MATERIAL SAFETY DATA SHEET

Product Name:
Regular Gasoline
(3392)

SECTION 1 – PRODUCT IDENTIFICATION AND USE

Product name **Regular Gasoline** *Note: All Irving gasolines are unleaded*
Chemical name Natural gasoline
Common names and synonyms Automotive gasoline
Product use Fuel
WHMIS classification Flammable liquid Class B Division 2
Very toxic Class D Division 2 Subdivision A

PIN #/ UN 1203
TDG, DOT class Class 3
Packing group II
Shipping name Gasoline; Motor spirit; or Petrol

Hazard codes

NFPA	Health	1	**HMIS**	Health	1
	Flammability	3		Flammability	3
	Reactivity	0		Reactivity	0

NFPA & HMIS Ratings: 0=Insignificant/No Hazard. 1=Slight Hazard. 2=Moderate Hazard. 3=High/Serious Hazard. 4=Extreme/Severe Hazard.

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SECTION 2 – HAZARDOUS INGREDIENTS

Ingredients	CAS#	Concentration (%)	ACGIH TLVs (2008) (ppm)		OSHA PELs (transitional) (ppm)				NIOSH RELs (ppm)		LD_{50} (rat, oral) (g/kg)	LC_{50} (rat, 4 hr)
			TWA	STEL	TWA	STEL	C	P	TWA	STEL		
Gasoline	8006-61-9	100	300	500	Not available				Not available		13.6	300 g/m^3
Contains a variety of aromatic and aliphatic hydrocarbons including:												
Benzene	71-43-2	Not available	0.5	2.5	10	None	25	50	0.1	1.0	0.9	113,200 ppm
n-Hexane	110-54-3	Not available	50	None	500	None	None	None	50	None	25	48,000 ppm
Toluene	108-88-3	Not available	20	None	200	None	300	500	100	150	0.6	49 g/m^3

Gasoline is a complex mixture of hydrocarbons. Its exact composition depends on the source of the crude oil from which it was produced and the refining methods used. Gasoline contains hundreds of individual organic chemicals. This section identifies only some of the well-known chemical constituents.
TWA means Time-Weighted Average C means Ceiling
STEL means Short Term Exposure Limit P means Peak

SECTION 3 – PHYSICAL DATA

Form Liquid
Colour Clear to yellow
Odour Characteristic odour
Odour threshold About 0.1 ppm
pH Not applicable
Coefficient of water/oil distribution Not available. Expected to be >1

Specific gravity Typically 0.72 to 0.76 @ 15˚C
Vapour density Typically 2.5 to 3.7 (air = 1)
Vapour pressure Variable: 400 to 775 mm Hg @ 20˚C
Evaporation rate Rapid. ~4. (Butyl acetate = 1)
Boiling point 29 to 217˚C (85 to 424˚F)
Freezing point Not available

SECTION 4 – FIRE AND EXPLOSION HAZARDS

Flammability ☒ Yes ☐ No **Conditions** Easily ignited by heat, sparks or flames.
Flash point Typically about -43˚C (-45˚F) (cc) **Auto ignition temperature** Typically 257˚C (494˚F)
Lower flammable limit Typically 1.4% **Upper flammable limit** Typically 7.6%
Explosion data: Sensitivity to: **Mechanical impact** Not expected to be sensitive **Static discharge** Vapour: yes
Means of extinction In general, do not extinguish fire unless flow can be stopped. Use carbon dioxide, dry chemical, or foam. Cool containers with flooding quantities of water until well after the fire is out.
Special precautions Vapour is heavier than air. It will spread along the ground & collect in low or confined areas (sewers, basements). Also travels to source of ignition and flashes back. Containers may explode when heated.
Hazardous combustion products Carbon monoxide. Nitrogen oxides. PAHs, phenols, and other aromatic hydrocarbons.

SECTION 5 – REACTIVITY INFORMATION

Stability Stable
Conditions to avoid Sources of ignition. Static discharges. High temperatures.
Incompatible substances Oxidizers such as peroxides, nitric acid, and perchlorates.
Hazardous decomposition products Carbon monoxide, nitrogen oxides, and numerous aromatic hydrocarbons.

SECTION 6 – HEALTH HAZARD INFORMATION

Route of Entry ☒ **Inhalation** ☒ **Ingestion** ☒ **Skin absorption**

Hazardous Contact ☒ **Eye** ☒ **Skin**

Acute exposure Headache, nausea, dizziness and other symptoms of central nervous system (CNS) depression. Aspiration into the lungs can cause severe pneumonitis (serious lung irritation), with coughing, gagging, shortness of breath, chest pain, and/or pulmonary edema (fluid accumulation).

Chronic exposure Peripheral & CNS damage, such as tremors, hallucinations, memory loss, & impaired mental capacity. Damage to kidneys and blood-producing system. Prolonged skin contact may cause dermatitis.

Carcinogenicity Gasoline is classified by IARC as possibly carcinogenic to humans; by ACGIH, as a confirmed animal carcinogen with unknown relevance to humans; and by NIOSH as a potential occupational carcinogen. Gasoline is not included in NTP's 11th Report on Carcinogens. Benzene is a recognized carcinogen.

Teratogenicity Yes (toluene)
Reproductive toxicity Not available
Mutagenicity Yes (benzene)

Irritancy Sensitization Skin, eyes, & respiratory tract. Very serious irritant if trapped against skin. Rare allergic skin reactions

Toxicologically synergistic products Ethanol enhances the action of benzene. Methyl ethyl ketone (MEK) and methyl isobuty ketone (MIBK) enhance the action of n-hexane. Other CNS depressants can be expected to produce additive or synergistic effects.

SECTION 7 – FIRST AID

Inhalation Move victim to fresh air. Give artificial respiration if breathing has stopped and if a qualified AR administrator is available. Apply CPR if both pulse and breathing have stopped. Get medical help immediately.

Ingestion Never give anything by mouth if the person is unconscious, rapidly losing consciousness, or convulsing. If the person is conscious, have them drink 8 to 10 ounces of water or milk to dilute the material in the stomach. **Do not** induce vomiting. If vomiting occurs spontaneously, have the person lean forward to avoid aspiration. Get medical help immediately.

Eye Flush eye with lukewarm, gently flowing fresh water for at least 10 minutes. Get immediate medical help.

Skin Quickly and gently blot away excess product. Remove contaminated clothing and shoes. Wash skin gently and thoroughly with water and non-abrasive soap. Get medical help.

SECTION 8 – PRECAUTIONARY MEASURES

Personal protective equipment

Gloves Tychem™BR/LV, Tychem™ Responder™, Tychem™TK, or Viton™ preferred.

Eye Chemical safety goggles or face shield, as a good general safety practice.

Respiratory NIOSH-approved. SCBA or air line respirator with escape cylinder for confined spaces. A qualified occupational health and safety professional should advise on respirator selection. If an air-purifying respirator is appropriate, use a "P series" filter & organic vapour cartridges.

Clothing & footwear Coveralls to prevent skin contact with product. If clothing or footwear becomes contaminated with product, completely decontaminate it before re-use, or discard it.

Engineering controls Enclose processes. Use local exhaust ventilation to remove vapour at its site of generation. Handle laboratory samples in a fume hood. Use mechanical ventilation in confined spaces.

Handling procedures & equipment Eliminate all sources of ignition. Ensure that ventilation systems are explosion-proof, non-sparking, and grounded. Use intrinsically-safe electrical systems. Ground and bond transfer containers. Keep containers closed. Have safety shower and eyewash in the work area. Never siphon gasoline by mouth.

Leak & spill Procedure Keep unauthorized persons away. Eliminate all sources of ignition. Ventilate area. Stop leak if it can be done safely. Prevent entry into sewers, waterways, or confined spaces. Small spills: Contain with earth, sand, or non-flammable absorbent material. Shovel (non-sparking tools) into clean, dry, labelled containers and cover. Flush area with water. Large spills: Contact emergency services for advice.

Waste disposal Contact appropriate governmental agencies for approved disposal of material.

Storage Cool, dry, well-ventilated area, out of direct sunlight. No ignition sources or incompatible materials. Containers should be grounded, vented and equipped with a flame arrester. Consider leak detection and alarm equipment for storage area.

Shipping Load at normal temperature (up to 38˚C) and pressure. Bond and ground containers for transfer.

SECTION 9 – PREPARATION DATE OF MSDS

Prepared by D. Smith for Irving Oil Refinery
Revision date November 2, 2008

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To re-order MSDS, phone (506) 202-2000