

# OILS, EDIBLE: TUCUM

OTC

## CAUTIONARY RESPONSE INFORMATION

|   |   |                  |              |           |
|---|---|------------------|--------------|-----------|
| <b>Common Synonyms</b>  |   | Liquid           | Light yellow | Weak odor |
| American palm kernel oil<br>Aouara oil<br>Palm seed oil<br>Tucum oil  |   | Floats on water. |              |           |
| <p>Call fire department.<br/>Notify local health and pollution control agencies.<br/>Avoid contact with liquid.</p> |   |                  |              |           |
| <b>Fire</b>   | Combustible.<br>Extinguish with dry chemicals, foam or carbon dioxide.<br>Water may be ineffective on fire.   |                  |              |           |
| <b>Exposure</b>   | LIQUID<br>Not harmful.<br>DO NOT INDUCE VOMITING.   |                  |              |           |
| <b>Water Pollution</b>  | Effect of low concentrations on aquatic life is unknown.<br>Fouling to shoreline.<br>May be dangerous if it enters water intakes.<br>Notify local health and wildlife officials.<br>Notify operators of nearby water intakes. |                  |              |           |

|  |   |
|--|---|
| <p><b>1. CORRECTIVE RESPONSE ACTIONS</b></p> Stop discharge<br>Contain<br>Collection Systems: Skim<br>Chemical and Physical Treatment:<br>Absorb<br>Clean shore line<br>Salvage waterfowl  | <p><b>2. CHEMICAL DESIGNATIONS</b></p> 2.1 CG Compatibility Group: 34; Ester<br>2.2 Formula: Not applicable<br>2.3 IMO/UN Designation: Not listed<br>2.4 DOT ID No.: Not listed<br>2.5 CAS Registry No.: Currently not available<br>2.6 NAERG Guide No.: Not listed<br>2.7 Standard Industrial Trade Classification: 9899 |
| <p><b>3. HEALTH HAZARDS</b></p> 3.1 Personal Protective Equipment: Goggles or face shield; rubber gloves.<br>3.2 Symptoms Following Exposure: Oil is essentially nontoxic. Contact with eyes causes mild irritation, and prolonged contact with skin may cause dermatitis.<br>3.3 Treatment of Exposure: EYES: flush with water for at least 15 min. INGESTION: do NOT induce vomiting.<br>3.4 TLV-TWA: Not listed.<br>3.5 TLV-STEL: Not listed.<br>3.6 TLV-Ceiling: Not listed.<br>3.7 Toxicity by Ingestion: Currently not available<br>3.8 Toxicity by Inhalation: Currently not available.<br>3.9 Chronic Toxicity: None known.<br>3.10 Vapor (Gas) Irritant Characteristics: Currently not available<br>3.11 Liquid or Solid Characteristics: Currently not available<br>3.12 Odor Threshold: Currently not available<br>3.13 IDLH Value: Not listed.<br>3.14 OSHA PEL-TWA: Not listed.<br>3.15 OSHA PEL-STEL: Not listed.<br>3.16 OSHA PEL-Ceiling: Not listed.<br>3.17 EPA AEGL: Not listed |   |

|  |  |          |                |                           |   |                         |   |                           |   |
|--|--|----------|----------------|---------------------------|---|-------------------------|---|---------------------------|---|
| <p><b>4. FIRE HAZARDS</b></p> 4.1 Flash Point: 398°F C.C.<br>4.2 Flammable Limits in Air: Not pertinent<br>4.3 Fire Extinguishing Agents: Dry chemical, foam, carbon dioxide<br>4.4 Fire Extinguishing Agents Not to Be Used: Water or foam may cause frothing; water may be ineffective.<br>4.5 Special Hazards of Combustion Products: Not pertinent<br>4.6 Behavior in Fire: Not pertinent<br>4.7 Auto Ignition Temperature: Currently not available<br>4.8 Electrical Hazards: Not pertinent<br>4.9 Burning Rate: 4 mm/min.<br>4.10 Adiabatic Flame Temperature: Currently not available<br>4.11 Stoichiometric Air to Fuel Ratio: Not pertinent.<br>4.12 Flame Temperature: Currently not available<br>4.13 Combustion Molar Ratio (Reactant to Product): Not pertinent.<br>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed | <p><b>7. SHIPPING INFORMATION</b></p> 7.1 Grades of Purity: Commercial<br>7.2 Storage Temperature: Ambient<br>7.3 Inert Atmosphere: No requirement<br>7.4 Venting: Open (flame arrester)<br>7.5 IMO Pollution Category: D<br>7.6 Ship Type: Data not available<br>7.7 Barge Hull Type: Currently not available   |          |                |                           |   |                         |   |                           |   |
| <p><b>5. CHEMICAL REACTIVITY</b></p> 5.1 Reactivity with Water: No reaction<br>5.2 Reactivity with Common Materials: No reaction<br>5.3 Stability During Transport: Stable<br>5.4 Neutralizing Agents for Acids and Caustics: Not pertinent<br>5.5 Polymerization: Not pertinent<br>5.6 Inhibitor of Polymerization: Not pertinent   | <p><b>8. HAZARD CLASSIFICATIONS</b></p> 8.1 49 CFR Category: Not listed<br>8.2 49 CFR Class: Not pertinent<br>8.3 49 CFR Package Group: Not listed.<br>8.4 Marine Pollutant: No<br>8.5 NFPA Hazard Classification:<br><table border="0"> <tr> <td>Category</td> <td>Classification</td> </tr> <tr> <td>Health Hazard (Blue).....</td> <td>0</td> </tr> <tr> <td>Flammability (Red).....</td> <td>1</td> </tr> <tr> <td>Instability (Yellow).....</td> <td>0</td> </tr> </table> 8.6 EPA Reportable Quantity: Not listed.<br>8.7 EPA Pollution Category: Not listed.<br>8.8 RCRA Waste Number: Not listed<br>8.9 EPA FWPCA List: Not listed   | Category | Classification | Health Hazard (Blue)..... | 0 | Flammability (Red)..... | 1 | Instability (Yellow)..... | 0 |
| Category   | Classification   |          |                |                           |   |                         |   |                           |   |
| Health Hazard (Blue).....  | 0  |          |                |                           |   |                         |   |                           |   |
| Flammability (Red).....  | 1  |          |                |                           |   |                         |   |                           |   |
| Instability (Yellow).....  | 0  |          |                |                           |   |                         |   |                           |   |
| <p><b>6. WATER POLLUTION</b></p> 6.1 Aquatic Toxicity: Currently not available<br>6.2 Waterfowl Toxicity: Currently not available<br>6.3 Biological Oxygen Demand (BOD): Currently not available<br>6.4 Food Chain Concentration Potential: None<br>6.5 GESAMP Hazard Profile:<br>Bioaccumulation: 0<br>Damage to living resources: 0<br>Human Oral hazard: 0<br>Human Contact hazard: 0<br>Reduction of amenities: XX   | <p><b>9. PHYSICAL &amp; CHEMICAL PROPERTIES</b></p> 9.1 Physical State at 15° C and 1 atm: Liquid<br>9.2 Molecular Weight: Not applicable<br>9.3 Boiling Point at 1 atm: Not pertinent (very high)<br>9.4 Freezing Point: 86°F = 30°C = 303°K<br>9.5 Critical Temperature: Not pertinent<br>9.6 Critical Pressure: Not pertinent<br>9.7 Specific Gravity: 0.908 at 60°C (liquid)<br>9.8 Liquid Surface Tension: (est.) 25 dynes/cm = 0.025 N/m at 30°C<br>9.9 Liquid Water Interfacial Tension: (est.) 50 dynes/cm = 0.050 N/m at 30°C<br>9.10 Vapor (Gas) Specific Gravity: Not pertinent<br>9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent<br>9.12 Latent Heat of Vaporization: Not pertinent<br>9.13 Heat of Combustion: (est.) -15,500 Btu/lb = -8,600 cal/g = -360 X 10 <sup>3</sup> J/kg<br>9.14 Heat of Decomposition: Not pertinent<br>9.15 Heat of Solution: Not pertinent<br>9.16 Heat of Polymerization: Not pertinent<br>9.17 Heat of Fusion: Currently not available<br>9.18 Limiting Value: Currently not available<br>9.19 Reid Vapor Pressure: Currently not available |          |                |                           |   |                         |   |                           |   |

NOTES

# OILS, EDIBLE: TUCUM

OTC

| 9.20<br>SATURATED LIQUID DENSITY |                       | 9.21<br>LIQUID HEAT CAPACITY |                                     | 9.22<br>LIQUID THERMAL CONDUCTIVITY |   | 9.23<br>LIQUID VISCOSITY   |  |
|----------------------------------|-----------------------|------------------------------|-------------------------------------|-------------------------------------|---|----------------------------|--|
| Temperature<br>(degrees F)       | Pounds per cubic foot | Temperature<br>(degrees F)   | British thermal unit per<br>pound-F | Temperature<br>(degrees F)          | British thermal unit inch<br>per hour-square foot-F | Temperature<br>(degrees F) | Centipoise   |
| 88                               | 57.000                | 88                           | 0.480                               | 90                                  | 1.158   |                            | N<br>O<br>T<br><br>P<br>E<br>R<br>T<br>I<br>N<br>E<br>N<br>T |
| 90                               | 56.960                | 90                           | 0.480                               | 95                                  | 1.158   |                            |  |
| 92                               | 56.910                | 92                           | 0.480                               | 100                                 | 1.158   |                            |  |
| 94                               | 56.860                | 94                           | 0.480                               | 105                                 | 1.158   |                            |  |
| 96                               | 56.810                | 96                           | 0.480                               | 110                                 | 1.158   |                            |  |
| 98                               | 56.760                | 98                           | 0.480                               | 115                                 | 1.158   |                            |  |
| 100                              | 56.710                | 100                          | 0.480                               | 120                                 | 1.158   |                            |  |
| 102                              | 56.670                | 102                          | 0.480                               |                                     |   |                            |  |
| 104                              | 56.620                | 104                          | 0.480                               |                                     |   |                            |  |
| 106                              | 56.570                | 106                          | 0.480                               |                                     |   |                            |  |
| 108                              | 56.520                | 108                          | 0.480                               |                                     |   |                            |  |
| 110                              | 56.470                | 110                          | 0.480                               |                                     |   |                            |  |
| 112                              | 56.420                | 112                          | 0.480                               |                                     |   |                            |  |
| 114                              | 56.370                | 114                          | 0.480                               |                                     |   |                            |  |
| 116                              | 56.330                | 116                          | 0.480                               |                                     |   |                            |  |
| 118                              | 56.280                | 118                          | 0.480                               |                                     |   |                            |  |
| 120                              | 56.230                | 120                          | 0.480                               |                                     |   |                            |  |
| 122                              | 56.180                | 122                          | 0.480                               |                                     |   |                            |  |
| 124                              | 56.130                |                              |                                     |                                     |   |                            |  |
| 126                              | 56.080                |                              |                                     |                                     |   |                            |  |
| 128                              | 56.030                |                              |                                     |                                     |   |                            |  |
| 130                              | 55.990                |                              |                                     |                                     |   |                            |  |
| 132                              | 55.940                |                              |                                     |                                     |   |                            |  |
| 134                              | 55.890                |                              |                                     |                                     |   |                            |  |
| 136                              | 55.840                |                              |                                     |                                     |   |                            |  |
| 138                              | 55.790                |                              |                                     |                                     |   |                            |  |

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