA RISK ASSESSMENT FORUM HAS CONCLUDED THAT MALE RAT KIDNEY TUMOR RESULTS ARE NOT RELEVANT FOR HUMANS. TOTAL GASOLINE EXPOSURE ALSO PRODUCED LIVER TUMORS IN FEMALE MICE ONLY. THE IMPLICATION OF THESE DATA FOR HUMANS HAS NOT BEEN DETERMINED.

THE PRESENCE OF n-HEXANE IN THIS PRODUCT REPRESENTS A DISTINCT HAZARD OF PRODUCING PERIPHERAL POLYNEUROPATHY, A PROGRESSIVE DISORDER OF THE NERVOUS SYSTEM, WHICH WITH SUFFICIENT HIGH EXPOSURE HAS THE POTENTIAL OF BECOMING IRREVERSIBLE. THIS DISORDER HAS BEEN OBSERVED IN INDIVIDUALS EXPOSED REPEATEDLY TO HIGH VAPOR CONCENTRATIONS (1000-1500 PPM) OF n-HEXANE OVER A PERIOD OF SEVERAL MONTHS. THE OSHA PERMISSIBLE EXPOSURE LIMIT (TWA-PEL) IS 50 PPM FOR n-HEXANE.

INHALATION OF COMPONENTS OF EXHAUST FROM BURNING, SUCH AS CARBON MONOXIDE, MAY CAUSE DEATH AT HIGH CONCENTRATIONS. EXPOSURE TO EXHAUST OF THIS FUEL SHOULD BE MINIMIZED.

PRE-EXISTING MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE

BENZENE - INDIVIDUALS WITH LIVER DISEASE MAY BE MORE SUSCEPTIBLE TO TOXIC EFFECTS.

HEXANE - INDIVIDUALS WITH NEURALGIC DISEASE SHOULD AVOID EXPOSURE.

PETROLEUM SOLVENTS/PETROLEUM HYDROCARBONS - SKIN CONTACT MAY AGGRAVATE AN EXISTING DERMATITIS.

6_

5. FIRE AND EXPLOSION

Flash Point (Method): AP -43°C (D-56)**Flammable Limits (% Vol. in air)** LOWER: AP 1.3
at Normal Atmospheric Temperature UPPER: AP 8.2
and Pressure**Unusual Fire and Explosion Hazards:**

EXTREMELY FLAMMABLE! THIS MATERIAL RELEASES VAPORS AT OR BELOW AMBIENT TEMPERATURES. WHEN MIXED WITH AIR IN CERTAIN PROPORTIONS AND EXPOSED TO AN IGNITION SOURCE, THESE VAPORS CAN BURN IN THE OPEN OR EXPLODE IN CONFINED SPACES. BEING HEAVIER THAN AIR, FLAMMABLE VAPORS MAY TRAVEL LONG DISTANCES ALONG THE GROUND BEFORE REACHING A POINT OF IGNITION AND FLASHING BACK.

Extinguishing Media:

DRY CHEMICAL, FOAM, CARBON DIOXIDE, HALON. WATER FOG OR WATER SPRAY ARE OF VALUE FOR COOLING, BUT MAY NOT ACHIEVE EXTINGUISHMENT.

Special Firefighting Procedures:

FOR FIRES INVOLVING THIS MATERIAL, DO NOT ENTER ANY ENCLOSED FIRE SPACE WITHOUT PROPER PROTECTIVE EQUIPMENT, INCLUDING SELF-CONTAINED BREATHING APPARATUS. COOL TANKS AND CONTAINERS EXPOSED TO FIRE WITH WATER.

6. EMPLOYEE PROTECTION

Respiratory: AN APPROVED ORGANIC VAPOR RESPIRATOR, SUPPLIED AIR, OR SELF-CONTAINED BREATHING APPARATUS (SCBA) MUST BE USED WHEN VAPOR CONCENTRATIONS EXCEED THE OCCUPATIONAL EXPOSURE LIMITS.

Ventilation: USE ADEQUATE VENTILATION TO KEEP VAPOR CONCENTRATIONS OF THIS MATERIAL BELOW THE OCCUPATIONAL EXPOSURE LIMITS.

Eye: EYE PROTECTION (CHEMICAL-TYPE GOGGLES AND/OR FACE SHIELD) SHOULD BE WORN WHENEVER THERE IS A LIKELIHOOD OF SPLASHING OR SPRAYING LIQUID. CONTACT LENSES SHOULD NOT BE WORN. EYE WASH WATER SHOULD BE PROVIDED.

Skin: AVOID PROLONGED OR REPEATED SKIN CONTACT. IF CONDITIONS OR FREQUENCY OF USE PRESENT DANGER OF EXPOSURE, CLEAN AND IMPERVIOUS PROTECTIVE CLOTHING SUCH AS GLOVES, APRON, BOOTS, AND FACIAL PROTECTION SHOULD BE WORN.

Other: USE GOOD PERSONAL HYGIENE PRACTICES. IN CASE OF SKIN CONTACT, WASH WITH MILD SOAP AND WATER OR A WATERLESS HAND CLEANER. IMMEDIATELY REMOVE SOILED CLOTHING AND WASH THOROUGHLY BEFORE REUSE. DISCARD GASOLINE-SOAKED SHOES.

of 6

7. EMERGENCY AND FIRST AID

Inhalation: IMMEDIATELY REMOVE FROM CONTAMINATED AREA TO FRESH AIR. FOR RESPIRATORY DISTRESS, GIVE OXYGEN OR ADMINISTER CPR (CARDIOPULMONARY RESUSCITATION), IF NECESSARY. OBTAIN PROMPT MEDICAL ATTENTION.

Eye Contact: FLUSH WITH CLEAN LOW-PRESSURE WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN MEDICAL ATTENTION.

Skin Contact: IMMEDIATELY REMOVE CONTAMINATED CLOTHING. WASH AFFECTED AREA THOROUGHLY WITH SOAP AND WATER. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. WASH CLOTHING THOROUGHLY BEFORE REUSE, BUT DISCARD CONTAMINATED LEATHER GOODS.

Ingestion: DO NOT INDUCE VOMITING, SINCE ASPIRATION INTO THE LUNGS WILL CAUSE CHEMICAL PNEUMONIA. MUST OBTAIN MEDICAL ATTENTION PROMPTLY.

Note to Physician: TOXIC SIGNS AND SYMPTOMS MAY FOLLOW CONTACT WITH THE SKIN OVER LARGE AREAS OF THE BODY, INHALATION OF VAPORS OR INGESTION.

8. SPILL AND DISPOSAL

Actions if Material is Spilled or Leaked:

CONTAIN SPILL. REMOVE ALL IGNITION SOURCES AND SAFELY STOP FLOW OF SPILL. IN URBAN AREAS, CLEANUP ASAP; IN NATURAL ENVIRONMENTS, SEEK ADVICE FROM ECOLOGISTS. EVACUATE ALL NON-ESSENTIAL PERSONNEL. USE PROPER PROTECTIVE EQUIPMENT. BLANKET WITH FOAM OR USE WATER FOG TO DISPERSE VAPORS. PADS/ABSORBENT MATERIAL CAN BE USED. GASOLINE WILL FLOAT ON WATER AND RESULTING RUNOFF MAY CREATE AN EXPLOSION OR FIRE HAZARD. NOTIFY THE NATIONAL RESPONSE CENTER (800/424-8802) AND COMPLY WITH ALL LAWS. GASOLINE OR CONTAMINATED MATERIALS MAY BE HAZARDOUS TO HUMAN AND OTHER LIFE.

Waste Disposal Methods:

MAXIMIZE PRODUCT RECOVERY FOR REUSE PRIOR TO DISPOSAL. DISPOSE OF PRODUCT, CONTAMINATED MATERIAL, AND STORAGE TANK WATER BOTTOMS AS AN EPA "IGNITABLE HAZARDOUS WASTE" (D001), UNLESS PROVEN OTHERWISE. USE APPROVED TREATMENT, TRANSPORTERS, AND DISPOSAL SITES IN COMPLIANCE WITH ALL APPLICABLE LAWS. TANK BOTTOMS AND TANK WATER BOTTOMS MAY BE HAZARDOUS TO HUMAN, ANIMAL AND AQUATIC LIFE. IF SPILL IS INTRODUCED INTO A WASTEWATER SYSTEM, THE CHEMICAL AND BIOLOGICAL OXYGEN DEMAND WILL LIKELY INCREASE. POTENTIAL TREATMENT AND DISPOSAL METHODS INCLUDE LAND FARMING, INCINERATION AND LAND DISPOSAL, IF PERMITTED.

MIDGRADE UNLEADED GASOLINE

Page 5 of 6

9. PHYSICAL AND CHEMICAL DATA

Specific Gravity (H₂O = 1 @ 39.2°F): AP 0.72 to 0.83

Evaporation Rate (Ratio of Time): SLOWER THAN BUTYL ACETATE

Vapor Pressure: (REID-PSIA AT 100°F) AP 7 TO 15

Vapor Sp. Gr. (Air = 1.0 at 60°-90°F): AP 3.5

Solubility in Water: NEGLIGIBLE

Dry Point: AP 430 F

Volatile Characteristics: APPRECIABLE

Stability: STABLE

Appearance and Odor: COLORLESS, PETROLEUM NAPHTHA ODOR

Conditions to Avoid: HEAT, SPARKS, AND OPEN FLAME

Materials to Avoid: REACTS WITH STRONG ACIDS AND STRONG OXIDIZING MATERIALS

Hazardous Decomposition Products: BURNING OR EXCESSIVE HEATING MAY PRODUCE CARBON MONOXIDE AND OTHER HARMFUL GASES AND VAPORS INCLUDING OXIDES AND/OR OTHER COMPOUNDS OF LEAD.

10. REGULATORY INFORMATION

REPORTABLE QUANTITY (RQ), EPA 40 CFR 302 (CERCLA SECTION 102)

THE RQ FOR:

BENZENE - 10 LBS
CUMENE - 5000 LBS
CYCLOHEXANE - 1000 LBS
ETHYLBENZENE - 1000 LBS
NAPHYHALENE - 100 LBS
n-HEXANE - 1 LB
TOLUENE - 1000 LBS
XYLENE - 1000 LBS

Toxic Chemical Release Reporting, (SARA Section 313)

| Component | CAS Number | Percent (Typical) |
|-------------------|------------|-------------------|
| TOLUENE | 108-88-3 | <10 |
| XYLENE | 1330-20-7 | <10 |
| BENZENE | 71-43-2 | <4.6 |
| ETHYLBENZENE | 100-41-4 | <2 |
| 1,2,4-TRIMETHYLBZ | 95-63-6 | <5 |
| ETHYLBENZENE | 100-41-4 | <3 |
| n-HEXANE | 110-54-3 | <1 |
| CYCLOHEXANE | 110-82-7 | <1 |

Threshold Planning Quantity (TPQ), (SARA 301-304)

NO TPQ FOR PRODUCT OR ANY CONSTITUENT GREATER THAN 1% OR 0.1%
(CARCINOGEN)

EPA Hazard Classification:

Acute Health Hazard: X
Chronic Health Hazard: X
Fire Hazard: X
Pressure Hazard:
Reactive Hazard:
Not Applicable:

11. ADDITIONAL PRECAUTIONS

Handling & Storage:

STORE AND TRANSPORT IN ACCORDANCE WITH ALL APPLICABLE LAWS. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME! KEEP CONTAINERS CLOSED! GROUND ALL DRUMS AND TRANSFER VESSELS WHEN HANDLING. THE PRESENCE OF LEAD COMPOUNDS IN GASOLINE REQUIRES USE OF SPECIAL PROCEDURES AND PROTECTIVE EQUIPMENT FOR TANK, VESSEL, OR OTHER ENCLOSED SPACE ENTRY. REFER TO AMERICAN PETROLEUM INSTITUTE PUBLICATIONS RP 2015 AND 2015A FOR SPECIAL PRECAUTIONS. ALL ELECTRICAL EQUIPMENT IN GASOLINE STORAGE AND/OR HANDLING AREAS SHOULD BE INSTALLED IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, N.F.P.A. KEEP OUT OF REACH OF CHILDREN.

General Comments:

FOR USE ONLY AS A MOTOR FUEL. DO NOT USE GASOLINE AS A CLEANING AGENT.

SOME OF THE INFORMATION PRESENT AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE MIXTURE ITSELF.

-----**NOTE**-----Qualifications

| | | |
|--------------------------|---------------------------|---------------------------------|
| EQ = Equal | AP = Approximately | N/AV = Not Available |
| LT = Less Than | UK = Unknown | N/AP = Not Applicable |
| GT = Greater than | TR = Trace | N/DA = No Data Available |

Disclaimer of Liability

The information in this MSDS was obtained for sources which we believe are reliable. **HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS ACCURACY OR CORRECTNESS.**

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. **FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.**