

KOCH**MATERIAL SAFETY DATA SHEET****CHEMICAL PRODUCT & COMPANY IDENTIFICATION**

TRADE NAME	GASOLINE
CAS NUMBER	MIXTURE
MSDS NUMBER	5466
PRODUCT CODE	ND
SYNONYM(S)	UNLEADED GASOLINE NO LEAD GASOLINE MOTOR FUEL APPLICABLE TO ALL GRADES
MANUFACTURER	Koch Petroleum Group, LP. PO Box 2256 Wichita, KS 67201

TELEPHONE NUMBERS - 24 HOUR EMERGENCY ASSISTANCE

Chemtrec:	800-424-9300
Koch Security:	316-828-6777

TELEPHONE NUMBERS - GENERAL ASSISTANCE

8-5 (M-F)	316-828-6777
8-5 (M-F, CST) MSDS Assistance	316-828-8488

COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	Concentration*	Exposure Limits / Health Hazards
GASOLINE, UNLEADED	MIXTURE	100 %	Gasoline: 300 ppm 8-Hour TWA (ACGIH) 500 ppm 15-Min STEL (ACGIH)
XYLENES	1330-20-7	0 - 25 %	100 ppm 8-Hour TWA (OSHA) 100 ppm 8-Hour TWA (ACGIH) 150 ppm 15-Min STEL (ACGIH)
TOLUENE	108-88-3	0 - 20 %	200 ppm 8-Hour TWA (OSHA) 50 ppm 8-Hour TWA (ACGIH)
N-HEXANE	110-54-3	0 - 7 %	500 ppm 8-Hour TWA (OSHA) 50 ppm 8-Hour TWA (ACGIH)
BENZENE	71-43-2	0 - 5 %	1 ppm 8-Hour TWA (OSHA) 5 ppm 15-Min STEL (OSHA) 0.5 ppm 8-Hour TWA (ACGIH) 2.5 ppm 15-Min STEL (ACGIH)
1,2,4-TRIMETHYLBENZENE	95-63-6	0 - 3 %	25 ppm 8-Hour TWA (ACGIH)
ETHYLBENZENE	100-41-4	0 - 2 %	100 ppm 8-Hour TWA (OSHA) 100 ppm 8-Hour TWA (ACGIH) 125 ppm 15-Min STEL (ACGIH)

ND = No Data

NA = Not Applicable

Printed On 01/19/2000

Material Id 5466 Trade Name GASOLINE

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Ingredient Name	CAS Number	Concentration*	Exposure Limits / Health Hazards
CYCLOHEXANE	110-82-7	0 - 1 %	300 ppm 8-Hour TWA (OSHA) 300 ppm 8-Hour TWA (ACGIH)
CUMENE	98-82-8	0 - 1 %	50 ppm 8-Hour TWA (OSHA) 50 ppm 8-Hour TWA (ACGIH)
NAPHTHALENE	91-20-3	0 - 1 %	10 ppm 8-Hour TWA (OSHA) 10 ppm 8-Hour TWA (ACGIH) 15 ppm 15-Min STEL (ACGIH)

*Values do not reflect absolute minimums and maximums; these values are typical which may vary from time to time.

This Material Safety Data Sheet is intended to communicate potential health hazards and potential physical hazards associated with the product(s) covered by this sheet, and is not intended to communicate product specification information. For product specification information, contact your Koch Petroleum Group, LP. representative.

3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HEALTH HAZARDS

DANGER!

MAY BE IRRITATING TO THE SKIN, EYES AND RESPIRATORY TRACT
MAY BE HARMFUL OR FATAL IF SWALLOWED OR INHALED
OVEREXPOSURE MAY CAUSE CNS DEPRESSION
ASPIRATION HAZARD IF SWALLOWED-CAN ENTER LUNGS AND CAUSE DAMAGE
MAY CAUSE CARDIAC SENSITIZATION
POTENTIAL REPRODUCTIVE HAZARD
POTENTIAL CANCER HAZARD
DANGER-CONTAINS BENZENE-CANCER HAZARD

FLAMMABILITY HAZARDS

EXTREMELY FLAMMABLE
FORMS EXPLOSIVE MIXTURES WITH AIR
MAY CAUSE FLASH FIRE

REACTIVITY HAZARDS

STABLE

POTENTIAL HEALTH EFFECTS, SKIN

SLIGHTLY TO MODERATELY IRRITATING. Contact may cause reddening, itching and inflammation. Repeated or prolonged contact may result in drying, reddening, itching, pain, inflammation, cracking and possible secondary infection with tissue damage. Defatting agent.

Absorption from prolonged or repeated skin contact may cause systemic toxicity.

POTENTIAL HEALTH EFFECTS, EYE

Direct contact may cause irritation, redness, tearing and blurred vision.

POTENTIAL HEALTH EFFECTS, INHALATION

SLIGHTLY TOXIC. Breathing of the mists, vapors or fumes may irritate the nose, throat and lungs. Symptoms may include sore throat, coughing, labored breathing, sneezing and burning sensation, depending on the concentration and duration of exposure.

Exposure to high concentrations of mists may lead to oil chemical pneumonia.

May cause central nervous system depression or effects. Symptoms may include headache, excitation, euphoria, dizziness, incoordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death, depending on the concentration and duration of exposure. Repeated or prolonged exposures may cause behavioral changes.

May cause cardiac sensitization, including arrhythmias (irregular heart beats) and death due to cardiac arrest.

Overexposure to this material may cause systemic damage including target organ effects listed under "Special Toxic Effects."

Other specific symptoms of exposure are listed under "Special Toxic Effects."

POTENTIAL HEALTH EFFECTS, INGESTION

SLIGHTLY TOXIC. May cause irritation of the mouth, throat and gastrointestinal tract. Symptoms may include salivation, pain, nausea, vomiting and diarrhea.

Aspiration into lungs may cause chemical pneumonia and lung damage.

Exposure may also cause central nervous system symptoms similar to those listed under "Inhalation" (see Inhalation section).

Overexposure to this material may cause systemic damage including target organ effects listed under "Special Toxic Effects."

Other specific symptoms of exposure are listed under "Special Toxic Effects."

SPECIAL TOXIC EFFECTS

Acute or chronic overexposure to this material or its components may cause systemic toxicity, including adverse effects to the following: kidney, liver, spleen, pancreas, pituitary, thyroid, adrenals, thymus, respiratory and central nervous systems.

Exposure may cause the following specific symptoms, depending on the concentration and duration of exposure: anemia, pallor, nervousness, loss of appetite and anxiety.

Wholly vaporized unleaded gasoline produced an increased incidence of liver cancers in female mice and kidney cancers in male rats following a two-year inhalation period. Subsequent investigations indicate that kidney damage, linked to kidney cancer, may be specific to the male rat. IARC has determined that there is limited evidence for the carcinogenicity of unleaded gasoline in experimental animals and inadequate evidence in humans. (IARC Class-2B) Solvent extracts of gasoline exhaust particles produced skin cancer in laboratory animals, leading IARC to categorize gasoline engine exhaust as a possible human cancer hazard. Has been shown to be positive in mutagenicity assays.

This material contains benzene. Benzene is carcinogenic to laboratory animals when given by intubation or by inhalation. There is an association between occupational exposure to benzene and human leukemia. Carcinogenic determinations: IARC Human positive and Animal suspected carcinogen; NTP Known carcinogen; ACGIH Suspected carcinogen; OSHA carcinogen. Acute benzene poisoning causes central nervous system depression. Chronic exposure affects the hematopoietic system causing blood disorders including anemia and pancytopenia. Mutagenic and clastogenic in mammalian and non-mammalian test systems. Reproductive or developmental toxicant only at doses that are maternally toxic, based on tests with animals.

This material contains n-hexane. n-Hexane is a skin, eye and respiratory tract irritant. It is a cardiac sensitizer, central nervous system depressant and a neurotoxin. Acute exposure may result in dizziness, asphyxia, anesthesia, brain damage and cardiac arrest at high concentrations. Repeated or prolonged exposure may result in peripheral neuropathy, characterized by progressive weakness, facial and limb numbness, color vision abnormalities and paralysis of the limbs. It has been observed to cause damage to the testes and fetal effects in a two generation animal study. NTP has reported it to cause liver tumors in female mice. Persons with skin, lung, liver or kidney disorders may be at increased risk.

This material may contain ethylbenzene. Ethylbenzene has shown clear evidence of carcinogenicity in male rats and some evidence of carcinogenicity in female rats and male and female mice.

Has been shown to be positive in mutagenicity assays.

This product contains toluene, xylene and C9 aromatics which may cause adverse reproductive and/or developmental effects. Pregnant women may be at an increased risk from exposure. Consumption of alcoholic beverages may enhance toxic effects.

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as solvent or painter's syndrome). Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

Pre-existing medical conditions which may be aggravated by exposure include disorders of the skin, kidney, liver, cardiovascular and respiratory systems.

WARNING: The use of any hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of combustion products and inadequate oxygen levels.

4 FIRST AID MEASURES

SKIN

Immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Place contaminated clothing in closed container for storage until laundered or discarded. If clothing is to be laundered, inform person performing operation of contaminant's hazardous properties. Discard contaminated leather goods.

EYE

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.

INHALATION

Remove to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure airway is clear and give oxygen.

Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

INGESTION

Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs keep head below hips to prevent aspiration and monitor for breathing difficulty. Gastric lavage should be performed only by qualified medical personnel.

Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

NOTES TO PHYSICIAN

Aspiration of low viscosity petroleum hydrocarbons may cause severe pneumonitis (oil pneumonia). Vomiting should not be induced. In unconscious victims, use of an endotracheal tube should be considered, if gastric lavage is undertaken. If spontaneous vomiting has occurred, the patient should be monitored for symptoms of pneumonitis, as this effect may be delayed up to 48 hours.

In cases of acute poisoning, artificial respiration with administration of oxygen is useful for support. DO NOT GIVE EPINEPHRINE, EPHEDRINE, OR SIMILAR ADRENERGIC DRUGS. THEY MAY INDUCE FATAL VENTRICULAR FIBRILLATION. Electrocardiographic monitoring should be carried out with severely ill patients to anticipate possible cardiac arrest.

Anemia may require the usual supportive measures. Medical evaluation of acute overexposure should include hematological determinations until stable. In severe acute and chronic poisoning, both renal and hepatic damage may occur and should be anticipated in such cases. Respiratory and pulmonary problems may require special attention. After severe acute symptoms have been alleviated, it may be advisable to consider periodic monitoring of the patient until such time as the likelihood of other adverse effects can be discounted.

INHALATION ABUSE: Gasoline is one of the solvents used by chemical substance abusers. These patients may present acute or chronic CNS signs or symptoms as well as arrhythmias.

5 FIRE FIGHTING MEASURES**HAZARDOUS COMBUSTION PRODUCTS**

Combustion may produce COx, NOx, SOx, reactive hydrocarbons and irritating vapors.

EXTINGUISHING MEDIA

Use water spray, dry chemical, alcohol foam, all purpose AFFF or carbon dioxide to extinguish fire.

BASIC FIRE FIGHTING PROCEDURES

Evacuate area and fight fire from a safe distance.

If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak.

Use water spray to cool adjacent structures and to protect personnel. Shut off source of flow if possible. Stay away from storage tank ends. Withdraw immediately in case of rising sound from venting safety device or any discoloration of storage tank due to fire.

Firefighters must wear MSHA/NIOSH approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

UNUSUAL FIRE & EXPLOSION HAZARDS

Extremely flammable. Vapors form flammable or explosive mixtures with air at room temperature. Vapor or gas may spread to distant ignition sources and flash back.

Explosion hazard if exposed to extreme heat or to physical or thermal shock.

Fires involving this product may release COx, NOx, SOx, reactive hydrocarbons and irritating vapors.

Flash Point	-45 F (-43 C)
Autolgnition Temperature	536 - 853 F (280-456 C)
Flammability Limits in Air, Lower, % by Volume	1.2 %
Flammability Limits in Air, Upper, % by Volume	7.6 %

6 ACCIDENTAL RELEASE MEASURES

EMERGENCY ACTION

Eliminate and/or shut off ignition sources and keep ignition sources out of the area. Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind. Isolate for 1/2 mile in all directions if tank, rail car or tank truck is involved in release. Evacuate area endangered by release as required. (See Personal Protection Information Section.)

ENVIRONMENTAL PRECAUTIONS

Eliminate all sources of ignition. Isolate hazard area and deny entry.

If product is released to the environment, take immediate steps to stop and contain release. Caution should be exercised regarding personnel safety and exposure to the released product. Notify local authorities and the National Response Center, if required.

SPILL OR LEAK PROCEDURE

Keep ignition sources out of area and shut off all ignition sources. Absorb spill with inert material (e. g. dry sand or earth) then place in a chemical waste container. Large Spills: Dike far ahead of liquid spill for later disposal. Stop leak when safe to do so.

See Exposure Controls/Personal Protection (Section 8).

7 HANDLING & STORAGE

HANDLING

Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Use non-sparking tools. Do not cut, grind, drill, weld or reuse containers unless adequate precautions are taken against these hazards.

Do not eat, drink or smoke in areas of use or storage.

STORAGE

Store in tightly closed containers in a cool, dry, isolated, well-ventilated area away from heat, sources of ignition and incompatibles. Avoid contact with strong oxidizers.

Empty containers may contain product residue. Do not reuse without adequate precautions.

Do not eat, drink or smoke in areas of use or storage.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

Ventilation and other forms of engineering controls are the preferred means for controlling exposures.

EYE PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)

Wear chemical safety goggles and face shield. Have eye washing facilities readily available where eye contact can occur.

SKIN PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)

Avoid skin contact with this material. Use appropriate chemical protective gloves when handling.

Use good personal hygiene.

RESPIRATORY PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)

A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

9 PHYSICAL & CHEMICAL PROPERTIES

ODOR AND APPEARANCE

CLEAR, COLORLESS TO LIGHT COLORED LIQUID WITH AN AROMATIC ODOR

Boiling Point	80 F (27 C)
Specific Gravity	0.7 - 0.75
Melting Point	-130 F (-90 C)
Percent Volatile	100 %
Vapor Pressure	348 - 750 mmHg
Vapor Density	3 - 4
Bulk Density	ND
Solubility in Water	NEGLIGIBLE
Octanol/Water Partn	ND
Volatile Organic	ND
Pour Point	ND
pH Value	ESSENTIALLY NEUTRAL
Freezing Point	ND
Viscosity	ND
Evaporation Rate	MODERATELY FAST
Molecular Formula	MIXTURE
Molecular Weight	NA
Chemical Family	HYDROCARBON MIXTURE
Odor Threshold	ND

10 STABILITY & REACTIVITY

STABILITY/INCOMPATIBILITY

Incompatible with oxidizing agents. See precautions under Handling & Storage (Section 7).

HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS

Combustion may produce COx, NOx, SOx, reactive hydrocarbons and irritating vapors.

11 TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA

See Special Toxic Effects (Section 3).

12 ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

ND

13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

This product, as supplied, when discarded or disposed of, is a hazardous waste according to Federal Regulations (40 CFR 261) due to its ignitability and benzene content. Under the Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determine, at the time of disposal, whether the material is a hazardous waste subject to RCRA.

The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can occur only in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Disposal of this material must be conducted in compliance with all federal, state and local regulations.

14 TRANSPORT INFORMATION**BILL OF LADING - BULK (U. S. DOT)**

Gasoline, 3, UN1203, PG II

U. S. Department of Transportation (DOT) Requirements**General Transportation Information for Bulk Shipments**

Proper Shipping Name	Gasoline		
Hazard Class	3	UN/NA Code	UN1203
Packaging Group	PG II		
Labels Required	Flammable Liquid		
Placards Required	Flammable Liquid, UN1203		
Reportable Quantity	See Regulatory Information (Section 15)		

General Transportation Information for Non-Bulk Shipments

Proper Shipping Name	Gasoline		
Hazard Class	3	UN/NA Code	UN1203
Packaging Group	PG II		
Labels Required	Flammable Liquid		
Placards Required	Flammable Liquid, UN1203		
Reportable Quantity	See Regulatory Information (Section 15)		

15 REGULATORY INFORMATION**FEDERAL REGULATIONS**

All known major components of this product are listed on the TSCA Inventory.

Consult OSHA's Benzene standard 29 CFR 1910.1028 for provisions on air monitoring, employee training, medical monitoring, etc.

A release of this product, as supplied, is exempt from reporting under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) by the petroleum exclusion. Releases may be reportable to the National Response Center (800-424-8802) under the Clean Water Act, 33 U.S.C. 1321(b)(3) and (5). Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Failure to report may result in substantial civil and criminal penalties.

This product contains one or more components designated as hazardous substances or toxic pollutants pursuant to the Federal Clean Water Act (40 CFR 116.4 Table A; 40 CFR 401.15). Any unpermitted introduction of this product into a facility stormwater or wastewater discharge may constitute a violation of the Clean Water Act. Facilities must notify the appropriate permitting agency prior to introducing this product into the aforementioned discharges.

This product contains one or more substances listed as hazardous, toxic or flammable air pollutants under Section 112 of the Clean Air Act.

There may be specific regulations at the local, regional or state/provincial level that pertain to this product.

STATE REGULATIONS

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

SARA TITLE III RATINGS

Immediate Hazard: X	Delayed Hazard: X	Fire Hazard: X	Pressure Hazard: -
Reactivity Hazard: -			

NFPA RATINGS

Health	1	Flammability	3	Reactivity	0	Special Hazards	-
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HMIS RATINGS

Health	2*	Flammability	3	Reactivity	0
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Following ingredients of this product are listed in SARA313

SARA Listed Ingredient Name	CAS Number	Maximum %
XYLENES	1330-20-7	25.0
TOLUENE	108-88-3	20.0
N-HEXANE	110-54-3	7.0
BENZENE	71-43-2	5.0
1,2,4-TRIMETHYLBENZENE	95-63-6	3.0
ETHYLBENZENE	100-41-4	2.0
CYCLOHEXANE	110-82-7	1.0
CUMENE	98-82-8	1.0
NAPHTHALENE	91-20-3	1.0

16 OTHER INFORMATION**DISCLAIMER**

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, MSDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

Current Revision Date 23-Dec-1998

Replaces Sheet Dated

22-Sep-1998

Completed By Safety & Emergency Response, Koch Industries, Inc.