

# N-AMYL METHYL KETONE

AMK

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION
Common Synonyms 2-Heptanone 2-Ketoheptane Methyl amyl ketone Methyl pentyl ketone Pentyl methyl ketone	Liquid Floats and mixes slowly with water.	White Penetrating fruity odor		<p>4.1 Flash Point: 117°F O.C. 102°F C.C.</p> <p>4.2 Flammable Limits in Air: 1.11%-7.9%</p> <p>4.3 Fire Extinguishing Agents: Dry chemical, alcohol foam, carbon dioxide</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective.</p> <p>4.5 Special Hazards of Combustion Products: Currently not available</p> <p>4.6 Behavior in Fire: Currently not available</p> <p>4.7 Auto Ignition Temperature: 740°F</p> <p>4.8 Electrical Hazards: Currently not available</p> <p>4.9 Burning Rate: Currently not available</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: Currently not available</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): Currently not available</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: Technical; Pure</p> <p>7.2 Storage Temperature: Ambient</p> <p>7.3 Inert Atmosphere: Ventilated (natural)</p> <p>7.4 Venting: Open (flame arrester)</p> <p>7.5 IMO Pollution Category: D</p> <p>7.6 Ship Type: Data not available</p> <p>7.7 Barge Hull Type: Currently not available</p>
<p>Stop discharge if possible. Keep people away. Shut off ignition sources. Call fire department. Stay upwind. Use water spray to "knock down" vapor. Avoid contact with liquid and vapor. Isolate and remove discharged material. Notify local health and pollution control agencies. Protect water intakes.</p>					
Fire	Combustible. Extinguish with dry chemicals, alcohol foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.				8. HAZARD CLASSIFICATIONS
<p>CALL FOR MEDICAL AID.</p> <p>VAPOR Irritating to eyes, nose and throat. If inhaled will cause dizziness, headache, or difficult breathing. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>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. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.</p>					
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.				8.1 49 CFR Category: Flammable liquid
<p>1. CORRECTIVE RESPONSE ACTIONS Stop discharge Contain Collection Systems: Skim Chemical and Physical Treatment: Burn; Absorb Clean shore line Salvage waterfowl</p> <p>2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed 2.2 Formula: CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>COCH<sub>3</sub> 2.3 IMO/UN Designation: 3.3/1110 2.4 DOT ID No.: 1110 2.5 CAS Registry No.: 110-43-0 2.6 NAERG Guide No.: 127 2.7 Standard Industrial Trade Classification: 51625</p> <p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Gloves and goggles</p> <p>3.2 Symptoms Following Exposure: Inhalation of concentrated vapor may have narcotic effect. Ingestion causes gastrointestinal disturbances. Contact with eyes causes irritation. Prolonged and repeated contact with skin may cause defatting with resultant irritation.</p> <p>3.3 Treatment of Exposure: INHALATION: move to fresh air. INGESTION: get medical attention. EYES: flush with water for 15 to 20 min. SKIN: flush affected areas with water.</p> <p>3.4 TLV-TWA: 50 ppm</p> <p>3.5 TLV-STEL: Not listed.</p> <p>3.6 TLV-Ceiling: Not listed.</p> <p>3.7 Toxicity by Ingestion: Grade 2; oral LD<sub>50</sub> = 1,670 mg/kg (rat)</p> <p>3.8 Toxicity by Inhalation: Currently not available.</p> <p>3.9 Chronic Toxicity: Currently not available</p> <p>3.10 Vapor (Gas) Irritant Characteristics: Currently not available</p> <p>3.11 Liquid or Solid Characteristics: Currently not available</p> <p>3.12 Odor Threshold: 0.897 ppb; 49 ppb</p> <p>3.13 IDLH Value: 800 ppm.</p> <p>3.14 OSHA PEL-TWA: 100 ppm.</p> <p>3.15 OSHA PEL-STEL: Not listed.</p> <p>3.16 OSHA PEL-Ceiling: Not listed.</p> <p>3.17 EPA AEGL: Not listed</p>					
<p>4. FIRE HAZARDS</p> <p>4.1 Flash Point: 117°F O.C. 102°F C.C.</p> <p>4.2 Flammable Limits in Air: 1.11%-7.9%</p> <p>4.3 Fire Extinguishing Agents: Dry chemical, alcohol foam, carbon dioxide</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective.</p> <p>4.5 Special Hazards of Combustion Products: Currently not available</p> <p>4.6 Behavior in Fire: Currently not available</p> <p>4.7 Auto Ignition Temperature: 740°F</p> <p>4.8 Electrical Hazards: Currently not available</p> <p>4.9 Burning Rate: Currently not available</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: Currently not available</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): Currently not available</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p> <p>5. CHEMICAL REACTIVITY</p> <p>5.1 Reactivity with Water: No reaction</p> <p>5.2 Reactivity with Common Materials: Will attack some forms of plastic.</p> <p>5.3 Stability During Transport: Stable</p> <p>5.4 Neutralizing Agents for Acids and Caustics: Not pertinent</p> <p>5.5 Polymerization: Not pertinent</p> <p>5.6 Inhibitor of Polymerization: Not pertinent</p> <p>6. WATER POLLUTION</p> <p>6.1 Aquatic Toxicity: Currently not available</p> <p>6.2 Waterfowl Toxicity: Currently not available</p> <p>6.3 Biological Oxygen Demand (BOD): 0.5 lb/lb, 10 days</p> <p>6.4 Food Chain Concentration Potential: None</p> <p>6.5 GESAMP Hazard Profile: Bioaccumulation: T Damage to living resources: 2 Human Oral hazard: 1 Human Contact hazard: I Reduction of amenities: X</p> <p>9. PHYSICAL &amp; CHEMICAL PROPERTIES</p> <p>9.1 Physical State at 15°C and 1 atm: Liquid</p> <p>9.2 Molecular Weight: 114.19</p> <p>9.3 Boiling Point at 1 atm: 304.7°F = 151.5°C = 424.7°K</p> <p>9.4 Freezing Point: -31°F = -35°C = 238°K</p> <p>9.5 Critical Temperature: Currently not available</p> <p>9.6 Critical Pressure: Currently not available</p> <p>9.7 Specific Gravity: 0.8204 at 15°C (liquid)</p> <p>9.8 Liquid Surface Tension: 26.17 dynes/cm = 0.02617 N/m at 25°C</p> <p>9.9 Liquid Water Interfacial Tension: 12.4 dynes/cm = 0.0124 N/m at 25°C</p> <p>9.10 Vapor (Gas) Specific Gravity: 3.94</p> <p>9.11 Ratio of Specific Heats of Vapor (Gas): (est.) 1.051</p> <p>9.12 Latent Heat of Vaporization: 148.9 Btu/lb = 82.7 cal/g = 3.46 X 10<sup>3</sup> J/kg</p> <p>9.13 Heat of Combustion: Currently not available</p> <p>9.14 Heat of Decomposition: Not pertinent</p> <p>9.15 Heat of Solution: Not pertinent</p> <p>9.16 Heat of Polymerization: Not pertinent</p> <p>9.17 Heat of Fusion: Currently not available</p> <p>9.18 Limiting Value: Currently not available</p> <p>9.19 Reid Vapor Pressure: Currently not available</p>					
<p>NOTES</p>					

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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
30	52.020	51	0.450	30	0.995	51	0.895
35	51.870	52	0.450	40	0.985	52	0.889
40	51.730	53	0.450	50	0.976	53	0.883
45	51.580	54	0.450	60	0.967	54	0.878
50	51.430	55	0.450	70	0.958	55	0.872
55	51.290	56	0.450	80	0.949	56	0.866
60	51.140	57	0.450	90	0.940	57	0.861
65	50.990	58	0.450	100	0.931	58	0.856
70	50.840	59	0.450	110	0.922	59	0.850
75	50.690	60	0.450	120	0.912	60	0.845
80	50.540	61	0.450	130	0.903	61	0.840
85	50.390	62	0.450	140	0.894	62	0.835
90	50.240	63	0.450	150	0.885	63	0.829
95	50.100	64	0.450	160	0.876	64	0.824
		65	0.450	170	0.867	65	0.819
		66	0.450	180	0.858	66	0.814
		67	0.450	190	0.848	67	0.809
		68	0.450	200	0.839	68	0.805
				210	0.830	69	0.800
				220	0.821	70	0.795
				230	0.812	71	0.790
				240	0.803	72	0.786
				250	0.794	73	0.781
				260	0.785	74	0.776
						75	0.772
						76	0.767

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
34	0.430	70	0.072	70	0.00144	0	0.323
36	0.430	80	0.099	80	0.00194	20	0.333
38	0.430	90	0.134	90	0.00260	40	0.344
40	0.430	100	0.181	100	0.00344	60	0.354
42	0.430	110	0.242	110	0.00451	80	0.365
44	0.430	120	0.319	120	0.00586	100	0.375
46	0.430	130	0.418	130	0.00753	120	0.385
48	0.430	140	0.541	140	0.00960	140	0.395
50	0.430	150	0.696	150	0.01215	160	0.404
52	0.430	160	0.888	160	0.01524	180	0.414
54	0.430	170	1.123	170	0.01898	200	0.423
56	0.430	180	1.411	180	0.02346	220	0.433
58	0.430	190	1.760	190	0.02882	240	0.442
60	0.430	200	2.181	200	0.03516	260	0.451
62	0.430	210	2.684	210	0.04264	280	0.460
64	0.430	220	3.285	220	0.05141	300	0.469
66	0.430	230	3.995	230	0.06163	320	0.477
68	0.430	240	4.833	240	0.07348	340	0.486
70	0.430	250	5.815	250	0.08716	360	0.494
72	0.430	260	6.960	260	0.10290	380	0.503
74	0.430	270	8.290	270	0.12090	400	0.511
76	0.430	280	9.828	280	0.14130	420	0.519
78	0.430	290	11.600	290	0.16460	440	0.527
80	0.430	300	13.630	300	0.19080		
82	0.430	310	15.940	310	0.22040		
84	0.430	320	18.580	320	0.25350		