Product: Tallow amine

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade name: Tallow amine/ Tallow alkyl amines
CAS No.: 61790-33-8  EC No.: 263-125-1

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: Surfactant
Uses identified against: no information available

1.3 Details of the supplier of the safety data sheet:
Manufacturer/Supplier:
Prasol Chemicals Ltd.,
Prasol House, Plot No.A-17/2/3,
T.T.C. Indl. Area, Khairne M.I.D.C.,
Navi Mumbai - 400 710
Maharashtra, India,
Tel: +91-22-27782555
Fax: +91-22-27782430

Further information obtainable from:
Mr. Dhaval Parikh
e-mail: sales@prasolchem.com; inquiry@prasolchem.com

Information in case of emergency:
Product safety department Tel: +91-22-27782555; Fax:+91-22-27782430
Other Comments (e.g. language(s) of the phone service): English

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)

<table>
<thead>
<tr>
<th>GHS05</th>
<th>GHS07</th>
<th>GHS08</th>
<th>GHS09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrosion</td>
<td>Exclamation mark</td>
<td>Health hazard</td>
<td>environment</td>
</tr>
<tr>
<td>Acute Tox. 4, H302</td>
<td>Harmful if swallowed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin Corr 1A, H314</td>
<td>Causes severe skin burns and eye damage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Dam. 1H318</td>
<td>Causes serious eye damage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STOT SE 3, H335</td>
<td>May cause respiratory irritation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STOT RE 2, H373</td>
<td>May cause damage to organs through prolonged or repeated exposure (gastro-intestinal tract, liver, immune system)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic Acute 1, H400</td>
<td>Very toxic to aquatic life</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.1.2 Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn: Irritant
C Corrosive
N Dangerous for the environment
R22 Harmful if swallowed
R35 Causes severe burns
R36/37: Irritating to eyes and respiratory system
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Information concerning particular hazards for human and environment: Not applicable

2.2 Label elements
Labeling according to Regulation (EC) No 1272/2008 (CLP)
Hazard pictograms
Product: Tallow amine

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical characterization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS No.</td>
</tr>
<tr>
<td>61790-33-8</td>
</tr>
</tbody>
</table>

Identification number(s)
- EC Number: 263-125-1
- Index number: 612-286-00-X

Additional information:
- Molecular Formula: R-NH2
- Molecular Weight: ~262g/mol

SECTION 4: First aid measures

4.1 General information: Consult a physician. Show this safety data sheet to the doctor in attendance.

After inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

After skin contact: Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

After eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

After swallowing: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
Central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Blood disorders, Dermatitis, Blurred vision.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

Information for doctor: Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Suitable extinguishing agents:
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires,
Product: Tallow amine

use water spray, fog or foam. Do not use water jet. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

5.2 Special hazards arising from the substance or mixture
5.3 Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.
Additional information Use water spray to cool unopened containers

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
6.2 Environmental precautions: Dilute with plenty of water. Do not allow to enter sewers/surface or ground water.
6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations
6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment
See Section 13 for disposal information

SECTION 7: Handling and storage

7.1 Precautions for safe handling:
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Take measures to prevent the buildup of electrostatic charge.
Information about fire - and explosion protection: Keep ignition sources away. Do not smoke.
7.2 Conditions for safe storage, including any incompatibilities:
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Information about storage in one common storage facility: Store away from incompatible materials.
Further information about storage conditions: Store away from moisture. Store in cool and dry place.
7.3 Specific end use(s) No further relevant information available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace: Not required.
Additional information: The lists valid during the making were used as basis.
8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.
Respiratory protection:
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Protection of hands: Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles

**Body protection:**
Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

**General Information**
- **Appearance:** Slightly yellow paste
- **Odour:** Amine like
- **Odour threshold:** not determined
- **pH:** not determined (pKₐ 10.6)
- **Melting point/Melting range:** 32-40°C
- **Initial Boiling point/Boiling range:** 200-230°C/ 36hPa
- **Flash point:** 159°C
- **Evaporation rate:** not determined
- **Flammability:** non-flammable
- **Upper/lower flammability or explosive limits:** not applicable
- **Danger of explosion:** Containers may explode in fire
- **Vapour pressure at 20°C:** not determined
- **Vapour density:** not determined
- **Relative density at 60 °C:** 0.79 g/cm³
- **Solubility in / Miscibility with water:** 0.12 mg/l at 25 °C
- **Partition coefficient (n-octanol/water) at 25°C:** log Pow 7.1 at 20 °C
- **Auto-ignition temperature:** no self-ignition up to the melting range
- **Decomposition temperature:** not determined
- **Viscosity:** not determined
- **Explosive properties:** not explosive (structural reasons)
- **Oxidising properties:** not oxidizing (structural reasons)

#### 9.2 Other information

- no further information

### SECTION 10: Stability and Reactivity

#### 10.1 Reactivity

No dangerous reactions known.

#### 10.2 Chemical stability

Under storage at normal ambient temperatures (minus 40°C to + 40°C), the product is stable. No hazardous reaction when handled and stored according to provisions.

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions

#### 10.4 Conditions to avoid

Heat, flames and sparks.

#### 10.5 Incompatible materials:

Strong oxidizing agents, acids

#### 10.6 Hazardous decomposition products:

Carbon oxides

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

**Acute toxicity:**
- **LD₅₀ oral:** >2000 mg/kg bw/ day rat
- **Skin corrosion/irritation:** corrosive 1B (rat)
- **Serious eye damage/irritation:** Severe eye irritation 24 h (rabbit)
- **Respiratory or skin sensitization:** no data
- **Germ cell mutagenicity:** non mutagenic
- **Carcinogenicity:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity: OECD 421, rat, oral
STOT-single exposure: Inhalation - May cause respiratory irritation. - Lungs
STOT-repeated exposure: LOAEL 12.5 mg/kg bw/day (oral)
Aspiration hazard: no data available
Additional information: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity:
- LC50 96h 0.88mg/l (Brachydanio rerio)
- NOEC 21d 0.013mg/L (Daphnia magna) long term, reproduction
- ErC50 96h 0.007 mg/L (Scenedesmus subspicatus) algae

12.2 Persistence and degradability
Biodegradation readily biodegradable (61% in 28 days)

12.3 Bio accumulative potential: low potential for bioaccumulation Log Kow 7.1

12.4 Mobility in soil no further data

12.5 Results of PBT and vPvB assessment
Low persistence and low bioaccumulation

12.6 Other adverse effects No further relevant information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product: Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging: Disposal must be made according to official regulations.
Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

Land Transport (ADR/RID) Marine Transport (IMDG) Air Transport (ICAO/ IATA)
14.1 UN/ID Number: 3259
14.2 UN proper shipping name: Amines, solid, corrosive, n.o.s.
14.3 Transport hazard class: 8
14.4 Packaging group: II
14.5 Environmental hazards: marine pollutant
14.6 Special precautions for the user:
   - Danger code (Kemler): 8
   - EMS Number: F-A S-B
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: no data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Hazard pictograms: Please refer section 2
Signal word: Danger
Labeling according to EU guidelines:
Code letter and hazard designation of product: Please refer section 2
Risk phrases: Please refer section 2

15.2 Chemical safety assessment A Chemical Safety Assessment has not been carried out and will be applicable
Product: Tallow amine

at the time of REACH Registration.
Substances of very high concern (SVHC) according to REACH, Article 57 The substance is not listed as SVHC.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS:
Product safety department.
Contact:
Tel: +91-22-27782555
Fax:+91-22-27782430

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS: Chemical Abstracts Service (division of the American Chemical Society)
EC50: Concentration at which 50% reduction in biomass is observed
EC: European Inventory of Existing Commercial Chemical Substances
EMS: Emergency Schedule
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOEC: No Observed Effect Level
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

Sources
ECHA: http://echa.europa.eu/registration-dossier/-/registered-dossier/14682/1

Data compared to the previous version altered:
• Section 1: Chemical Product and Company Identification
• Section 3: Composition and Information on Ingredients
• Section 4: First Aid Measures
• Section 5: Fire and Explosion Data
• Section 6: Accidental Release Measures
• Section 7: Handling and Storage
• Section 8: Exposure Controls/Personal Protection
• Section 9: Physical and Chemical Properties
• Section 10: Stability and Reactivity Data
• Section 11: Toxicological Information
• Section 12: Ecological Information
• Section 13: Disposal Considerations

Revision: 16-02
Issue Date: 19.05.2016