

# GASOLINES: AUTOMOTIVE (<4.23G LEAD/GAL)

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CAUTIONARY RESPONSE INFORMATION			
Common Synonyms Motor spirit Petrol	Watery liquid  Floats on water. Flammable, irritating vapor is produced.	Colorless to pale brown or pink	Gasoline odor
Evacuate. Keep people away. Wear chemical protective suit with self-contained breathing apparatus. Shut off ignition sources and call fire department. Stay upwind and use water spray to "knock down" vapor. Notify local health and pollution control agencies. Protect water intakes.			
Fire	FLAMMABLE. Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. Extinguish with dry chemical, foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.		
Exposure			
	CALL FOR MEDICAL AID.  VAPOR Irritating to eyes, nose and throat. If inhaled, will cause dizziness, headache, difficult breathing or loss of consciousness. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.  LIQUID Irritating to skin and eyes. If swallowed, will cause nausea or vomiting. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. DO NOT INDUCE VOMITING.		
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.		

1. CORRECTIVE RESPONSE ACTIONS	2. CHEMICAL DESIGNATIONS
Stop discharge Contain Collection Systems: Skim Chemical and Physical Treatment: Burn Salvage waterfowl	2.1 CG Compatibility Group: 33; Miscellaneous Hydrocarbon Mixtures 2.2 Formula: (Mixture of hydrocarbons) 2.3 IMO/UN Designation: 3.1/203 2.4 DOT ID No.: 1203 2.5 CAS Registry No.: Currently not available 2.6 NAERG Guide No.: 128 2.7 Standard Industrial Trade Classification: 33411
3. HEALTH HAZARDS	
3.1 Personal Protective Equipment: Protective goggles, gloves.	
3.2 Symptoms Following Exposure: Irritation of mucous membranes and stimulation followed by depression of central nervous system. Breathing of vapor may also cause dizziness, headache, and incoordination or, in more severe cases, anesthesia, coma, and respiratory arrest. If liquid enters lungs, it will cause severe irritation, coughing, gagging, pulmonary edema, and, later, signs of bronchopneumonia and pneumonitis. Swallowing may cause irregular heartbeat.	
3.3 Treatment of Exposure: INHALATION: maintain respiration and administer oxygen; enforce bed rest if liquid is in lungs. INGESTION: do NOT induce vomiting; stomach should be lavaged (by doctor) if appreciable quantity is swallowed. EYES: wash with copious quantity of water. SKIN: wipe off and wash with soap and water.	
3.4 TLV-TWA: 300 ppm 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: 500 ppm 3.7 Toxicity by Ingestion: Grade 2; LD <sub>50</sub> = 0.5 to 5 g/kg. 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: None 3.10 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary. 3.11 Liquid or Solid Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin. 3.12 Odor Threshold: 0.25 ppm 3.13 IDLH Value: Not listed. 3.14 OSHA PEL-TWA: Not listed. 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed	2.1 CG Compatibility Group: 33; Miscellaneous Hydrocarbon Mixtures 2.2 Formula: (Mixture of hydrocarbons) 2.3 IMO/UN Designation: 3.1/203 2.4 DOT ID No.: 1203 2.5 CAS Registry No.: Currently not available 2.6 NAERG Guide No.: 128 2.7 Standard Industrial Trade Classification: 33411

4. FIRE HAZARDS	7. SHIPPING INFORMATION
4.1 Flash Point: -36°F C.C. 4.2 Flammable Limits in Air: 1.4%-7.4% 4.3 Fire Extinguishing Agents: Foam, carbon dioxide, dry chemical 4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective 4.5 Special Hazards of Combustion Products: None 4.6 Behavior in Fire: Vapor is heavier than air and may travel considerable distance to a source of ignition and flash back. 4.7 Auto Ignition Temperature: 853°F 4.8 Electrical Hazards: Class I, Group D 4.9 Burning Rate: 4 mm/min. 4.10 Adiabatic Flame Temperature: Currently not available 4.11 Stoichiometric Air to Fuel Ratio: Not pertinent 4.12 Flame Temperature: Currently not available 4.13 Combustion Molar Ratio (Reactant to Product): Not pertinent 4.14 Minimum Oxygen Concentration for Combustion (MOCC): N <sub>2</sub> diluent: 12.0%; CO <sub>2</sub> diluent: 14.5-15.0%	7.1 Grades of Purity: Various octane ratings; military specifications 7.2 Storage Temperature: Ambient 7.3 Inert Atmosphere: No requirement 7.4 Venting: Open (flame arrester) or pressure-vacuum 7.5 IMO Pollution Category: Currently not available 7.6 Ship Type: Currently not available 7.7 Barge Hull Type: Currently not available
8. HAZARD CLASSIFICATIONS	
8.1 49 CFR Category: Flammable liquid 8.2 49 CFR Class: 3 8.3 49 CFR Package Group: II 8.4 Marine Pollutant: Yes 8.5 NFPA Hazard Classification:	Category Classification Health Hazard (Blue)..... 1 Flammability (Red)..... 3 Instability (Yellow)..... 0
8.6 EPA Reportable Quantity: Not listed. 8.7 EPA Pollution Category: Not listed. 8.8 RCRA Waste Number: Not listed 8.9 EPA FWP/CA List: Not listed	8.6 EPA Reportable Quantity: Not listed. 8.7 EPA Pollution Category: Not listed. 8.8 RCRA Waste Number: Not listed 8.9 EPA FWP/CA List: Not listed
9. PHYSICAL & CHEMICAL PROPERTIES	
9.1 Physical State at 15° C and 1 atm: Liquid 9.2 Molecular Weight: Not pertinent 9.3 Boiling Point at 1 atm: 140-390°F = 60-199°C = 333-472°K 9.4 Freezing Point: Not pertinent 9.5 Critical Temperature: Not pertinent 9.6 Critical Pressure: Not pertinent 9.7 Specific Gravity: 0.7321 at 20°C (liquid) 9.8 Liquid Surface Tension: 19-23 dynes/cm = 0.019-0.023 N/m at 20°C 9.9 Liquid Water Interfacial Tension: 49-51 dynes/cm = 0.049-0.051 N/m at 20°C 9.10 Vapor (Gas) Specific Gravity: 3.4 9.11 Ratio of Specific Heats of Vapor (Gas): (est.) 1.054 9.12 Latent Heat of Vaporization: 130-150 BTu/lb = 71-81 cal/g = 3.0 - 3.4 X 10 <sup>5</sup> J/kg 9.13 Heat of Combustion: -18,720 BTu/lb = -10,400 cal/g = 435.1 X 10 <sup>5</sup> J/kg 9.14 Heat of Decomposition: Not pertinent 9.15 Heat of Solution: Not pertinent 9.16 Heat of Polymerization: Not pertinent 9.17 Heat of Fusion: Currently not available 9.18 Limiting Value: Currently not available 9.19 Reid Vapor Pressure: 7.4 psia	9.1 Physical State at 15° C and 1 atm: Liquid 9.2 Molecular Weight: Not pertinent 9.3 Boiling Point at 1 atm: 140-390°F = 60-199°C = 333-472°K 9.4 Freezing Point: Not pertinent 9.5 Critical Temperature: Not pertinent 9.6 Critical Pressure: Not pertinent 9.7 Specific Gravity: 0.7321 at 20°C (liquid) 9.8 Liquid Surface Tension: 19-23 dynes/cm = 0.019-0.023 N/m at 20°C 9.9 Liquid Water Interfacial Tension: 49-51 dynes/cm = 0.049-0.051 N/m at 20°C 9.10 Vapor (Gas) Specific Gravity: 3.4 9.11 Ratio of Specific Heats of Vapor (Gas): (est.) 1.054 9.12 Latent Heat of Vaporization: 130-150 BTu/lb = 71-81 cal/g = 3.0 - 3.4 X 10 <sup>5</sup> J/kg 9.13 Heat of Combustion: -18,720 BTu/lb = -10,400 cal/g = 435.1 X 10 <sup>5</sup> J/kg 9.14 Heat of Decomposition: Not pertinent 9.15 Heat of Solution: Not pertinent 9.16 Heat of Polymerization: Not pertinent 9.17 Heat of Fusion: Currently not available 9.18 Limiting Value: Currently not available 9.19 Reid Vapor Pressure: 7.4 psia
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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
45	46.270	10	0.459	40	0.909	46	0.521
50	46.130	15	0.462	50	0.900	48	0.514
55	46.000	20	0.464	60	0.891	50	0.507
60	45.850	25	0.467	70	0.883	52	0.500
65	45.710	30	0.470	80	0.874	54	0.494
70	45.560	35	0.472	90	0.865	56	0.487
75	45.400	40	0.475	100	0.856	58	0.481
80	45.240	45	0.478	110	0.847	60	0.475
85	45.080	50	0.480	120	0.838	62	0.469
90	44.910	55	0.483	130	0.829	64	0.463
95	44.750	60	0.486	140	0.821	66	0.457
100	44.570	65	0.488	150	0.812	68	0.451
105	44.390	70	0.491	160	0.803	70	0.446
110	44.210	75	0.494	170	0.794	72	0.440
115	44.030	80	0.496	180	0.785	74	0.435
		85	0.499	190	0.776	76	0.430
		90	0.502			78	0.424
		95	0.504			80	0.419
		100	0.507			82	0.414
		105	0.510			84	0.410
						86	0.405
						88	0.400
						90	0.396
						92	0.391
						94	0.387
						96	0.382

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	I N S O L U B L E		C U R R E N T L Y		N O T P E R T I N E T		C U R R E N T L Y N O T A V A I L A B L E