Material Safety Data Sheet

PRODUCT NAME: HYDROGENATED TALLOW FATTY ACID

IDENTIFICATION AND DISTRIBUTOR INFORMATION

<table>
<thead>
<tr>
<th>TRADE NAME:</th>
<th>HYDROGENATED TALLOW FATTY ACID</th>
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</thead>
<tbody>
<tr>
<td>CAS#:</td>
<td>57-11-4</td>
</tr>
<tr>
<td>EINECS#:</td>
<td>2631309</td>
</tr>
<tr>
<td>DATE:</td>
<td>February 24, 2011</td>
</tr>
</tbody>
</table>

DISTRIBUTOR: ACME-HARDESTY COMPANY
ADDRESS: 450 Sentry Parkway
          Blue Bell, PA 19422

TELEPHONE: (866) 226 – 3834
FAX: (215) 591 – 3620
EMERGENCY: CHEMTREC (800) 424-9300

COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT NAME</th>
<th>CAS NUMBER</th>
<th>% (W/W)</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturated straight chain aliphatic monocarboxylic acids mainly palmitic and stearic acid.</td>
<td>57-11-4</td>
<td>60-100</td>
<td>No PEL established</td>
<td>No TLV established</td>
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Ingredients not precisely identified are proprietary or nonhazardous.
Values are not product specifications.

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Emergency Overview:

- Color: White
- Form: Solid @ 20°C
- Odor: Faint Odor

INHALATION OR INGESTION MAY CAUSE MUCOUS MEMBRANE IRRITATION.
MAY CAUSE EYE IRRITATION
MAY FORM EXPLOSIVE DUST CLOUDS IN AIR.

LIMITED TOXICITY DATA IS AVAILABLE ON THIS SPECIFIC PRODUCT; THIS HEALTH HAZARD ASSESSMENT IS BASED ON THE RESULTS OF SCREENING TESTS.

EYE CONTACT: No May cause eye irritation in man.

SKIN CONTACT: No irritation is likely to develop following contact with human skin.
This product will probably not be absorbed through human skin.
INHALATION: Unlikely to be hazardous by inhalation because of low vapor pressure of material at ambient temperature. Vapors and aerosols will probably irritate respiratory passages. No toxic effects are known to be associated with inhalation of this material.

INGESTION: Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract. No toxic effects are expected following ingestion of this product.

OTHER: Not listed by ACGIH, IARC, NIOSH, NTP or OSHA.

FIRST AID MEASURES

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention.

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

INGESTION: DO NOT INDUCE VOMITING. Give one or two glasses of water to drink and refer to medical personnel or take direction from either a physician or a poison control center. Never give anything by mouth to an unconscious person.

FIRE & EXPLOSION HAZARD DATA

FLASH POINT, °F: 356°F (open cup)
FLASH POINT, °C: 180°C (open cup)
AUTO-IGNITION TEMPERATURE, °F: 662
AUTO-IGNITION TEMPERATURE, °C: 350
FLAMMABLE LIMITS: No data.

EXTINGUISHING MEDIA: Water fog, alcohol foam, carbon dioxide, dry chemical.
SPECIAL FIRE-FIGHTING PROTECTIVE EQUIPMENT: A self contained breathing apparatus and suitable protective clothing must be worn in fire conditions.

FIRE AND EXPLOSION HAZARDS: The material may form explosive dust clouds in air. Thermal decomposition will evolve irritant vapors.

EXPLOSION DATA:
SENSITIVITY TO MECHANICAL IMPACT: No data.
SENSITIVITY TO STATIC DISCHARGE: No data

ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Refer to Exposure Controls/Personal Protection section.
ACCIDENTAL RELEASES/SPILLS: Contain spill. Sweep up and recover or mix material with a moist absorbent and shovel into a chemical waste container. Wash residue from spill area with water containing detergent and flush to a sewer serviced by a permitted wastewater treatment facility.

HANDLING AND STORAGE

HANDLING: Normal precautions should be observed as for handling all chemicals. Control dust formation. Extra care should be taken to prevent burns from contact with hot material. Follow procedures specified in the National Fire Protection Association Codes and Standards for handling combustible dusts. Maintain good housekeeping to avoid dust buildup. Prevent eye contact. Avoid breathing vapors or aerosols. Do not swallow.

SPECIFIC USES OF THE PRODUCT: Smoldering can occur upon leakage onto fibrous insulation material.

STORE: Store in original containers.
EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:

OSHA PEL

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<td>No OSHA PEL assigned. Minimize exposure in accordance with good hygiene practice.</td>
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ACGIH TLV

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PERSONAL PROTECTION:

ENGINEERING CONTROLS: Provide adequate ventilation

EYE PROTECTION: Chemical tight goggles

PROTECTIVE CLOTHING: Impervious gloves

RESPIRATORY PROTECTION: Respiratory protection is not normally needed if controls are adequate

OTHER: Eyewash and safety shower easily accessible to the work area

PHYSICAL AND CHEMICAL PROPERTIES

COLOR: White

FORM: Solid @ 20 °C

ODOR: Faint odor

pH: Not applicable.

BOILING POINT (°F): 401 – 437 (10 hPa)

BOILING POINT (°C): 205 – 225 (10 hPa)

FLASH POINT (°F): 356 (open cup)

FLASH POINT (°C): 180 (open cup)

AUTOIGNITION TEMPERATURE (°F): 662

AUTOIGNITION TEMPERATURE (°C): 350

FLAMMABLE LIMITS: No data.

EXPLOSIVE PROPERTIES: No data.

OXIDIZING PROPERTIES: Not to be expected

SOLUBILITY (WATER): Insoluble

SOLUBILITY (OTHER): Soluble in many organic solvents

PARTITION COEFFICIENT: Estimated > 3

DYNAMIC VISCOSITY (mPa.s): 10 @ 65 °C

DENSITY (g/ml): 0.85 @ 75 °C

SOLIDIFICATION POINT (°F): 140

SOLIDIFICATION POINT (°C): 60

STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions

MATERIALS TO AVOID: Strong oxidizing agents

CONDITIONS TO AVOID: None known

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition will evolve irritant vapors

HAZARDOUS POLYMERIZATION: Will not occur
TOXICOLOGICAL INFORMATION

A 100% SUSPENSION OF THIS MATERIAL WAS TESTED.

EYE CONTACT:
Rabbit Draize Nonirritating.

SKIN CONTACT:
Rabbit Draize 24 hours Nonirritating.

INGESTION:
LD50 rat ≥ 2g/kg Practically nontoxic.

CHRONIC:
A chronic ingestion study in animals has shown that repeated doses produce no significant effects.

CARCINOGENITY:
Studies in animals have shown that repeated doses produce no carcinogenic effects.

MUTAGENICITY:
There is no evidence of mutagenic potential. Ames test: Negative

ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE & DISTRIBUTION:
The product is essentially insoluble in water.

PERSISTENCE & DEGRADATION:
(OECD 301B) (28 days) ≥ 70%

TOXICITY:
Not toxic at concentrations well above the water solubility
LC50 (48 hour) Cyprinus carpio ≥ 1000mg/l
EC50 (16 hour) Pseudomonas putida ≥ 100mg/l

DISPOSAL CONSIDERATIONS

RCRA (RESOURCE CONSERVATION AND RECOVERY ACT) CLASSIFICATION:
SPECIFICALLY LISTED WASTES: Not applicable.
CHARACTERISTIC WASTES:
IGNITABILITY Not applicable.
CORROSIVITY: Not applicable.
REACTIVITY: Not applicable.
TOXICITY: Not Applicable.
DISPOSAL METHOD:
Disposal in accordance with local, state or national legislation.
CONTAINER DISPOSAL:
Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT): Not regulated
TRANSPORTATION OF DANGEROUS GOODS (TDG): Not regulated
NOT CLASSIFIED IN RID/ADR – ADNR – IMDG – ICAO/IATA-DGR
REGULATORY INFORMATION

INVENTORY STATUS:
EU (EINECS/ELINCS/NLP): Compliant.
USA (TSCA): Compliant.
CANADA (DSL): Compliant.
AUSTRALIA (AICS): Compliant.
JAPAN (ENCS): Compliant.
CHINA (IECSC): Compliant.
KOREA (ECL): Compliant.
PHILIPPINES (PICCS): Compliant.

OSHA HAZARD COMMUNICATION STANDARD,
29 CFR 1910.1200, HAZARD SUMMARY:
HEALTH HAZARDS: None
PHYSICAL HAZARDS: None

WHMIS CLASSIFICATION: Noncontrolled (Nonhazardous).

CERCLA AND SARA REGULATIONS (40 CFR 355, 370, AND 372):
THIS MATERIAL CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS
OF SARA 313:
No 313-listed chemicals in this product

SARA 311/312 HAZARD CATEGORIES:
Immediate: N
Delayed: N
Fire: N
Pressure: N
Reactivity: N

OTHER INFORMATION

NFPA ratings and HMIS ratings were assigned to this product based on the hazards of its ingredient(s). Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment is provided with information contained in the product MSDS.

HMIS INFORMATION:
Health: 1
Flammability: 1
Physical Hazards: 0

The HMIS ratings displayed above are from the HMIS III Third Edition. There have been significant changes made to the system. “Physical Hazard” stands for physical hazard as defined in the OSHA Hazard Communication Standard and replaces the former code for reactivity. For a more detailed explanation of the system and the ratings, please contact our Quality Assurance Specialist.

NFPA INFORMATION:
Health: 1
Flammability: 1
Instability: 0

The data herein are based on our current knowledge and believed to be reliable. Acme-Hardesty Co., provides this information without any representation or warranty, expressed or implied, regarding its accuracy or correctness.

Users must make their own determination that handling, storage and use of the product in the anticipated manner is safe and appropriate. Because these actions of the user are out of our control, and may be beyond our knowledge, we do not assume responsibility and expressly disclaim liability for loss, damage, expense or any other claim arising out of or in any way connected with the handling, storage, use or disposal of the product.

Disposal of containers must comply with applicable federal, state and local laws and regulations. Empty containers should never be given to individuals.