



Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

ADVASTAB (TM) TM-291 HEAT STABILIZER

Revision date: 07/14/2009

Supplier Rohm and Haas Company
100 Independence Mall West
Philadelphia, PA 19106-2399 United States of America

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

Emergency telephone

Spill Emergency	215-592-3000
Health Emergency	215-592-3000
Chemtrec	800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Mixed alkylmetallic mercaptoester sulfides	201687-58-3	70.0 - 80.0%
Solvent dewaxed heavy paraffinic distillates	64742-65-0	20.0 - 30.0%

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Form	liquid
Colour	amber clear
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:Material can cause the following:
irritation

Skin:Material can cause the following:
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

Mixed alkylmetallic mercaptoester sulfides	ACGIH	Not classifiable as a human carcinogen.
Solvent dewaxed heavy paraffinic distillates	NTP CARC	Known carcinogen.
Solvent dewaxed heavy paraffinic distillates	IARC	Sufficient data.
Solvent dewaxed heavy paraffinic distillates	IARC	Sufficient data.
Solvent dewaxed heavy paraffinic distillates	IARC	Human carcinogen.

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. FIRE-FIGHTING MEASURES

Flash point	185 °C (365 °F) SETAFLASH CLOSED CUP
Lower explosion limit	no data available
Upper explosion limit	no data available
Thermal decomposition	Combustion generates toxic fumes of the following:, Carbon oxides, sulfur oxides

Suitable extinguishing media:Extinguishing media - small fires

Dry chemical

Carbon dioxide (CO₂)

Water spray

Extinguishing media - large fires

Foam

Specific hazards during fire fighting: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 fire-fighters: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.

Methods for cleaning up

Large spills:Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Do not allow into any sewer, on the ground, or into any body of water.

Small spills:Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

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.

Component	Regulation	Type of listing	Value
Mixed alkylmetallic mercaptoester sulfides	ACGIH	TWA	0.1 mg/m ³
	ACGIH	STEL	0.2 mg/m ³
	ACGIH	SKIN_DES	
	OSHA_TRANS	PEL	0.1 mg/m ³
	ACGIH	TWA	0.1 mg/m ³
	ACGIH	STEL	0.2 mg/m ³
	ACGIH	SKIN_DES	
	OSHA_TRANS	PEL	0.1 mg/m ³
	Z1A	TWA	0.1 mg/m ³
Z1A	SKIN_FINAL		

Component	Regulation	Type of listing	Value
Solvent dewaxed heavy paraffinic distillates	OSHA_TRANS	PEL	2,000 mg/m ³ 500 ppm
	Z1A	TWA	1,600 mg/m ³ 400 ppm
	ACGIH	TWA Mist.	5 mg/m ³
	ACGIH	STEL Mist.	10 mg/m ³
	ACGIHLIS_P	TWA Inhalable fraction.	0.2 mg/m ³
	ACGIHLIS_P	Mist.	

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

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.

Skin and body 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.

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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	amber clear
Odour	Mercaptan
pH	not applicable
Boiling point/boiling range	>175 °C (347.9 °F) Decomposes
Melting point/range	no data available
Flash point	185 °C (365 °F) SETAFLASH CLOSED CUP
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	insoluble
Relative density	1.02
Viscosity, dynamic	91.3 mPa.s
Evaporation rate	no data available

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 (H ₂ S), a combustible and toxic gas. , Thermal decomposition may yield the following: , Hydrogen sulfide ,
polymerisation	Product will not undergo polymerization.

11. TOXICOLOGICAL INFORMATION

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: **Solvent dewaxed heavy paraffinic distillates**

Skin irritation irritant effects

Component: **Mixed alkylmetallic mercaptoester sulfides**

Eye irritation No eye irritation
 Component: **Solvent dewaxed heavy paraffinic distillates**
Eye irritation irritant effects
 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
 Component: **Solvent dewaxed heavy paraffinic distillates**
Respiratory system irritation irritant effects

12. ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

Proper shipping name	Environmentally hazardous substances, liquid, n.o.s. (Dimethyltin compound)
UN-Number	UN 3082
Class	9
Packing group	III
Marine pollutant	Dimethyltin compound

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).

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.

CERCLAInformation(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.

US. Toxic Substances Control Act (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

Hazard Rating

	Health	Fire	Reactivity
HMIS	1*	1	0

HMIS:* = 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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