

Gasoline Standard.
Product Code: AR3003.
CAS NO. 86290-81-5.
Version 1.1
Effective Date: 14.01.2013.
Regulation: 2003/30/EC

MATERIAL SAFETY DATA SHEET

1. INDITIFICATION OF THE SUBTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING :

Material Name : Gasoline Standard, CAS NO. 86290-81-5
% W : 100 %
Chemical Name : Gasoline
Pack : 100 mL.

Product Code : AR3003 : 0.0103% : Weight percent Sulfur = 0.0103% : Standard Deviation : 0.0010

Manufacturer Contact Details :

Alpha Resources, Inc.

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2. HAZARD IDENTIFICATION:

Emergency Overview

DANGER!

Extremely Flammable liquid and vapor Harmful if swallowed, Skin Irritant

May cause eye and respiratory irritation Cancer Hazard – Contains material which can cause cancer.

Physical form	:	Liquid
Appearance	:	Clear to amber
Odor	:	Strong, Gasoline

Potential Health Effects

Eyes: Contact with eyes may cause irritation, redness, tearing, stinging, watering and blurred vision.

Skin: Contact with skin may cause irritation, itching, redness and skin damage. Prolonged or repeated contact may cause drying and cracking of the skin, and may also cause dermatitis and inflammation. (See also section 11).

Inhalation: Breathing high concentration can be harmful. Throat and lung irritation may occur. Central nervous system effects including nausea, euphoria, dizziness, headache, fatigue, drowsiness or unconsciousness may occur due to long term or high concentration exposure to vapors. **Ingestion:** Toxic if swallowed. This product may cause nausea, vomiting, dizziness, drowsiness, diarrhea if swallowed. Central nervous system effects may be caused. Swallowing this product can result in severe lung damage and/or death.

Ingestion: May cause burning of mouth, nausea and vomiting.

Chronic Overexposure: Prolonged inhalation may adversely affect respiratory function.

Acute Overexposure: Harmful if swallowed. May be harmful if inhaled. May be harmful if absorbed through the skin. Causes eye and skin irritation.

Carcinogenic effects: Contains material that may cause cancer depending on the level and duration of exposure.

Target organs: Contains material that may cause damage to humans organs such as (but not limited to) blood, kidneys, lungs, liver, eye, skin, nervous system and upper respiratory tract.

Signs / Symptoms: When overexposed to this product effects such as nausea, vomiting, blurred vision, respiratory failure, central nervous system depression,

LABEL ELEMENTS :

This material is DOT regulated material, Labeling according to Regulation (EC) No 1272/2008 .

Symbol(s) :



Signal Words : Danger

USA DOT : UN 1203 Flammable Liquid, Gasoline, Class 3.1, Pkg Group 3

Labeling according to Directive 1999/45/EC / 67/548/EEC

EC Symbols : Xn Harmful. N Dangerous for the environment



EC Classification : Harmful. Irritant. Dangerous for the environment.

EC Risk Phrases : Irritating to skin.
Harmful: may cause lung damage if swallowed.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

EC Safety Phrases : Do not breathe gas/fumes/vapour/spray.
Avoid contact with skin.
Use only in well-ventilated areas.
Avoid release to the environment.
If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

3. COMPOSITION/INFORMATION ON INGREDIENTS :

Substance

CAS No. : 86290-81-5

COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS #	Concentration %	ACGIH	OSHA
Gasoline	86290-81-5	100	TWA – 300 STEL – 500	N/A
Benzene	71-43-2	.1 -4.9	TWA – 0.5 STEL – 2.5	TWA – 1 STEL – 5
n-Butane	106-97-8	<10	TWA – 800	N/A
Ethly Alcohol	64-17-5	0-10	TWA – 100	N/A
Ethyl Benzene	100-41-4	<3	TWA – 100 STEL – 125	N/A.
N-Hexane	110-54-3	05-4	TWA – 50	TWA – 500
Methyl-tertiary butyl ether	1634-04-4	0-15	TWA – 50	N/A

Tertiary-amyl methyl ether	994-05-8	0-17.2	N/A	N/A
Toluene	108-88-3	1-25	TWA – 50	TWA – 200
1,2,4-Trimethylbenzene	95-63-6	<6	TWA – 25	N/A
Xylene, mixed isomers	1330-20-7	1-15	TWA – 100 STEL – 150	TWA – 100

TWA – Time Weighted Average
STEL – Short Term Exposure Limit

CAS NO.	%W	CHEMICAL NAMES	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)
8006-61-9	100	GASOLINE	300 PPM 500 PPM STEL	300 PPM 500 PPM STEL

4. FIRST AID MEASURES :

Eye contact: Flush eyes immediately with fresh, cool water for at least 15 minutes. If irritation or redness or any symptoms persist, seek medical attention.

Skin contact: Remove contaminated clothes and shoes. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, wash affected area thoroughly with soap and water. If irritation or redness develops, seek medical attention.

Inhalation (Breathing): If inhaled, immediately move person to fresh air. If there is difficulty breathing, give oxygen. If not breathing, immediately give artificial respiration. Seek medical attention.

Ingestion (Swallowing): This product may be harmful or fatal if swallowed. This product may cause nausea, vomiting, diarrhea and restlessness. Do not induce vomiting. Do not give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is unconscious or drowsy, place on the left side with the head down. Seek immediate medical attention.

Notes to Physician: This material sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Inhalation overexposure can produce toxic effects. Monitor respiratory distress. If difficulty in breathing evaluate upper respiratory tract inflammation, bronchitis and pneumonitis. Administer supplemental oxygen as required. If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

5. FIRE FIGHTING MEASURES :

NFPA Hazard Class: Health = 1 ; Flammability = 3 ; Instability = 0

FLAMMABLE PROPERTIES

Flammable

Flash Point: -40 F ASTM D-56

Flammable Limits: (% by Volume in Air): Lower: 1.4 Upper: 7.4

AUTO-IGNITION TEMPERATURE: 495 F

HAZARDOUS COMBUSTION PRODUCTS: Sulfur oxides and hydrogen sulfide, both of which are toxic, may be released upon combustion. Vapor accumulation could flash and/or explode if ignited. A complex mixture of airborne solid, liquid, particulates and gases will evolve when the material undergoes pyrolysis or combustion. Carbon monoxide and other unidentified organic compounds may be formed upon combustion. Nitrogen oxides, sulfur oxides and metal oxides are also possible products.

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or CO₂. Do not use a direct stream of water. Product will float and can be re-ignited on surface of water.

SPECIAL PROPERTIES : Flammable liquid! This material can be ignited by heat, sparks, flames or other sources of ignition. Vapors may travel long distances to a source where they can ignite and flash back, or explode. A mixture of vapor and air can create an explosion hazard in confined spaces. If container is not properly cooled, it can rupture on the heat of a fire.

FIREFIGHTING INSTRUCTIONS: Wear self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode when fighting fires. Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter, especially if sprayed into containers of hot, burning liquid.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS : Fire fighters should wear appropriate protective equipment and **Fire Fighters** self contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES :

PERSONAL PRECAUTIONS: This material is extremely flammable. Eliminate all ignition sources. Keep all hot metal surfaces away from spill/release. All equipment used when handling this material must be grounded.

SPILL PRECAUTIONS: Stay upwind and away from spill. Notify persons down wind of the spill, isolate spill area and keep unauthorized personnel out. If it can be done with minimal risk, try to stop spill. Always wear protective equipment, including respiratory protection. Contact emergency personnel.

ENVIRONMENTAL PRECAUTIONS: Prevent spilled material from entering sewers, drains, soil, and natural waterways. Use foam or sorbents to minimize vapors (section 5). Spilled material may be absorbed into an appropriate absorbent material.

METHODS FOR CLEANING Up: Notify fire authorities and appropriate federal, state and local agencies. Immediate cleanup is recommended.

7. HANDLING AND STORAGE :

HANDLING: Flammable liquid and vapor. To be used only as a motor fuel. Avoid inhalation of vapors and contact with skin. Wash hands thoroughly after handling this material. Use in a well ventilated area away from all ignition sources. Use product with caution around heat, sparks, static electricity and open flames. Static electricity may ignite vapors and cause fire. Empty containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks or other ignition sources. They may explode and cause injury and/or death. Empty drums should be completely drained, properly bunged, and returned promptly to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations..

STORAGE: Store in approved containers only. Keep in tightly closed containers in cool, dry, well ventilated areas. Keep isolated away from heat, sources of ignition and hot metal surfaces.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION :

Engineering controls: Provide ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below their occupational exposure limits. Eyewash stations and safety showers should be located near the workstation.

Personal Protection :

Eye Protection: Keep away from eyes. Safety glasses complying with approved standards should be worn. Chemical type goggles should be worn.

Skin Protection: Keep away from skin. Skin protection should be worn. Chemical resistant, impervious gloves should be worn. Always follow good personal hygiene practices after handling the material.

Respiratory Protection: Approved respiratory equipment must be used if a risk assessment indicates it is necessary. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn.

General Protection: Use this material in well ventilated areas. Ventilation equipment should be explosion proof also.

Component	Applicable Workplace Exposure Limits	
Gasoline	ACGIH –	TWA: 300 ppm (8 hours) STEL: 500 ppm (15 minutes)
Benzene	ACGIH –	TWA: 0.5 ppm (8 hours) STEL: 2.5 ppm (15 minutes)
	OSHA –	TWA: 1 ppm (8 hours) STEL: 5 ppm (15 minutes)
Toluene	ACGIH –	TWA: 20 ppm (8 hours)
	OSHA –	TWA: 200 ppm (8 hours) CEIL: 300 ppm PEAK: 500 ppm (10 minutes)
Xylene (all isomers)	ACGIH –	TWA: 100 ppm (8 hours) STEL: 150 ppm (15 minutes)
	OSHA –	TWA: 100 ppm (8 hours)
Hexane (other isomers)	ACGIH –	TWA: 500 ppm (8 hours) STEL: 1000 ppm (15 minutes)
n-Hexane	ACGIH –	TWA: 50 ppm (8 hours)
	OSHA –	TWA: 500 ppm (8 hours)
Cyclohexane	ACGIH –	TWA: 100 ppm (8 hours)
	OSHA –	TWA: 300 ppm (8 hours)
Octanes (all isomers)	ACGIH –	TWA: 300 ppm (8 hours)
	OSHA –	TWA: 500 ppm (8 hours)
Heptane (all isomers)	ACGIH –	TWA: 400 ppm (8 hours) STEL: 5000 ppm (15 minutes)
	OSHA –	TWA: 500 ppm (8 hours)
Ethanol	ACGIH –	TWA: 1000 ppm (8 hours)
	OSHA –	TWA: 1000 ppm (8 hours)
Pentanes (all isomers)	ACGIH –	TWA: 600 ppm (8 hours)
	OSHA –	TWA: 1000 ppm (8 hours)
Trimethylbenzenes (all isomers)	ACGIH –	TWA: 25 ppm (8 hours)
Ethylbenzene	ACGIH –	TWA: 100 ppm (8 hours) STEL: 125 ppm (15 minutes)
	OSHA –	TWA: 100 ppm (8 hours)
Cumene	ACGIH –	TWA: 50 ppm (8 hours)
	OSHA –	WA: 50 ppm (8 hours)
Methyl Tertiary Butyl Ether (MTBE)	ACGIH –	TWA: 50 ppm (8 hours)
Tertiary Amyl Methyl Ether (TAME)	ACGIH –	TWA: 20 ppm (8 hours)

9. PHYSICAL AND CHEMICAL PROPERTIES :

APPEARANCE	:	Clear, colorless to amber, aromatic, volatile liquid.
BOILING POINT	:	85 F
FREEZE-MELT POINT	:	N/A
VAPOR PRESSURE	:	Unknown
VOLATILITY	:	720 – 770 g/l VOC (w/v)
VAPOR DENSITY	:	3.0 – 4.0
VISCOSITY (AT 40 °C)	:	< 1
SOLUBILITY IN WATER	:	Insoluble
SPECIFIC GRAVITY	:	0.76
ph	:	N/A
ODOR	:	Hydrocarbon/petroleum odor
AUTO IGNITION TEMPERATURE :		495 F
EVAORATION RATE	:	10-11 (N-Butyl Acetate = 1)

10. STABILITY AND REACTIVITY :

CHEMICAL STABILITY	:	Stable. Extremely flammable liquid and vapor. Vapor can cause fire.
INCOMPATIBILITY	:	Heat, sparks, flame, contact with strong oxidizing agents, and build up of static electricity.
MATERIALS TO AVOID	:	Keep away from strong oxidizing agents such as acids, chlorine, hydrogen peroxide and oxygen.
HAZARDOUS DECOMPOSITION PRODUCTS	:	Carbon monoxide, carbon dioxide, nitrogen and sulfur oxides, smoke, fumes, unburned hydrocarbons and other products of incomplete combustion.
HAZARDOUS POLYMERIZATION	:	Not expected to occur.

11. TOXICOLOGICAL INFORMATION

Oral toxicity: Almost non-toxic. LD 50: > 2000 mg/kg (species: rats).

Dermal toxicity: Almost non-toxic. LD 50: > 2000 mg/kg (species: rabbits).

Inhalation toxicity: Almost non-toxic. LD 50: > 5 mg/l (species: rats).

Eye irritation: Almost non-irritating. Draize score: > 6 and < 15 (species: rabbits).

Skin irritation: Irritant. Primary irritation index: > 3 and < 5 (species: rabbits).

Other data: Inhalation of high concentrations of vapors or mists may cause respiratory system irritation and damage. It may also result in the damage and depression of the central nervous system and may cause death. Prolonged contact with the material may cause severe skin irritation.

Subchronic toxicity: Dermal studies resulted in significant irritation but not systematic toxicity (species: rabbits). Inhalation exposures (90 day, approximately 1500 ppm vapor) produced light hydrocarbon nephropathy but no significant systemic toxicity (species: rats).

Neurotoxicity: Repeated and prolonged exposures to high concentrations of vapor has been reported to result in central nervous system damage and eventually, death. In a study in which ten human volunteers were exposed for 30 minutes to approximately 200, 500 or 1000 ppm concentrations of gasoline vapor, irritation of the eyes was the only significant effect observed, based on both subjective and objective assessments. However, no persistent neurotoxic effects were observed in subchronic inhalation studies of gasoline.

Reproductive toxicity: An inhalation study with rats exposed to 0, 400 and 1600 ppm of wholly vaporized unleaded gasoline, 6 hours per day on day 6 through 16 of gestation, showed no teratogenic effects nor indication of toxicity to either the mother or the fetus. Another inhalation study in rats exposed to 3000, 6000, or 9000 ppm of gasoline vapor, 6 hours per day on day 6 through 20 of gestation, also showed no teratogenic effects nor indications of toxicity to either the mother or the fetus.

Chronic toxicity: A lifetime mouse skin painting study of unleaded gasoline applied at 50 microliters, three times weekly, resulted in some severe skin irritation and changes, but no statistically significant increase in skin cancer or cancer to any other organ. Lifetime inhalation of wholly vaporized unleaded gasoline over 2000 ppm has caused increased liver tumors in female mice and increased kidney tumors in male rats. The EPA has concluded that mechanism by which wholly vaporized unleaded gasoline causes kidney damage is unique to the male rat. The effects in that species (kidney damage and cancer) should not be used in human risk assessment.

Other toxic effects Extremely hazardous in case of ingestion. on humans Very hazardous in case of eye contact. Hazardous in case of skin contact. Slightly hazardous in case of inhalation.

Carcinogenic effects: Contains material that may cause cancer depending on the level and duration of exposure.

Target organs: Contains material that may cause damage to humans organs such as (but not limited to) blood, kidneys, lungs, liver, eye, skin, nervous system and upper respiratory tract.

12. ECOLOGICAL INFORMATION :

Ecotoxicity: This material may be toxic to aquatic organisms such as algae and daphnia. It has also shown to be toxic to fish.

Environmental fate: The material is expected to be readily biodegradable. When released into the environment, some of the constituents of gasoline will volatilize and be photo degraded in the atmosphere. Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions, photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline.

13. DISPOSAL CONSIDERATION :

Waste disposal: Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal of this product and any of its by products should always comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. This material would likely be identified as a federally regulated RCRA hazardous waste.

14. TRANSPORTATION INFORMATION :

This material is U.S Department of Transportation (DOT) regulated material.

Shipping name : Gasoline, 3, UN 1203, PG II
Gasohol, 3, NA 1203, PG II (for gasoline blended with less than 20% ethanol).

Hazard class : 3 DOT Class: Flammable liquid

Packing Group : II

UN / NA Number : UN1203 / NA1203

Emergency Response Code : 128.

15. REGULATORY INFORMATION :

TSCA Inventory: This product and/or its components are listed on the Toxic Substances Control Act (TSCA).

SARA 302 / 304 : The Superfund Amendments and Reauthorization Act of 1986

Emergency planning and notification (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for “Extremely Hazardous Substances” listed in 40 CFR 302.4 and CFR 355. No components were identified.

SARA 311 / 312 : SARA Title III requires facilities subject to this subpart to

Hazard identification submit aggregate information on chemicals by “Hazard Category” as defined in 40 CFR 370.2. This material would be classified under: Fire, Acute (immediate) Health Hazard, Chronic (Delayed) Health Hazard.

CERCLA / SARA 313 Toxic and chemical reporting notification and release reporting : This material contains the following chemicals subject to the requirements of Section 313 of SARA Title III and 40 CFR 372.

Component	CAS Number	Amount (%)
Benzene	71-43-2	0 – 5
Toluene	108-88-3	0 – 30
Xylene (o, m, p isomers)	1330-20-7	0 – 25
n-Hexane	110-54-3	0 – 3
Cyclohexane	110-82-7	0 – 3
1, 2, 4 Trimethylbenzenes	95-63-6	0 – 5
Ethylbenzene	100-41-4	0 – 5
Cumene	98-82-8	0 – 5
Methyl Tertiary Butyl Ether (MTBE)	1634-04-4	0 – 16

EPA Hazardous Classification Code: Acute Health, Chronic Health, Fire.

TOXIC SUBSTANCES CONTRAL ACT (TSCA) : This product is listed on the EPA TSCA Inventory.

California Proposition 65: This material may contain detectable quantities of the following chemicals known to the State of California to cause cancer, birth defects or other reproductive harm, and which may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Benzene (CAS NO. 71-43-3) Toluene (CAS No. 108-88-3) Ethylbenzene (CAS No. 100-41-4)
Naphthalene (CAS No. 91-20-3).

Canadian Regulations: WHMIS Hazard Class: B2 – Flammable Liquids

D2A/B – Very Toxic Material

16. OTHER INFORMATION :

SUPPLEMENTAL INFORMATION

The data and information as stated was furnished by the manufacturer/vendor &/or supplier of this product. Alpha Resources, Inc. cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.

Date Prepared: January 14, 2013

Prepared by : Greg Molter