01. GENERAL INFORMATION
Sartomer USA, LLC
Oaklands Corporate Center
502 Thomas Jones Way
Exton, Pennsylvania 19341

Emergency phone number:
CHEMTREC: 1-800-424-9300 (within USA) or 1-703-527-3887 (outside USA)

Medical Emergency phone number:
Rocky Mountain Poison Control: 1-303-623-5716

Product information:
1-610-363-4100

GENERIC NAME
Ethoxylated (3) Trimethylolpropane Triacrylate

DOT PROPER SHIPPING NAME
N/AP

UN/NA NUMBER
N/AP

DOT HAZARD CLASS
Not regulated

02. SUMMARY OF HAZARDS
WARNING
PHYSICAL HAZARDS: Unstable (reactive) upon depletion of inhibitor

ACUTE HEALTH EFFECTS: Moderate eye irritant
(SHORT-TERM)
Slight skin irritant/may cause skin sensitization
May cause respiratory tract irritation
No data found; not expected to be an ingestion hazard
May be absorbed through the skin

CHRONIC HEALTH EFFECTS: No appropriate human or animal chronic health effects
(LONG-TERM) data known to exist.

03. COMPONENTS

<table>
<thead>
<tr>
<th>COMPONENT NAME</th>
<th>CAS NUMBER</th>
<th>% COMPOSITION (BY WT.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethoxylated Trimethylolpropane Triacrylate Esters</td>
<td>28961-43-5</td>
<td>AP 100</td>
</tr>
</tbody>
</table>

04. PHYSICAL AND CHEMICAL DATA

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOILING POINT</td>
<td>N/DA</td>
</tr>
<tr>
<td>FREEZING POINT</td>
<td>DRY POINT</td>
</tr>
<tr>
<td>pH</td>
<td>6.8 to 7.2</td>
</tr>
</tbody>
</table>

Date Printed: 07-05-2011
SPECIFIC GRAVITY (H2O=1 AT 39.2F)  VOLATILE CHARACTERISTICS
AP 1.10-1.12 at 25C/77F  Negligible
VISCOSITY UNITS, TEMP. (Brookfield)  SOLUBILITY IN WATER
AP 30 to 90 cps at 25C/77F  Negligible
VAPOR PRESSURE  STABILITY
Negligible  Stable
VAPOR SP GR (AIR=1 AT 60 - 90F)  HAZARDOUS POLYMERIZATION
N/AP  May occur

APPEARANCE AND ODOR
Clear, light yellow liquid

CONDITIONS AND MATERIALS TO AVOID
High temperatures, localized heat sources (ie, drum or band heaters), oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing;
Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers

HAZARDOUS DECOMPOSITION PRODUCTS
Acrid smoke-fumes/carbon monoxide/carbon dioxide and perhaps other toxic vapors may be released during a fire involving this product.

05. OCCUPATIONAL EXPOSURE LIMITS

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>SOURCE</th>
<th>DATE</th>
<th>TYPE</th>
<th>VALUE</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A PEL or TLV has not been established</td>
<td></td>
</tr>
</tbody>
</table>

06. FIRE AND EXPLOSION

FLASH POINT  METHOD=(PMCC)  AUTOIGNITION TEMP.  METHOD=
GT 93C/200F  N/DA

FLAMMABLE LIMITS (% VOLUME IN AIR)
LOWER: N/DA  UPPER: N/DA

FIRE AND EXPLOSION HAZARDS
High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat/pressure. Closed containers may rupture or explode during runaway polymerization.

EXTINGUISHING MEDIA
Dry chemical
CO2
Water spray
Foam
Water fog
SPECIAL FIREFIGHTING PROCEDURES
Do not enter fire area without proper protection. See Section 4 - decomposition products possible. Fight fire from safe distance/protected location. Heat/impurities may increase temperature/build pressure/rupture closed containers, spreading fire, increasing risk of burns/injuries. Water may be ineffective in firefighting due to low solubility. Use water spray/fog for cooling. Pressure relief system may plug with solids, increasing risk of overpressure. Notify authorities if liquid enters sewer/public waters.

07. HEALTH HAZARDS
ROUTES OF EXPOSURE

INHALATION
No significant signs or symptoms indicative of any adverse health hazard are expected to occur at standard conditions due to the low volatility of this material. However, aerosols, or vapors which may be generated at elevated processing temperatures, may cause respiratory tract irritation. Symptoms of irritation may include coughing, mucous production and shortness of breath.

EYE CONTACT -- PRIMARY ROUTE
May cause moderate irritation with symptoms including burning sensation, tearing, redness or swelling.

SKIN ABSORPTION -- PRIMARY ROUTE
Some acrylate materials are absorbed through the skin. Although no appropriate human or animal health effects data are known to exist, the potential for skin absorption does exist for this material.

SKIN IRRITATION -- PRIMARY ROUTE
May cause minor skin irritation.
Symptoms of irritation may include a slight localized redness or rash and swelling.
Although no appropriate human or animal health effects data is known to exist, this material may cause an allergic skin reaction (sensitization) in susceptible individuals upon repeated exposure.

INGESTION
Although no appropriate human or animal health effects data is known to exist, this material is not expected to be an ingestion hazard.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
This material or its emissions may induce an allergic or sensitization reaction and thereby aggravate systemic disease.

08. PROTECTIVE EQUIPMENT / CONTROL MEASURES
RESPIRATORY PROTECTION
If this material is handled at elevated temperature or under mist forming conditions, NIOSH/MSHA approved respiratory protection equipment should be used.

EYE PROTECTION

Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor. Contact lenses should not be worn.

SKIN PROTECTION

Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn. This equipment should be cleaned thoroughly after each use.

ENGINEERING CONTROLS

If this material is handled at elevated temperature or under mist forming conditions, NIOSH/MSHA approved respiratory protection equipment should be used.

OTHER HYGIENIC PRACTICES

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

OTHER WORK PRACTICES

Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing/wash thoroughly before reuse. Shower after work using plenty of soap and water.

09. EMERGENCY AND FIRST AID

INHALATION

If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

EYE CONTACT

In case of eye contact, immediately rinse with clean water for 20-30 minutes. Retract eyelids often. Obtain emergency medical attention.

SKIN CONTACT

Remove contaminated clothing as needed. Wash skin thoroughly with mild soap/water. Flush with lukewarm water for 15 minutes. If sticky, a waterless cleaner may be used.

INGESTION

Ingestion unlikely. However, if ingested, obtain emergency medical attention.

EMERGENCY MEDICAL TREATMENT PROCEDURES

If pain, blinking, tears, or redness continue, patient should contact ophthalmologist.
10. SPILL AND DISPOSAL

PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED

Spilled or released material may polymerize and release heat/gases. Extinguish all ignition sources and ventilate area. Wear protective equipment during clean-up. Dike and recover large spill. Soak up small spill with inert solids (such as vermiculite, clay) and sweep/shovel into vented disposal container. Wash spill area with a strong detergent and water solution; rinse with water but minimize water use during clean-up. For spills on water, contain, minimize dispersion and collect. Dispose/report per regulatory requirements.

WASTE DISPOSAL METHODS

Non-contaminated, properly inhibited material is not a RCRA hazardous waste. However, contaminated material/soil/water may be RCRA/OSHA hazardous waste due to potential for internal heat generation (see 40 CFR 261 and 29 CFR 1910). It is the responsibility of the generator to determine at the time of disposal whether the material meets the criteria of a hazardous waste. Comply with all applicable federal, state and local regulations. Use registered transporters. Disposal options include landfilling solids at permitted sites; fuel blending or incinerating liquids. Assure emissions comply with applicable regulations. Dilute aqueous waste may biodegrade; avoid overloading/poisoning plant biomass. Assure effluent complies with applicable regulations.

11. ADDITIONAL PRECAUTIONS

HANDLING AND STORAGE PROCEDURES

Wear appropriate protective equipment when handling this material (See Section 8 of MSDS). Most acrylic monomers have low viscosities; hence, pouring, material transfer and processing of these materials do not necessitate heating. Viscous monomers may require heating to facilitate handling. To facilitate product transfer from original container, product may be heated to 60C/140F for not more than 24 hours. Do NOT use localized heat sources such as band heaters to heat/melt product. Do NOT use steam. Hot boxes or hot rooms are recommended for heating/melting material. The hot box or hot room should be set at a maximum temperature of 60C/140F. Do not overheat--this may compromise product quality and/or result in an uncontrolled hazardous polymerization. If product freezes, heat as indicated above and mix gently to redistribute the inhibitor. Product should be consumed in its entirety after heating/melting--avoid multiple "re-heats" which may affect product quality or result in product degradation. Product is packaged with inhibitor(s). Unless inhibited, product can polymerize, raising temperature and pressure possibly rupturing container. Check inhibitor content periodically, adding to bulk material if needed. In addition, the product's inhibitor(s) require the presence of dissolved oxygen. Maintain, at a minimum, the original headspace in the product container and do not blanket or mix with oxygen-free gas as it renders inhibitor ineffective. Ensure air space (oxygen) is present during product heating/melting.
Store product indoors at temperatures greater than product's freezing point (or greater than 0C/32F if no freezing point available) and below 38C/100F. Avoid prolonged (longer than shelf-life) storage temperatures above 38C/100F. Store in tightly closed containers in a properly vented storage area away from: heat, sparks, open flame, strong oxidizers, radiation, and other initiators. Prevent contamination by foreign materials. Prevent moisture contact. Use only non-sparking tools and limit storage time. Unless specified below, shelf-life is 6 months from receipt.

DECONTAMINATION PROCEDURES
Follow standard plant procedures or supervisor's instructions for decontamination operations.

12. LABEL INFORMATION
USE STATEMENT
FOR INDUSTRIAL USE ONLY
SIGNAL WORD
WARNING
PHYSICAL HAZARDS
UNSTABLE (REACTIVE) UPON LOSS OF INHIBITOR
HEALTH HAZARDS
CAUSES EYE IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION
PRECAUTIONARY MEASURES
HAZARDOUS POLYMERIZATION MAY OCCUR UPON DEPLETION OF INHIBITOR.
DO NOT HANDLE NEAR HEAT, SPARKS, OR OPEN FLAME.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
WASH THOROUGHLY AFTER HANDLING.
KEEP CONTAINER CLOSED WHEN NOT IN USE.
BEFORE USING PRODUCT, READ MATERIAL SAFETY DATA SHEET (MSDS).

13. SUPPLEMENT
NPCA - HMIS RATING
Health 2
Flammability 1
Reactivity 2
Personal protection** D

**Respiratory protection may be necessary depending on conditions of use. Refer to Section 8 of this MSDS for respiratory protection guidelines.

REGULATORY INFORMATION
TSCA STATUS:
TSCA status: All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.
TSCA Section 12(b):
TSCA Section 12(b) - Export Notification: This product does not contain any chemicals at concentrations subject to Section 12(b) export notification.

CALIFORNIA PROPOSITION 65:
California Proposition 65 Information: This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity.

INTERNATIONAL INVENTORY STATUS:
- Australia (AICS): included on inventory
- Canada (DSL): included on inventory
- China (IECSC): included on inventory
- Europe (EINECS): NLP
- Japan (ENCS): included on inventory
- Korea (ECL): included on inventory
- Philippines (PICCS): included on inventory
- New Zealand (IIC): included on inventory
- Switzerland: not included on inventory

This material contains an inhibitor (HQ, MEHQ, etc.) at <1%. The type and amount meet product specifications. Contact a company representative for exact concentrations and details on inhibitor level maintenance.

*Note - qualifiers and codes used in this MSDS
EQ = Equal; AP = Approximately; LT = Less Than; GT = Greater Than; TR = Trace; UK = Unknown; N/AP = Not Applicable; N/P = No Applicable Information Found; N/DA = No Data Available

14. DISCLAIMERS
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