MATERIAL SAFETY DATA SHEET (MSDS)

GASOLINE



1. PRODUCT IDENTIFICATION:

Synonyms: Gasoline; Reformulated Gasoline

A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. May contain antioxidant and multifunctional additives. Non-oxygenated Conventional Gasoline and RBOB do not have oxygenates (Ethanol or MTBE and/or TAME). **Chemical Designation:** A complex mixture of hydrocarbon.

CAS NO.: 8006-61-9

COMPANY IDENTIFICATION:

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2. HAZARDS IDENTIFICATION:

Physical:	Flammable liquids	Category 2
Health:	Aspiration Toxicity	Category 1
	Skin corrosion/irritation	Category 2
	Carcinogenicity	Category 1A
	Specific target organ toxicity (Single Exposure)	Category 3 (Nervous System)
	Germ Cell Mutagenicity	Category 1B

LABEL ELEMENTS



Signal word: Danger!

Hazard statements:

Extremely flammable liquid and vapor.

May be fatal if swallowed and enters airways.

Causes skin irritation.

May cause drowsiness or dizziness.

May cause cancer.

May cause genetic defects.

Precautionary statements:

Prevention:

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing vapors.

Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

Immediately call a POISON CENTER or doctor.
Do NOT induce vomiting.
Take off immediately all contaminated clothing. Rinse skin with
water.
Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell
Get medical advice/ attention.
Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
Use water fog, carbon dioxide, dry chemical and foam to extinguish.

Storage and Disposal:

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents and container in accordance with local and national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Components	CAS-No.	Percent
gasoline, natural	8006-61-9	95 - 100 %

4. FIRST AID MEASURES:

Eye contact	Remove contact lenses.
	Rinse immediately with plenty of water, also under the eyelids, for at least
	15 minutes.
	Obtain medical attention.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15
	minutes while removing contaminated clothing and shoes.
	Wash skin thoroughly with soap and water or use recognized skin cleanser.
	Wash clothing before reuse.
	Seek medical advice.
Inhalation	Artificial respiration and/or oxygen may be necessary.
	Move to fresh air.
	Seek medical advice.
If swallowed	Rinse mouth with water.
	DO NOT induce vomiting unless directed to do so by a physician or poison
	control center.
	Never give anything by mouth to an unconscious person.
	Seek medical advice.
Protection	First Aid responders should pay attention to self-protection and use the
of first aiders	recommended protective clothing It may be dangerous to the person
	providing aid to give mouth-to-mouth resuscitation.

5. FIRE FIGHTING MEASURES:

FLAMMABLE PROPERTIES:

Suitable extinguishing media:	Dry chemical
	Carbon dioxide (CO2)
	Water fog.
	Foam
Unsuitable extinguishing media:	Do NOT use water jet.
Specific hazards during fire-	Cool closed containers exposed to fire with water spray.
fighting:	
Hazardous combustion	Carbon oxides (CO, CO2), nitrogen oxides (NOx), polynuclear
products:	aromatic hydrocarbons, phenols, aldehydes, ketones, smoke
	and irritating vapors as products of incomplete combustion.
Further information	Prevent fire extinguishing water from contaminating surface
	water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions,	Use personal protective equipment.
protective equipment	Ensure adequate ventilation.
and emergency	Evacuate personnel to safe areas.
procedures:	Material can create slippery conditions.
Environmental	If the product contaminates rivers and lakes or drains inform
precautions:	respective authorities.
Methods and materials	Prevent further leakage or spillage if safe to do so.
for containment and	Remove all sources of ignition.
cleaning up:	Soak up with inert absorbent material.
	Non-sparking tools should be used.
	Ensure adequate ventilation.
	Contact the proper local authorities.

7. HANDLING AND STORAGE:

Advice on safe	For personal protection see section 8.
handling:	Smoking, eating and drinking should be prohibited in the application area.
	Use only with adequate ventilation.
	In case of insufficient ventilation, wear suitable respiratory equipment.
	Avoid spark promoters. Ground/bond container and equipment. These
	alone may be insuffic <mark>ient to remove</mark> static electricity.
	Avoid contact with skin, eyes and clothing.
	Do not ingest.
	Keep away from heat and sources of ignition.
	Keep container closed when not in use.
Conditions for	Store in original container.
safe storage:	Containers which are opened must be carefully resealed and kept upright
	to prevent leakage.
	Keep in a dry, cool and well-ventilated place.
	Keep in properly labelled containers.
	To maintain product quality, do not store in heat or direct sun-light.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION:

Exposure controls:

Engineering controls:

Use only in well-ventilated areas.

Ensure that eyewash station and safety shower are proximal to the work-station location.

PERSONAL PROTECTIVE EQUIPMENT:

Respiratory	Use respiratory protection unless adequate local exhaust ventilation is
protection:	provided or exposure assessment demonstrates that exposures are
	within recommended exposure guidelines.
	Respirator selection must be based on known or anticipated exposure
	levels, the hazards of the product and the safe working limits of the
	selected respirator.

Filter type:	A NIOSH-approved air-purifying respirator with an organic vapor
Filter type:	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
	uncontrolled release, exposure levels are unknown, or any other
	circumstances where air-purifying respirators may not provide
	adequate protection
Hand protection	polyvinyl alcohol (PVA), Viton(R). Consult your PPE provider for
Material:	breakthrough times and the specific glove that is best for you based on
	your use patterns. It should be realized that eventually any material
	regardless of their imperviousness will get permeated by chemicals.
	Therefore, protective gloves should be regularly checked for wear and
	tear. At the first signs of hardening and cracks, they should be changed.
Remarks:	Chemical-resistant, impervious gloves complying with an approved
	standard should be worn at all times when handling chemical products
	if a risk assessment indicates this is necessary.
Eye protection:	Wear face-shield and protective suit for abnormal processing
	problems.
Skin and body	Choose body protection in relation to its type, to the concentration
protection:	and amount of dangerous substances, and to the specific work-place.
Protective	Wash contaminat <mark>ed clothin</mark> g b <mark>efo</mark> re re-use.
measures:	
Hygiene	Remove and wash contaminated clothing and gloves, including the
measures:	inside, before re-use.
	W <mark>ash face, hands an</mark> d any expo <mark>sed skin</mark> thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	Clear liquid.
Color	Clear to slightly yellow or green, undyed liquid.
Koowle	May be dyed red for taxation purposes.
Form	liquid
Odor	Gasoline
Odor Threshold	No data available
Flash point	-5038 °C (-5836 °F)
Flammability	Extremely flammable in presence of open flames, sparks, shocks, and heat. Vapors are heavier than air and may travel considerable distance to sources of ignition and flash back. Rapid escape of vapor may generate static charge causing ignition. May accumulate in confined spaces. Upper explosion limit: 7.6% (V) Lower explosion limit: 1.3% (V)
Boiling point/boiling range	25 - 225 °C
Freezing point	<-27 °C
Auto-ignition temperature	257 °C (495 °F)
Decomposition temperature	No data available

Flammability (solid, gas)	No data available
Vapor pressure	< 802.5 mmHg (20 °C / 68 °F)
Relative vapor density	3
Density	0.720-0.775 g/cm3 @ 15 °C
Water solubility	insoluble
рН	No data available
Evaporation rate	No data available
Partition coefficient: n-octanol/water	No data available
Sulfur	Max 1000 ppm
Explosive properties	Do not pressurise, cut, weld, braze, solder, drill, grind
	or expose containers to heat or sources of ignition.
	Containers may explode in heat of fire. Vapors may
	form explosive mixtures with air.

10. STABILITY AND REACTIVITY

Hazardous Decomposition Products:

May release COx, NOx, phenols, polycyclic aromatic hydrocarbons, aldehydes, ketones, smoke and irritating vapor when heated to decomposition.

Possibility of hazardous reactions:

Hazardous polymerisation does not occur. Stable under normal conditions.

Incompatible materials:

Reactive with oxidising agents, acids and interhalogens.

Conditions to Avoid:

Extremes of temperature and direct sunlight.

11. TOXICOLOGICAL INFORMATION:

Acute toxicological data:

Inhalation rat LC50: > 5.2 mg/L (Rat) 4 h; oral rat LD50: 14000 mg/kg (Rat); Dermal LD50: > 2000 mg/kg (Rabbit)

Potential short-term adverse effects from overexposures:

Inhalation:	May cause irritation of respiratory tract. May cause drowsiness or dizziness.
	Breathing high concentrations of this material in a confined space or by intentional
	abuse can cause irregular heartbeats which can cause death.
Eye contact:	Exposure to vapor or contact with liquid may cause mild eye irritation, including
	tearing, stinging, and redness.
Skin contact:	Irritating to skin. Effects may become more serious with repeated or prolonged
	contact. May be absorbed through the skin in harmful amounts.
Ingestion:	May be fatal if swallowed or vomited and enters airways. May cause irritation of the
	mouth, throat and gastrointestinal tract.

Adverse effects related to the physical, chemical and toxicological characteristics:

Signs and Symptoms:	Irritating to the skin and mucous membranes.			
	Symptoms may include redness, itching, and			
	inflammation. May cause nausea, vomiting,			
	diarrhea, and signs of nervous system			
	depression: headache, drowsiness, dizziness,			
	loss of coordination, disorientation and			
	fatigue. Aspiration hazard. May cause			
	coughing, chest pains, shortness of breath,			
	pulmonary edema and/or chemical			
	pneumonitis. Prolonged or repeated exposure			
	may cause damage to organs. Repeated or			
	prolonged skin contact may cause drying,			
	reddening, itching and cracking.			
Sensitization:	Not expected to be a skin or respiratory			
	sensitizer.			
Mutagenic effects:	May cause genetic defects.			
Carcinogenicity:	May cause cancer.			

12. ECOLOGICAL INFORMATION:

Ecotoxicity:

This product should be considered toxic to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

Persistence and degradability:

Expected to be inherently biodegradable. The presence of ethanol in this product may impede the biodegradation of benzene, toluene, ethylbenzene and xylene in groundwater, resulting in elongated plumes of these constituents. ExirPooyan

Bio accumulative potential: Has the potential to bioaccumulate.

Mobility in soil:

May partition into air, soil and water.

Other adverse effects:

No information available.

13. DISPOSAL CONSIDERATIONS:

Description of Waste Residues

This material may be a flammable liquid waste.

Safe Handling of Wastes:

Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Use appropriate grounding and bonding practices. Use only non-sparking tools. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking.

Disposal of Wastes / Methods of Disposal:

The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal:

Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION:

DOT	UN 1203, Gasoline, 3, II			
TDG	UN 1203, Gasoline, 3, II			

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15. OTERE INFORMATION:

NFPA Ratings: Health: 1 Flammability: 3 Reactivity: 0