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CAUTIONARY RESPONSE INFORMATION

Common Synonyms n-Nonylethylene	Liquid	Colorless	Mild odor
	Floats on water.		

Call fire department.
Avoid contact with liquid.
Notify local health and pollution control agencies.

Fire	Combustible. Extinguish with foam, dry chemical, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.
Exposure	CALL FOR MEDICAL AID. LIQUID Irritating to skin and eyes. Harmful if swallowed. 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	Effect of low concentrations on aquatic life is unknown. 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

Stop discharge
Contain
Collection Systems: Skim
Chemical and Physical Treatment:
Absorb
Clean shore line
Salvage waterfowl

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: 30; Olefin
2.2 Formula: $CH_3(CH_2)_8CH{=}CH_2$
2.3 IMO/UN Designation: Not listed
2.4 DOT ID No.: Not listed
2.5 CAS Registry No.: Currently not available
2.6 NAERG Guide No.: Not listed.
2.7 Standard Industrial Trade Classification: 51119

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Goggles or face shield; rubber gloves.
3.2 Symptoms Following Exposure: Aspiration hazard if ingested. Slight skin and eye irritation. No inhalation hazard expected.
3.3 Treatment of Exposure: INHALATION: remove victim to fresh air. INGESTION: do NOT lavage or induce vomiting; give vegetable oil and demulcents; call a doctor. EYES: flush with water for 15 min. SKIN: wipe off, wash with soap and water.
3.4 TLV-TWA: Not listed.
3.5 TLV-STEL: Not listed.
3.6 TLV-Ceiling: Not listed.
3.7 Toxicity by Ingestion: Currently not available
3.8 Toxicity by Inhalation: Currently not available.
3.9 Chronic Toxicity: Currently not available
3.10 Vapor (Gas) Irritant Characteristics: Slight smarting of eyes and respiratory system at 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: Currently not available
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: 160°F O.C.
4.2 Flammable Limits in Air: Currently not available
4.3 Fire Extinguishing Agents: Foam, dry chemical, or carbon dioxide
4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective.
4.5 Special Hazards of Combustion Products: Not pertinent
4.6 Behavior in Fire: Not pertinent
4.7 Auto Ignition Temperature: Currently not available
4.8 Electrical Hazards: Not pertinent
4.9 Burning Rate: 4.8 mm/min.
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichometric Air to Fuel Ratio: 78.5 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 22.0 (calc.)
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: Currently not available
6.2 Waterfowl Toxicity: Currently not available
6.3 Biological Oxygen Demand (BOD): Currently not available
6.4 Food Chain Concentration Potential: None
6.5 GESAMP Hazard Profile:
Bioaccumulation: 0
Damage to living resources: 3
Human Oral hazard: (1)
Human Contact hazard: 0
Reduction of amenities: 0

7. SHIPPING INFORMATION

7.1 Grades of Purity: Technical: 99%
7.2 Storage Temperature: Ambient
7.3 Inert Atmosphere: No requirement
7.4 Venting: Open (flame arrester)
7.5 IMO Pollution Category: B
7.6 Ship Type: 3
7.7 Barge Hull Type: Currently not available

8. HAZARD CLASSIFICATIONS

8.1 49 CFR Category: Not listed
8.2 49 CFR Class: Not pertinent
8.3 49 CFR Package Group: Not listed.
8.4 Marine Pollutant: No
8.5 NFPA Hazard Classification: 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 FWPCA List: Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Physical State at 15° C and 1 atm: Liquid
9.2 Molecular Weight: 154.2
9.3 Boiling Point at 1 atm: 378.9°F = 192.7°C = 465.9°K
9.4 Freezing Point: –56°F = 49°C = 224°K
9.5 Critical Temperature: Not pertinent
9.6 Critical Pressure: Not pertinent
9.7 Specific Gravity: 0.750 at 20°C (liquid)
9.8 Liquid Surface Tension: 23.4 dynes/cm = 0.0234 N/m at 20°C
9.9 Liquid Water Interfacial Tension: (est.) 50 dynes/cm = 0.050 N/m at 20°C
9.10 Vapor (Gas) Specific Gravity: Not pertinent
9.11 Ratio of Specific Heats of Vapor (Gas): 1.035
9.12 Latent Heat of Vaporization: 154 Btu/lb = 85.8 cal/g = $3.59\ 10^5$ J/kg
9.13 Heat of Combustion: –19,084 Btu/lb = –10,602 cal/g = -443.89×10^5 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		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
34	47.170	35	0.480	32	1.040	34	1.461
36	47.150	40	0.480	34	1.040	36	1.429
38	47.130	45	0.480	36	1.040	38	1.398
40	47.110	50	0.480	38	1.040	40	1.368
42	47.090	55	0.480	40	1.040	42	1.339
44	47.070	60	0.480	42	1.040	44	1.311
46	47.050	65	0.480	44	1.040	46	1.283
48	47.030	70	0.480	46	1.040	48	1.257
50	47.010	75	0.480	48	1.040	50	1.231
52	46.990	80	0.480	50	1.040	52	1.205
54	46.970	85	0.480	52	1.040	54	1.181
56	46.940	90	0.480	54	1.040	56	1.157
58	46.920	95	0.480	56	1.040	58	1.134
60	46.900	100	0.480	58	1.040	60	1.111
62	46.880	105	0.480	60	1.040	62	1.089
64	46.860	110	0.480	62	1.040	64	1.068
66	46.840	115	0.480	64	1.040	66	1.047
68	46.820	120	0.480	66	1.040	68	1.027
70	46.800			68	1.040	70	1.008
72	46.780			70	1.040	72	0.988
74	46.760			72	1.040	74	0.970
76	46.740			74	1.040	76	0.952
78	46.720			76	1.040	78	0.934
80	46.700					80	0.917
82	46.670					82	0.900
84	46.650					84	0.884

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	80	0.011	80	0.00029	0	0.337
	N	100	0.024	100	0.00062	25	0.352
	S	120	0.051	120	0.00126	50	0.366
	O	140	0.099	140	0.00238	75	0.381
	L	160	0.183	160	0.00425	100	0.395
	U	180	0.322	180	0.00723	125	0.410
	B	200	0.541	200	0.01178	150	0.424
	L	220	0.875	220	0.01849	175	0.438
	E	240	1.365	240	0.02802	200	0.451
		260	2.065	260	0.04121	225	0.465
		280	3.037	280	0.05897	250	0.478
		300	4.354	300	0.08234	275	0.491
		320	6.103	320	0.11240	300	0.504
		340	8.377	340	0.15050	325	0.517
		360	11.280	360	0.19770	350	0.530
		380	14.940	380	0.25550	375	0.542
		400	19.460	400	0.32520	400	0.554
		420	25.000	420	0.40820	425	0.566
		440	31.680	440	0.50580	450	0.578
						475	0.590
						500	0.601
						525	0.613
						550	0.624
						575	0.635
						600	0.646