Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

ADVASTAB™ TM-181FS HEAT STABILIZER

Revision Date: 01/15/2013

Supplier

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

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

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Bis(2-ethylhexylthioglycolate) dimethyltin	57583-35-4	65.0 - 75.0 %
Tris(2-ethylhexylthioglycolate)methyl tin	57583-34-3	25.0 - 35.0 %
Ethylhexyl thioglycolate	7659-86-1	1.0 - 5.0 %

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Form	liquid
Colour	Pale yellow
Odour	Mercaptan

Hazard Summary	**WARNING!** INHALATION OF VAPOR OR MIST CAN CAUSE HEADACHE, NAUSEA AND IRRITATION OF THE NOSE, THROAT AND LUNGS. MAY CAUSE EYE AND SKIN IRRITATION. PROLONGED OR REPEATED EXPOSURE CAN CAUSE THE FOLLOWING: INTERNAL ORGAN EFFECTS

Potential Health Effects
Primary Routes of Entry: Inhalation
Ingestion
Skin contact

Eyes: Direct contact with material can cause the following:
slight irritation

Skin: Prolonged or repeated skin contact can cause the following:
slight irritation

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

Chronic Exposure: Prolonged or repeated overexposure can cause the following:
liver effects
lung effects
Kidney effects
- blood effects
bladder effects
Brain
Respiratory effects.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Get prompt medical attention. Give artificial respiration if breathing has stopped.

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: Immediately flush eye(s) with plenty of water. Call a physician immediately.

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

Notes to physician: Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.

5. FIREFIGHTING MEASURES

Flash point	150 °C (302.00 °F) SETAFLASH CLOSED CUP
Ignition temperature	not applicable
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.
If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow.
Take off all contaminated clothing immediately.
Wash off with soap and plenty of water.
Do not take clothing home to be laundered.
Wash contaminated clothing before re-use.

Environmental precautions
WARNING: KEEP SPILLS AND CLEANING RUNOFFS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER.

Methods for cleaning up
Keep people away from and upwind of spill/leak.
Floor may be slippery; use care to avoid falling.
Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Handling
Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Vapors can be evolved when material is heated during processing operations. See SECTION 8, Exposure Controls/Personal Protection, for types of ventilation required. May cause sensitization of susceptible persons by skin contact. For personal protection see section 8.

Storage
Storage conditions: Keep in a dry, cool and well-ventilated place. Keep container tightly closed.
Further information on storage conditions: Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit(s)

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value
Tris(2-ethylhexylthioglycolate)methyl tin	OSHA P1	TWA	0.1 mg/m3 , Tin
Tris(2-ethylhexylthioglycolate)methyl tin	ACGIH	TWA	0.1 mg/m3 , Tin
Tris(2-ethylhexylthioglycolate)methyl tin	ACGIH	STEL	0.2 mg/m3 , Tin
Tris(2-ethylhexylthioglycolate)methyl tin	OSHA P0	TWA	0.1 mg/m3 , Tin
Tris(2-ethylhexylthioglycolate)methyl tin	NIOSH REL	TWA	0.1 mg/m3 , Tin
Ethylhexyl thioglycolate	Rohm and Haas	TWA	0.2 ppm
Ethylhexyl thioglycolate	Rohm and Haas	Absorbed via skin	

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 and a safety shower.

Individual protection measures

Eye/face protection: Chemical resistant goggles must be worn. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Form	liquid
Colour	Pale yellow
Odour	Mercaptan
pH	not applicable
Melting point/range	no data available
Boiling point/boiling range	> 221 °C (> 429.98 °F) Decomposes
Flash point	150 °C (302.00 °F) SETAFLASH CLOSED CUP
Evaporation rate	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Vapour pressure	<0.5 mmHg at 20 °C (68.00 °F)
Relative vapor density	4.5
Relative density	1.17
Water solubility	insoluble
Auto-ignition temperature	not applicable
Viscosity, dynamic	no data available
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	None known. Stable
Materials to avoid	Avoid contact with the following: Acids
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.

Information given is based on data on the components and the toxicology of similar products.

Acute oral toxicity	LD50 rat 1,080 mg/kg
Acute inhalation toxicity	LC50 rat 1 Hour 240 mg/l
Acute dermal toxicity	LD50 rabbit > 1,050 mg/kg
Skin irritation	slight irritation
Eye irritation	No eye irritation
Sensitisation	guinea pig Did not cause sensitization on laboratory animals. OECD Test Guideline 406 Skin sensitization - guinea pig: Not a sensitizer
Subchronic toxicity	In laboratory animals, prolonged oral exposure may produce the following: Brain Kidney Liver Pancreas lung blood effects Respiratory effects.

Carcinogenicity:
No relevant information found.
Reproductive toxicity
No relevant information found.
Teratogenicity
No relevant information found.
Mutagenicity
no data available

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Ecotoxicity effects

Toxicity to fish	LC50 Pimephales promelas (fathead minnow) 96 Hour OECD Test Guideline 203 or Equivalent > 1,000 mg/l
Toxicity to algae	ErC50 Selenastrum capricornutum (green algae) 72 Hour OECD Test Guideline 201 270 mg/l
Toxicity to aquatic invertebrates	EC50 Daphnia magna (Water flea) 48 Hour OECD Test Guideline 202 or Equivalent 32 mg/l

13. DISPOSAL CONSIDERATIONS

Environmental precautions: WARNING: KEEP SPILLS AND CLEANING RUNOFFS 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: Can be landfilled or incinerated, when in compliance with local regulations. Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Environmentally hazardous substances, liquid, n.o.s.(Bis(2-ethylhexylthioglycolate) dimethyltin, Tris(2-ethylhexylthioglycolate)methyl tin)
UN number	UN 3082
Class	9
Packing group	III
Marine Pollutant	Bis(2-ethylhexylthioglycolate) dimethyltin, Tris(2-ethylhexylthioglycolate)methyl tin

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(2-Ethylhexyl thioglycolate)
UN number	UN 3082
Class	9
Packing group	III
Marine Pollutant	2-Ethylhexyl thioglycolate

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).

WHMIS: This product is a 'controlled product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).

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.

SARA TITLE III: Section 313 Information (40CFR372)
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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	Flammability	Physical Hazard
*2	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.

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