I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Supplier/Manufacturer's Name:** Mexichem Compuestos S.A.

**Address:** Autopista Tampico-Altamira, Km. 4.5 Nuevo. Puerto Industrial, Altamira, Tamaulipas. México.

**Emergency Phone:** 011 (52 833) 229 01 00 SETIQ 01 800 002 21400 24 Hrs.

**Chemical Name:** Tri 2 etil hexyl trimellitate

**Synonyms:** TOTM

**Chemical Name Family:** Ester.

**Product Name(s):**

- TOTM
- Trioctyl Trimellitate

**Product Use:** Manufacture of plastics, lubricants, lacquers'

**Formula:** $C_{33}H_{56}O_6$

Version date: 10/20/2001 Revision date: 01/24/2011

II. COMPOSITION AND INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tri 2 etil hexyl trimellitate</td>
<td>3319-31-1</td>
</tr>
<tr>
<td>2 etil hexanol</td>
<td>104-76-7</td>
</tr>
</tbody>
</table>

**W/W %:**

- Tri 2 etil hexyl trimellitato 99%
- 2 etil hexanol  Traces

**Exposure Limits in Air ACGIH-TLV:**

- 5 mg/m³: TWA / STEL Not regulated

**Exposure Limits in Air OSHA-PEL:**

- TWA / STEL Not regulated.

**Exposure Limits in Air NIOSH IDLH:**

- No available

This MSDS Should be retained and made available for employees and other uses of the product.

III. HAZARDS IDENTIFICATION

**Emergency Overview:** This product is a clear, odorless, and liquid. Excessive exposure may result in eye skin or respiratory irritation.

**Target Organs:** Acute: Ingestion may cause gastric irritation. Tests have proved this substance is not harmful in terms of general exposure.

**Health Hazards:** Inhalation of vapors from this product may be irritating to respiratory system. May cause eye irritation, skin contact. Ingestion of this product may be harmful. Flammability hazard: This product may ignite if substantially heated. Reactivity hazard: This product is not reactive.

**INHALATION:** Inhalation excessive of o from this product may irritate the respiratory system. Symptoms may include coughing, and sneezing. Symptoms should be relieved upon removal to fresh air. If heated to decomposition, fumes may be irritating to the respiratory system. Symptoms may include coughing and difficulty breathing.

**CONTACT WHIT SKIN OR EYES:** Contact with the skin is not expected to cause adverse symptoms unless exposure is prolonged or in conditions where moisture is present on the skin. Repeated skin – overexposures to low concentrations can result in dermatitis. Contact with eyes may cause mild irritation, pain, reddening, and watering to eye tissue may occur and irritation may be delayed by several hours.

**SKIN ABSORPTION:** None

**ADDITIONAL INFORMATION:** Avoid breathing mist vapor. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation.

**CONSIDERATIONS:** Emergency responders must wear proper personal protective equipment for the incident to which they are responding.

**INGESTION:** Ingestion intestinal disorder. Abdominal pain, diarrhea and vomiting.

**INJECTION:** Accidental injection of this product, via laceration or puncture by contaminated object, may cause pain and irritation in addition to the wound.

**ROUTESOFEXPOSURE:** The substance can be absorbed into the body by inhalation, by ingestion.
IV. FIRST AID MEASURES

Victims of Chemicals exposure must be taken for medical attention if necessary.

SKIN EXPOSURE: Immediately wash soap and plenty of water. Wash clothing before reuse. Destroy contaminated shoes. Minimum flushing is for 15 minutes. Do not interrupt flushing. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek medical attention if adverse effect occurs.

INHALATION: If vapors or fumes from heated product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

EYE EXPOSURE: If this product enters the eyes, open victim’s eyes while under gently running water. Use sufficient force to open eyelids. Minimum flushing is for 15 minutes. Do not interrupt flushing.

INGESTION: If this product is swallowed. Do not induce vomiting, unless directly by medical personnel. Have victim rinse mouth with water or give several cupfuls of water, if conscious. If vomiting occurs, lean patient forward or place on side (head-down position, if possible) to maintain an open airway and prevent aspiration.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

V. FIRE – FIGHTING MEASURES

Flash Point: 263 °C
Autoignition Temperature: 210 °C
Flammable Limits (in air by volume %) Lower (LEL): 0.3 % at 249 °C Upper (UEL): 2.5 % at 304 °C
Fire Extinguishing Materials: Use Water Fog, Carbon Dioxide, Foam or Chemical Powder. Water and Foam may cause frothing when they come in contact with the burning material.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product poses a slight fire hazard at elevated temperatures. When involved in a fire, this material may decompose and produce irritating vapors, acrid smoke, and toxic gases (Carbon monoxide, carbon dioxide).

EXPLOSION SENSITIVITY TO MECHANICAL IMPACT: Not sensitive
EXPLOSION SENSITIVITY TO SATATIC DISCHARGE: Electrostatic loads during handling of this product may form. It is recommended to connect equipment to land.

SPECIAL FIRE-FIGHTING PROCEDURES: keep away non-essential persons, isolate the area of risk and control access to it. If you can do so without risk, remove the container of the fire area. Fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move fire-exposed containers if it can be done without risk to firefighters. If possible, firefighters should control run-off water to prevent environmental contamination.

VI. ACCIDENTAL RELEASE MEASURES

SPILL RESPONSE PROCEDURES: Spill can be cleaned using absorptive means, deposited in containers and available in accordance with existing regulations. Large spills containing forming a dike with absorbent material or sand, control of ignition sources. Collect material spilled into an appropriate waste container, keep it closed. Not be exposed to material without protective equipment. Avoid contamination of water supplies, drainage and sewers, or rain channels. Required if inform local authorities about the incident.

VII. HANDLING AND USE

WORK AND HYGIENE PRACTICES: As with chemicals, avoid getting this product on you or in you. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapor’s generated if this product. Use in a well-ventilated location. Wipe-down area routinely to avoid the accumulation of vapors.

STORAGE AND HANDLING PRACTICES: Prevent inhalation and direct contact with skin eyes. Wear protective gloves when handling hot material during processing. Safety glasses are recommended for all industrial activities. Wash hands immediately after contact. Store containers away sunlight and direct sources of heat/fire in adequately ventilated storerooms. Store in tightly sealed, appropriately marked containers. Disused empty containers should also be tightly sealed. Segregate from strong oxidizing agents. PROCESSING WARNING: TOTM materials may emit fumes and/or vapors when heated to processing temperatures. Concentration of these emissions in the workplace air depends upon specific compound formulation, amount processed, processing method and temperatures and the effectiveness of exhaust ventilation. Always use materials under well ventilated conditions and avoid continued or prolonged breathing of process vapors.

VIII. EXPOSURE CONTROLS-PERSONAL PROTECTION

EXPOSURE LIMITS FOR COMPONENTS: TWA / STEL: TWA: 5 mg/m3.
VENTILATION AND ENGINEERING CONTROLS: Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.
EYE PROTECTION: Splash goggles or safety glasses may be worn if operations can generate vapors. Provide an emergency
eye wash fountain and quick drench shower in the immediate work area.
HAND PROTECTION: Nitrile Gloves
BODY PROTECTION: Wear appropriate chemical resistant clothing.
RESPIRATORY PROTECTION: A NIOSH approved respirator with N95 cartridges may be permissible under certain circumstances where airborne concentrations of vapors are expected to exceed exposure limits. Or when symptoms have been observed that are indicative of overexposure. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

IX. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAPOR DENSITY (WATER = 1)</td>
<td>18.9</td>
</tr>
<tr>
<td>BOILING POINT</td>
<td>414 °C</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY</td>
<td>0.989 @ 20 °C</td>
</tr>
<tr>
<td>SOLUBILITY IN WATER</td>
<td>0.39 mg/l</td>
</tr>
<tr>
<td>EVAPORATION RATE (n-BuAc =1)</td>
<td>Not stabilized</td>
</tr>
<tr>
<td>ODOR THRESHOLD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>PERCENT VOLATILES</td>
<td>0.3 % max.</td>
</tr>
<tr>
<td>VAPOR PRESSURE</td>
<td>0.16 mmHg</td>
</tr>
<tr>
<td>Density</td>
<td>0.981 – 0.985 @ 20 °C</td>
</tr>
<tr>
<td>MELTING POINT</td>
<td>Not available.</td>
</tr>
<tr>
<td>MOLECULAR WEIGHT</td>
<td>547 gr/mol</td>
</tr>
<tr>
<td>FLASH POINT</td>
<td>263 °C</td>
</tr>
<tr>
<td>APPEARANCE, ODOR AND COLOR</td>
<td>This product is a clear to pale yellow, odor characteristic, slightly irritant, and liquid.</td>
</tr>
</tbody>
</table>

X. STABILITY AND REACTIVITY

STABILITY: Stable under normal temperature and pressure.
DECOMPOSITION PRODUCTS: Thermal decomposition products include carbon monoxide, carbon dioxide.
SUBSTANCE IS INCOMPATIBLE: Strong oxidizing agents, sulfuric acid, and nitric acid.
Hazardous Polymerization: Will not occur.
CONDITIONS TO AVOID: Avoid heat, static electricity, flames, sparks and other sources of ignition.

XI. TOXICLOGICAL INFORMATION

TOXICITY DATA: LD50 rat > 5000 mg/kg (oral). Dermal LD50 rat > 2000 mg/kg (rat).
GENERAL TOXICITY INFORMATION: Excessive exposure this material may causes irritation to skin, eyes, mucous membranes and upper respiratory tract.
SUSPECTED CANCER AGENT: Agent suspect of cancer A5, animal experimentation, the available epidemiological studies do not confirm an increase in risk of cancer in exposed humans.
REPRODUCTIVE TOXICITY INFORMATION: Mutagenicity, Embryo toxicity, Teratogenicity, Reproductive Toxicity: This material is not having harmful effects on human reproduction, repeated exposures and for a long time.
ACGIH BIOLOGICAL EXPOSURE INDICES: There are no ACGIH Biological Exposure Indices (BEIs) determined for this material.

XII. ECOLOGICAL INFORMATION

BIODEGRADABILITY: No data.
ACCUMULATION: No data.
EFFECT OF CHEMICAL ON AQUATIC LIFE: Fish Lc50 >1000 mg/l. Toxicity to aquatic plants, microorganisms, aquatic invertebrates. No data.
Do not release into natural waters.

XIII. DISPOSAL CONSIDERATIONS

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Small spills may be collected With absorbent materials. For large spills, flush area with water spray. Prevent runoff from entering drains, sewers, or streams.
WASTE DISPOSAL METHOD: Incineration, Observe all federal, state, and local laws concerning health and environment.

XIV. TRANSPORTATION INFORMATION

HAZARD CLASS NUMBER and DESCRIPTION: No applicable
UN IDENTIFICATION NUMBER: No applicable
PACKING GROUP: Group No applicable
MARINE POLLUTANT COMPONENTS: No applicable
REPORTABLE QUANTITY: No applicable
XV. REGULATORY INFORMATION

ADDITIONAL UNITED STATES REGULATIONS:
U.S. SARA (311-312) HAZARD CLASSIFICATION: This material is not regulated.
U.S. TSCA INVENTORY STATUS: This material is listed on the TSCA Inventory.
ACGIH: Animal carcinogen Not ( A5)
CANADIAN DSL INVENTORY STATUS: This compound is listed the Canadian DSL Inventory.
CANADA HMIS STATUS: Not controlled.

XVI. OTHER INFORMATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

H.M.I.S.

N.F.P.A. 704

The information and recommendations in this publication are to best of our knowledge, information and belief accurate at the date of publication. Nothing herein is to be construed as a representation or a warranty, express or implied, as to any specific property, quality, use or condition of the product. In all cases, it is the responsibility of the user to determine the applicability of such information and recommendations, and the suitability of any products for their own particular purpose.

MSDS ACRONYMS:
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety and Health Administration
STEL: Short Term Exposure Limit ( 15 minutes)
TLV: Threshold Limit Value
TWA: Time Weighted Average (8 Hours)
TSCA: Toxic Substance Control Act.
NTP: National Toxicology Program (U.S.A)