GASOLINES: STRAIGHT RUN

GSR

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Watery liquid Colorless Gasoline odor Floats on water. Flammable, irritating vapor is produced.

Evacuate.
Keep people away.
Avoid contact with liquid and vapor.
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.
Exposure	VAPOR Irritating to eyes, nose and throat. If inhaled, will cause dizziness, headache, difficult breathing or loss of consciousness. LIQUID Irritating to skin and eyes. If swallowed, will cause nausea or vomiting.
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. Fouling to shoreline. May be dangerous if it enters water intakes.

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge
Contain
Collection Systems: Skim
Chemical and Physical Treatment: Burn
Salvage waterfowl

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: 33; Miscellaneous Hydrocarbon Mixtures
2.2 Formula: Not pertinent
2.3 IMO/UN Designation: 3.1, 3.2/1203
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: INHALATION causes irritation of upper respiratory tract; central nervous system stimulation followed by depression of varying degrees ranging from dizziness, headache, and incoordination to anesthesia, coma, and respiratory arrest; irregular heartbeat is dangerous complication. ASPIRATION causes severe lung irritation with coughing, gagging, dyspnea, substernal distress, and rapidly developing pulmonary edema; later, signs of bronchopneumonia and pneumonitis; acute onset of central nervous system excitement followed by depression. INGESTION causes irritation of mucous membranes of throat, esophagus, and stomach; stimulation followed by depression of central nervous system; irregular heartbeat.
3.3 Treatment of Exposure: Seek medical attention. INHALATION: maintain respiration; give oxygen if needed. ASPIRATION: enforce bed rest; administer oxygen. INGESTION: do NOT induce vomiting; lavage carefully if appreciable quantity was ingested; guard against aspiration into lungs. 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_{50} = 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

4. FIRE HAZARDS

4.1 Flash Point: (a) <0°F C.C. (b) 0-73°F C.C.
4.2 Flammable Limits in Air: (a) 1.3%-7.1%
4.3 Fire Extinguishing Agents: Dry chemical, foam, carbon dioxide
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 a considerable distance to a source of ignition and flash back.
4.7 Auto Ignition Temperature: Currently not available
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 Stoichometric 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): Not listed

5. CHEMICAL REACTIVITY

5.1 Reactivity with Water: No reaction
5.2 Reactivity with Common Materials: No reaction
5.3 Stability During Transport: Stable
5.4 Neutralizing Agents for Acids and Caustics: Not pertinent
5.5 Polymerization: Not pertinent
5.6 Inhibitor of Polymerization: Not pertinent

6. WATER POLLUTION

6.1 Aquatic Toxicity: 90 ppm/24 hr/juvenile American shad/TL_m/fresh water
91 ppm/24 hr/juvenile American shad/TL_m/salt water
6.2 Waterfowl Toxicity: Currently not available
6.3 Biological Oxygen Demand (BOD): 8%, 5 days
6.4 Food Chain Concentration Potential: None
6.5 GESAMP Hazard Profile: Not listed

7. SHIPPING INFORMATION

7.1 Grades of Purity: Composition varies with range of distillation temperatures used.
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 FWPCA 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: 58-275°F = 14–135°C = 287–408°K
9.4 Freezing Point: Not pertinent
9.5 Critical Temperature: Not pertinent
9.6 Critical Pressure: Not pertinent
9.7 Specific Gravity: 0.71-0.747 at 15°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): Not pertinent
9.12 Latent Heat of Vaporization: 130–150 Btu/lb = 71–81 cal/g = 3.0–3.4 X 10^5 J/kg
9.13 Heat of Combustion: –18,720 Btu/lb = –10,400 cal/g = –435.4 X 10^5 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: Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY

Temperature (degrees F)	Pounds per cubic foot
35	45.040
40	44.880
45	44.730
50	44.570
55	44.410
60	44.260
65	44.100
70	43.950
75	43.790
80	43.630
85	43.480
90	43.320
95	43.160
100	43.010
105	42.850
110	42.700
115	42.540
120	42.380
125	42.230
130	42.070
135	41.920
140	41.760
145	41.600
150	41.450
155	41.290
160	41.140

9.21 LIQUID HEAT CAPACITY

Temperature (degrees F)	British thermal unit per pound-F
10	0.459
15	0.462
20	0.464
25	0.467
30	0.470
35	0.472
40	0.475
45	0.478
50	0.480
55	0.483
60	0.486
65	0.488
70	0.491
75	0.493
80	0.496
85	0.499
90	0.501
95	0.504
100	0.507
105	0.509

9.22 LIQUID THERMAL CONDUCTIVITY

Temperature (degrees F)	British thermal unit inch per hour-square foot-F
40	0.909
50	0.900
60	0.891
70	0.883
80	0.874
90	0.865
100	0.856
110	0.847
120	0.838
130	0.829
140	0.821
150	0.812
160	0.803
170	0.794
180	0.785
190	0.776

9.23 LIQUID VISCOSITY

Temperature (degrees F)	Centipoise
35	0.519
40	0.501
45	0.485
50	0.469
55	0.454
60	0.440
65	0.426
70	0.414
75	0.401
80	0.390
85	0.379
90	0.368
95	0.358
100	0.348
105	0.339
110	0.330
115	0.322
120	0.314
125	0.306
130	0.299
135	0.291
140	0.285
145	0.278
150	0.272
155	0.266
160	0.260

9.24 SOLUBILITY IN WATER

Temperature (degrees F)	Pounds per 100 pounds of water
	INSOLUBLE

9.25 SATURATED VAPOR PRESSURE

Temperature (degrees F)	Pounds per square inch
	CURRENTLY NOT AVAILABLE

9.26 SATURATED VAPOR DENSITY

Temperature (degrees F)	Pounds per cubic foot
	NOT PERTINENT

9.27 IDEAL GAS HEAT CAPACITY

Temperature (degrees F)	British thermal unit per pound-F
	CURRENTLY NOT AVAILABLE