# NAPHTHA: COAL TAR

## NCT

### CAUTIONARY RESPONSE INFORMATION

<table>
<thead>
<tr>
<th>Common Synonym</th>
<th>Waterly liquid</th>
<th>Colorless to pale yellow</th>
<th>Gasoline-like odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture of benzene, toluene, xylene</td>
<td>Floats on water. Irritating vapor is produced.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Keep people away.**
- Avoid inhalation.
- Shut off ignition sources and call fire department.
- Avoid contact with liquid and vapor.

**Stay upwind and use water spray to "knock down" vapor.**
- Notify local health and pollution control agencies.
- Protect water intakes.

### Fire

**Combustible.**
- Extinguish with foam, dry chemical or carbon dioxide.
- 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.
- **LIQUID**
  - Irritating to skin and eyes.
  - If swallowed, will cause nausea or vomiting.
  - Remove contaminated clothing and shoes.
  - 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.**
- Contains:
  - Collection Systems: Skim
  - Chemical and Physical Treatment: Burn
  - Clean shore line
  - Salvage wastewater

### 2. CHEMICAL DESIGNATIONS

<table>
<thead>
<tr>
<th>Code</th>
<th>Compatibility Group</th>
<th>Miscellaneous Hydrocarbon Mixtures</th>
<th>IMO/UN Designation</th>
<th>DOT ID No.</th>
<th>CAS Registry No.</th>
<th>NAERG Guide No.</th>
<th>Standard Industrial Trade Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>CG</td>
<td>33</td>
<td>2.3</td>
<td>1268</td>
<td>33429</td>
<td>128</td>
<td>50</td>
</tr>
</tbody>
</table>

### 3. HEALTH HAZARDS

**3.1 Personal Protective Equipment:**
- Hydrocarbon vapor canister or air pack; plastic gloves; goggles or face shield.

**3.2 Symptoms Following Exposure:**
- Primarily a narcotic, causing unconsciousness in high concentrations. The symptoms of acute benzene poisoning are not likely, since the compound has components other than benzene.

**3.3 Treatment of Exposure:**
- Remove from exposure. Support respiration. Call physician.

**3.4 TLV-TWA:**
- 400 ppm

**3.5 TLV-STEL:**
- Not listed

**3.6 TLV-CEILING:**
- Not listed

**3.7 Toxicity by Ingestion:**
- Grade 3; LD50 = 50 to 500 mg/kg

**3.8 Toxicity by Inhalation:**
- Currently not available.

**3.9 Chronic Toxicity:**
- Leukemia

**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 a smarting and reddening of the skin.

**3.12 Odor Thresholds:**
- 4.68 ppm

**3.13 IDLH Value:**
- 1.000 ppm

**3.14 OSHA PEL-TWA:**
- 100 ppm

**3.15 OSHA PEL-STEL:**
- Not listed

**3.16 OSHA PEL-Ceiling:**
- Not listed

**3.17 EPA AEGL:**
- Not listed

### 4. FIRE HAZARDS

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Flammable Limits in Air:</th>
<th>Fire Extinguishing Agents:</th>
<th>Special Hazards of Combustion Products:</th>
<th>Auto Ignition Temperature:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 20°F</td>
<td>Currently not available</td>
<td>Foam, carbon dioxide, or dry chemical</td>
<td>Not pertinent</td>
<td>900 – 950°F</td>
</tr>
</tbody>
</table>

**4.1 Flash Point:**
- 0 – 20°F

**4.2 Flammable Limits in Air:**
- Currently not available

**4.3 Fire Extinguishing Agents:**
- Foam, carbon dioxide, or dry chemical

**4.4 Special Hazards of Combustion Products:**
- Not pertinent

**4.5 Minimum Oxygen Concentration for Combustion (MOCC):**
- Not listed

**5. CHEMICAL REACTIVITY

<table>
<thead>
<tr>
<th>Reactivity with Water:</th>
<th>Reactivity with Common Materials:</th>
<th>Stability During Transport:</th>
<th>Neutralizing Agents for Acids and Causatives:</th>
<th>Polymerization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>No reaction</td>
<td>No reaction</td>
<td>Stable</td>
<td>Stable</td>
<td>Not pertinent</td>
</tr>
</tbody>
</table>

**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 Causatives:**
- Stable

**5.5 Polymerization:**
- Not pertinent

**6. WATER POLLUTION

<table>
<thead>
<tr>
<th>Aquatic Toxicity:</th>
<th>Waterfowl Toxicity:</th>
<th>Biological Oxygen Demand (BOD):</th>
<th>Food Chain Concentration Potential:</th>
<th>GESAMP Hazard Profile:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently not listed</td>
<td>Currently not listed</td>
<td>Currently not available</td>
<td>None</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**6.1 Aquatic Toxicity:**
- Currently not listed

**6.2 Waterfowl Toxicity:**
- Currently not listed

**6.3 Biological Oxygen Demand (BOD):**
- Currently not available

**6.4 Food Chain Concentration Potential:**
- None

**6.5 GESAMP Hazard Profile:**
- Not listed

### 7. SHIPPING INFORMATION

<table>
<thead>
<tr>
<th>Grades of Purity:</th>
<th>Storage Temperature:</th>
<th>Inert Atmosphere:</th>
<th>Venting:</th>
<th>IMO Pollution Category:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity varies with coal used and distillation range taken.</td>
<td>Ambient</td>
<td>No requirement</td>
<td>Open (flame arrester)</td>
<td>B</td>
</tr>
</tbody>
</table>

**7.1 Grades of Purity:**
- Purity varies with coal used and distillation range taken.

**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:**
- 3

### 8. HAZARD CLASSIFICATIONS

**8.1 49 CFR Category:**
- Flammable liquid

**8.2 49 CFR Class:**
- 3

**8.3 49 CFR Package Group:**
- I

**8.4 Marine Pollutant:**
- Yes

**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

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Molecular Weight:</th>
<th>Boiling Point at 1 atm:</th>
<th>Critical Temperature:</th>
<th>Freezing Point:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>Not pertinent</td>
<td>Not pertinent</td>
<td>Not pertinent</td>
<td>Not pertinent</td>
</tr>
</tbody>
</table>

**9.1 Physical State:**
- Liquid

**9.2 Molecular Weight:**
- Not pertinent

**9.3 Boiling Point at 1 atm:**
- 200 – 500°F = 366 – 533°F

**9.4 Freezing Point:**
- Not pertinent

**9.5 Critical Temperature:**
- Not pertinent

**9.6 Critical Pressure:**
- Not pertinent

**9.7 Specific Gravity:**
- 0.86 – 0.88 at 20°C (liquid)

**9.8 Liquid Surface Tension:**
- (est.) 20 dynes/cm

**9.9 Liquid Water Interfacial Tension:**
- (est.) 45 dynes/cm

**9.10 Vapor (Gas) Specific Gravity:**
- Currently not available

**9.11 Ratio of Specific Heats of Vapor (Gas):**
- (est.) 1.030

**9.12 Latent Heat of Vaporization:**
- (est.) 101 Btu/lb = 58.2 cal/g = 2.35 X 10^5 J/kg

**9.13 Heat of Combustion:**
- (est.) – 18,200 Btu/lb = – 10.100 cal/g = – 424 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:**
- 0.13 psia

### NOTES

- JUNE 1999
### NAPHTHA: COAL TAR

#### 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
---|---|---|---|---|---|---|---
50 | 53.680 | 50 | 0.478 | 50 | 1.040 | 50 | 9.343
52 | 53.680 | 52 | 0.478 | 52 | 1.040 | 52 | 8.641
54 | 53.680 | 54 | 0.478 | 54 | 1.040 | 54 | 8.370
56 | 53.680 | 56 | 0.478 | 56 | 1.040 | 56 | 7.927
58 | 53.680 | 58 | 0.478 | 58 | 1.040 | 58 | 7.511
60 | 53.680 | 60 | 0.478 | 60 | 1.040 | 60 | 7.119
62 | 53.680 | 62 | 0.478 | 62 | 1.040 | 62 | 6.751
64 | 53.680 | 64 | 0.478 | 64 | 1.040 | 64 | 6.404
66 | 53.680 | 66 | 0.478 | 66 | 1.040 | 66 | 6.078
68 | 53.680 | 68 | 0.478 | 68 | 1.040 | 68 | 5.770
70 | 53.680 | 70 | 0.478 | 70 | 1.040 | 70 | 5.461
72 | 53.680 | 72 | 0.478 | 72 | 1.040 | 72 | 5.207
74 | 53.680 | 74 | 0.478 | 74 | 1.040 | 74 | 4.950
76 | 53.680 | 76 | 0.478 | 76 | 1.040 | 76 | 4.707
78 | 53.680 | 78 | 0.478 | 78 | 1.040 | 78 | 4.477
80 | 53.680 | 80 | 0.478 | 80 | 1.040 | 80 | 4.260
82 | 53.680 | 82 | 0.478 | 82 | 1.040 | 82 | 4.056
84 | 53.680 | 84 | 0.478 | 84 | 1.040 | 84 | 3.862
86 | 53.680 | 86 | 0.478 | 86 | 1.040 | 86 | 3.679
88 | 53.680 | 88 | 0.478 | 88 | 1.040 | 88 | 3.506
90 | 53.680 | 90 | 0.478 | 90 | 1.040 | 90 | 3.342
92 | 53.680 | 92 | 0.478 | 92 | 1.040 | 92 | 3.187
94 | 53.680 | 94 | 0.478 | 94 | 1.040 | 94 | 3.040
96 | 53.680 | 96 | 0.478 | 96 | 1.040 | 96 | 2.901
98 | 53.680 | 98 | 0.478 | 98 | 1.040 | 98 | 2.770
100 | 53.680 | 100 | 0.478 | 100 | 1.040 | 100 | 2.645

#### Pounds per 100 pounds of water | Pounds per square inch | Temperature (degrees F) | Pounds per cubic foot | Temperature (degrees F) | British thermal unit per pound-F
---|---|---|---|---|---
I | 0.094 | N | C
N | 0.124 | O | U
S | 0.163 | P | T
O | 0.211 | T | R
L | 0.272 | E | E
U | 0.347 | N | N
B | 0.440 | T | T
L | 0.553 |
E | 0.691 |
I | 0.856 |
A | 1.054 |
T | 1.290 |
210 | 1.589 |
220 | 1.897 |
230 | 2.281 |
240 | 2.728 |
250 | 3.247 |
260 | 3.846 |
270 | 4.535 |
280 | 5.323 |
290 | 6.221 |
300 | 7.241 |
310 | 8.394 |
320 | 9.695 |
330 | 11.150 |
340 | 12.790 |

#### Temperatures (degrees F) | British thermal unit per pound-F
---|---
JUNE 1999