Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

ADVASTAB™ TM-900F Heat Stabilizer

Revision Date: 05/24/2012

Supplier

ROHM AND HAAS CHEMICALS LLC
A Subsidiary of The Dow Chemical Company
100 INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19106-2399 United States

For non-emergency information contact: 215-592-3000

Emergency telephone number
1 800 424 9300
Local emergency telephone number
989-636-4400

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Mixed alkylmetallic mercaptoester sulfides	Trade Secret	100.0%

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Form	clear liquid
Colour	light yellow
Odour	Mercaptan

Hazard Summary	**CAUTION!** INHALATION OF VAPOR OR MIST CAN CAUSE HEADACHE, NAUSEA AND IRRITATION OF THE NOSE, THROAT AND LUNGS. MAY CAUSE EYE AND SKIN IRRITATION. CAN BE ABSORBED THROUGH INTACT SKIN. MATERIAL CAN CAUSE THE FOLLOWING: KIDNEY EFFECTS BLOOD CHANGES HYDROGEN SULFIDE, H2S, A DECOMPOSITION BY-PRODUCT OF THIS MATERIAL, WHICH MAY BE TOXIC IF INHALED, MAY BE PRESENT IN THE HEAD SPACE.

Potential Health Effects
Primary Routes of Entry:
Eye contact
Inhalation
Skin contact
Dermal Absorption

Eyes: May cause eye irritation.

Skin: May cause skin irritation.
Can be absorbed through intact skin.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Inhalation: Inhalation of vapor or mist can cause the following:
irritation of nose, throat, and lungs
Hydrogen sulfide (H2S), a decomposition by-product of this material, may be toxic if inhaled.

Chronic Exposure: Prolonged or repeated overexposure can cause the following:
Kidney effects
Blood changes

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Give artificial respiration if breathing has stopped. Consult a physician.

Skin contact: Take off all contaminated clothing immediately. Wash off with soap and plenty of water. Wash contaminated clothing before re-use. Do not take clothing home to be laundered. In the case of skin irritation or allergic reactions see a physician.

Eye contact: Rinse with plenty of water. If eye irritation persists, consult a specialist.

Ingestion: Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Consult a physician.

Notes to physician: For inhalation exposure consider treatment for hydrogen sulfide (H2S) exposure.

5. FIREFIGHTING MEASURES

Flash point	>180 °C (356 °F) SETAFLASH CLOSED CUP
Lower explosion limit	not applicable
Upper explosion limit	not applicable

Suitable extinguishing media: Extinguishing media - small fires
Dry chemical
Carbon dioxide (CO2)
Water spray
Extinguishing media - large fires
Foam

Thermal decomposition	Combustion generates toxic fumes of the following:, Carbon oxides, sulfur oxides

Specific hazards during firefighting: High temperatures can cause sealed containers to rupture due to a build up or of internal pressure. During a fire, irritating and highly toxic gases and/or fumes may be generated during combustion or decomposition.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

Further information: Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment.
Keep people away from and upwind of spill/leak.
Material can create slippery conditions.

Environmental precautions
CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

Handling
Vapors can be evolved when material is heated during processing operations. See SECTION 8, Exposure Controls/Personal Protection, for types of ventilation required. Do not breathe vapors, mist or gas. Vapors may contain hydrogen sulfide (H2S) and may be toxic if inhaled; extreme caution must be used if container is opened. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Shower or bathe at the end of working.

Storage
Storage conditions: Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Hydrogen sulfide (H2S), a decomposition by-product of this material, may be present in the headspace of the container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit(s)

Exposure limits are listed below, if they exist.

Exposure controls
Engineering measures: Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Protective measures: Wash thoroughly after handling. Shower or bathe at the end of working. Facilities storing or utilizing this material should be equipped with an eyewash facility.

Individual protection measures

Eye/face protection: Safety glasses with side-shields Eye protection worn must be compatible with respiratory protection system employed.

Skin protection

Hand protection: Chemical-resistant gloves should be worn whenever this material is handled. Glove permeation data does not exist for this material. The following glove(s) should be used for splash protection only: Neoprene gloves Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

Other protection: Wear as appropriate: impervious clothing Chemical resistant apron

Respiratory protection: A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Up to 10 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. Up to 50 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) full-facepiece, air-purifying respirator, OR full-facepiece, airline respirator in the pressure demand mode. Above 50 times the exposure limit or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-facepiece, airline respirator in the pressure demand mode with emergency escape provision. Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters. Hydrogen sulfide (H2S), a decomposition by-product of this material, may be present in the headspace of the container. The occupational exposure limits for hydrogen sulfide are: ACGIH and OSHA 15-min STEL: 15 ppm, 8-hr TWA: 10 ppm, Rohm and Haas Company 15-min STEL: 10 ppm, 8-hr TWA: 3 ppm. When conditions exist where hydrogen sulfide exposure above these exposure limits is possible the following respiratory protection is required. Above the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in

the pressure demand mode, OR full-facepiece, airline respirator in the pressure demand mode with emergency escape provision.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Form	clear liquid
Colour	light yellow
Odour	Mercaptan
pH	not applicable
Boiling point/boiling range	223 °C (434.5 °F)
Flash point	>180 °C (356 °F) SETAFLASH CLOSED CUP
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Relative vapour density	not applicable
Relative density	1.13
Water solubility	insoluble
Viscosity, dynamic	148 mPa.s at 25 °C (77 °F)
Percent volatility	0 % open vessel, room temperature, 8 hrs

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Hazardous reactions	At elevated temperature and in the presence of additives, such as strong acid, ethylene sulfide (CASRN 420-12-2) can form, which can polymerize and deposit on equipment, with the potential to plug pipes.
Materials to avoid	Contact with acids can generate hydrogen sulfide (CAS Reg. No. 7783-06-4).
Hazardous decomposition products	Decomposes under the influence of moisture, water, or acids to form hydrogen sulfide (H2S), a combustible and toxic gas., Thermal decomposition may yield the following:, Hydrogen sulfide,
polymerisation	Product will not undergo polymerization.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.
No toxicity data are available for this material.

Component: **Mixed alkylmetallic mercaptoester sulfides**

Acute oral toxicity LD50 rat > 4,000 mg/kg

Component: **Mixed alkylmetallic mercaptoester sulfides**
Skin irritation No skin irritation

Component: **Mixed alkylmetallic mercaptoester sulfides**
Eye irritation No eye irritation

Component: **Mixed alkylmetallic mercaptoester sulfides**
Subchronic toxicity Oral rat
90-day In oral studies of 28 days (gavage) and 90 days (dietary) a dose of approximately 50 mg/kg-day in rats produced blood chemistry changes suggestive of diuresis, plus increases in hemoglobin, hematocrit, and red blood cells in the absence of other histopathological effects. The No Observable Effect Level (NOEL) was approximately 15 mg/kg body weight - day.

Component: **Mixed alkylmetallic mercaptoester sulfides**
Mutagenicity
Not mutagenic in Ames Test. In vivo micronucleus assay (mouse bone marrow cells): Not mutagenic

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Mixed alkylmetallic mercaptoester sulfides
Elimination information (persistence and degradability)
Biodegradability
Not readily biodegraded.

Ecotoxicity effects
Toxicity to fish Freshwater fish 96 Hour OECD Test Guideline 203 or Equivalent
0.1 - 1 mg/l

Toxicity to aquatic invertebrates Daphnia 48 Hour OECD Test Guideline 202 or Equivalent
0.1 - 1 mg/l

13. DISPOSAL CONSIDERATIONS

Environmental precautions: CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Disposal
Waste Classification: When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40 CFR 261.33. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

Refer to all federal, state and local regulations prior to disposition of container and unused contents by reuse, recycle, or disposal. For disposal, incinerate this material at a facility that complies with local, state, and federal regulations.

Contaminated packaging: Improper disposal or reuse of this container may be dangerous and illegal. Can be landfilled or incinerated, when in compliance with local regulations. Refer to applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Dimethyltin compound)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Dimethyltin compound

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations.

15. REGULATORY INFORMATION

Workplace Classification

OSHA: This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SARA TITLE III: Section 311/312 Categorizations (40CFR370): Acute Health Hazard
Chronic Health Hazard

SARA TITLE III: Section 313 Information (40CFR372)

This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

CERCLA Information (40CFR302.4)

Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

United States TSCA Inventory (US.TSCA): All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Pennsylvania
Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

16. OTHER INFORMATION

HMIS Hazard Rating

Health	Fire	Reactivity	Physical Hazard	PPE
*1	1	0		

* = Chronic Effects (See Hazards Identification)

Legend

ACGIH	American Conference of Governmental Industrial Hygienists
BAc	Butyl acetate
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
STEL	Short Term Exposure Limit (STEL):
TLV	Threshold Limit Value
TWA	Time Weighted Average (TWA):
|	Bar denotes a revision from prior MSDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Version: 2.0
Print Date: 06/08/2012

Layout 101078298