# SAFETY DATA SHEET
**ROHM & HAAS CHEMICALS LLC**

**Product name: OPTI-MATT™ A-2000LV Duller** **Issue Date:** 12/29/2021
**Print Date:** 10/30/2023

ROHM & HAAS CHEMICALS LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## 1. IDENTIFICATION

**Product name:** OPTI-MATT™ A-2000LV Duller

**Recommended use of the chemical and restrictions on use**
**Identified uses:** Leather and Textile

**COMPANY IDENTIFICATION**
ROHM & HAAS CHEMICALS LLC
Agent for Rohm and Haas Chemicals LLC
400 ARCOLA ROAD
COLLEGEVILLE PA 19426-2914
UNITED STATES

**Customer Information Number:** 800-258-2436
SDSQuestion@dow.com

**EMERGENCY TELEPHONE NUMBER**
**24-Hour Emergency Contact:** 1 800 424 9300
**Local Emergency Contact:** 800-424-9300

## 2. HAZARDS IDENTIFICATION

**Hazard classification**
GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Not a hazardous substance or mixture.

**Other hazards**
No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

| Component | CASRN | Concentration |
|---|---|---|

| | | |
|---|---|---|
| Acrylic polymer(s) | Not hazardous | 23.0 - 27.0 % |
| Polyether modified trisiloxane | 134180-76-0 | >= 1.0 - < 5.0 % |
| Triethylamine | 121-44-8 | >= 0.1 - < 1.0 % |
| Water | 7732-18-5 | 73.0 - 75.0 % |

## 4. FIRST AID MEASURES

**Description of first aid measures**
**General advice:**
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air and keep comfortable for breathing; consult a physician.

**Skin contact:** Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

**Eye contact:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Rinse mouth with water. No emergency medical treatment necessary.

**Most important symptoms and effects, both acute and delayed:**
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed**
**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

## 5. FIREFIGHTING MEASURES

**Extinguishing media**

**Suitable extinguishing media:** Use extinguishing media appropriate for surrounding fire..

**Unsuitable extinguishing media:** None known..

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** Carbon dioxide.. Carbon monoxide..

**Unusual Fire and Explosion Hazards:** Material can splatter above 100C/212F.. Dried product can burn..

**Advice for firefighters**

**Fire Fighting Procedures:** No data available

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

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** 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 and materials for containment and cleaning up:** Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Do not breathe vapors, mist or gas.

**Conditions for safe storage:** Keep from freezing - product stability may be affected. STIR WELL BEFORE USE.

**Storage stability**
**Storage temperature:** 1 - 49 °C (34 - 120 °F)
Other data: Monomer vapors can be evolved when material is heated during processing operations. See SECTION 8, for types of ventilation required.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

| Component | Regulation | Type of listing | Value |
|---|---|---|---|
| Triethylamine | Dow IHG | TWA | 1 ppm |
| | Further information: SKIN: Absorbed via skin | | |
| | Dow IHG | STEL | 3 ppm |
| | Further information: SKIN: Absorbed via skin | | |
| | ACGIH | TWA | 0.5 ppm |
| | Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption | | |
| | ACGIH | STEL | 1 ppm |

| | | | |
|---|---|---|---|
| | Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption | | |
| | OSHA Z-1 | TWA | 100 mg/m3 25 ppm |

**Exposure controls**

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

**Individual protection measures**

**Eye/face protection:** Use chemical goggles.

**Skin protection**

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. Avoid gloves made of: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Particulate filter.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Appearance** | |
| **Physical state** | milky liquid |
| **Color** | white |
| **Odor** | Mild acrylic |
| **Odor Threshold** | No data available |
| **pH** | 6.5 - 8.5 |
| **Melting point/range** | 0 °C ( 32 °F) Water |
| **Freezing point** | No data available |
| **Boiling point (760 mmHg)** | 100 °C ( 212 °F) Water |
| **Flash point** | Not applicable |
| **Evaporation Rate (Butyl Acetate = 1)** | No data available |
| **Flammability (solid, gas)** | Not Applicable |
| **Lower explosion limit** | No data available |

| | |
|---|---|
| **Upper explosion limit** | No data available |
| **Vapor Pressure** | No data available |
| **Relative Vapor Density (air = 1)** | No data available |
| **Relative Density (water = 1)** | No data available |
| **Water solubility** | No data available |
| **Partition coefficient: n-octanol/water** | No data available |
| **Auto-ignition temperature** | No data available |
| **Decomposition temperature** | No data available |
| **Kinematic Viscosity** | No data available |
| **Explosive properties** | No data available |
| **Oxidizing properties** | No data available |
| **Molecular weight** | No data available |
| **Percent volatility** | 73.5 - 75.5 % |

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

## 10. STABILITY AND REACTIVITY

**Reactivity:** None reasonably foreseeable.

**Chemical stability:** Stable

**Possibility of hazardous reactions:** Product will not undergo polymerization.

**Conditions to avoid:** No data available

**Incompatible materials:** There are no known materials which are incompatible with this product.

**Hazardous decomposition products:** Thermal decomposition may yield acrylic monomers..

## 11. TOXICOLOGICAL INFORMATION

*Toxicological information appears in this section when such data is available.*

**Information on likely routes of exposure**
Ingestion, Inhalation, Skin contact, Eye contact.

**Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)**

**Acute oral toxicity**

**Information for the Product:**

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Based on testing for product(s) in this family of materials:
LD50, Rat, > 5,000 mg/kg

**Information for components:**

**Acrylic polymer(s)**
For similar material(s): LD50, Rat, > 5,000 mg/kg

**Polyether modified trisiloxane**
LD50, Rat, > 2,000 mg/kg OECD Test Guideline 401

**Triethylamine**
Swallowing may result in burns of the mouth and throat. LD50, Rat, 730 mg/kg

**Acute dermal toxicity**

**Information for the Product:**

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Based on testing for product(s) in this family of materials:
LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

**Information for components:**

**Acrylic polymer(s)**
For similar material(s): LD50, Rabbit, > 5,000 mg/kg

**Polyether modified trisiloxane**
LD50, Rat, > 2,000 mg/kg OECD Test Guideline 402

**Triethylamine**
LD50, Rabbit, 580 mg/kg

**Acute inhalation toxicity**

**Information for the Product:**

Brief exposure (minutes) is not likely to cause adverse effects. Mist may cause irritation of upper respiratory tract (nose and throat).

As product: The LC50 has not been determined.

**Information for components:**

**Acrylic polymer(s)**
Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs.

For similar material(s): LC50, Rat, dust/mist, > 3.4 mg/l

**Polyether modified trisiloxane**
As product: LC50, Rat, 4 Hour, dust/mist, 1.08 mg/l OECD Test Guideline 403

**Triethylamine**
In humans, symptoms may include: Headache. LC50, Rat, 1 Hour, vapour, 14.4 mg/l

**Skin corrosion/irritation**

**Information for the Product:**

Based on testing for product(s) in this family of materials:
Brief contact may cause slight skin irritation with local redness.

**Information for components:**

**Acrylic polymer(s)**
Brief contact may cause slight skin irritation with local redness.

**Polyether modified trisiloxane**
Brief contact may cause slight skin irritation with local redness.

**Triethylamine**
Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage.
Classified as corrosive to the skin according to DOT guidelines.

**Serious eye damage/eye irritation**

**Information for the Product:**

Based on testing for product(s) in this family of materials:
May cause eye irritation.
May cause corneal injury.

**Information for components:**

**Acrylic polymer(s)**
May cause slight eye irritation.

**Polyether modified trisiloxane**
May cause severe eye irritation.
May cause corneal injury.

**Triethylamine**
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.
Vapor may cause eye irritation experienced as mild discomfort and redness.
Vapor of amines may cause swelling of the cornea resulting in visual disturbances such as blurred or hazy vision. Bright lights may appear to be surrounded by halos. Effects may be delayed and typically disappear spontaneously.

**Sensitization**

**Information for the Product:**

For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

**Information for components:**

**Acrylic polymer(s)**
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

**Polyether modified trisiloxane**
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

**Triethylamine**
Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:
No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

**Information for the Product:**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Information for components:**

**Acrylic polymer(s)**
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Polyether modified trisiloxane**
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Triethylamine**
May cause respiratory irritation.
Route of Exposure: Inhalation
Target Organs: Respiratory Tract

**Aspiration Hazard**

**Information for the Product:**

Based on physical properties, not likely to be an aspiration hazard.

**Information for components:**

**Acrylic polymer(s)**

Based on physical properties, not likely to be an aspiration hazard.

**Polyether modified trisiloxane**
Based on physical properties, not likely to be an aspiration hazard.

**Triethylamine**
Aspiration into the respiratory system may occur during ingestion or vomiting. Due to corrosivity, tissue damage or lung injury may occur.

**Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)**

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

**Information for the Product:**

No relevant data found.

**Information for components:**

**Acrylic polymer(s)**
No relevant data found.

**Polyether modified trisiloxane**
No relevant data found.

**Triethylamine**
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**Carcinogenicity**

**Information for the Product:**

No relevant data found.

**Information for components:**

**Acrylic polymer(s)**
No relevant data found.

**Polyether modified trisiloxane**
No relevant data found.

**Triethylamine**
Available data are inadequate to evaluate carcinogenicity.

**Teratogenicity**

**Information for the Product:**

No relevant data found.

**Information for components:**

**Acrylic polymer(s)**
No relevant data found.

**Polyether modified trisiloxane**
No relevant data found.

**Triethylamine**
No relevant data found.

**Reproductive toxicity**

**Information for the Product:**

No relevant data found.

**Information for components:**

**Acrylic polymer(s)**
No relevant data found.

**Polyether modified trisiloxane**
No relevant data found.

**Triethylamine**
No relevant data found.

**Mutagenicity**

**Information for the Product:**

Based on testing for product(s) in this family of materials: In vitro genetic toxicity studies were negative.

**Information for components:**

**Acrylic polymer(s)**
No relevant data found.

**Polyether modified trisiloxane**
No relevant data found.

**Triethylamine**
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

## 12. ECOLOGICAL INFORMATION

*Ecotoxicological information appears in this section when such data is available.*

**Toxicity**

**Acrylic polymer(s)**

**Acute toxicity to fish**
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
For similar material(s):
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 100 mg/l, OECD Test Guideline 203
For similar material(s):
NOEC, Oncorhynchus mykiss (rainbow trout), 96 Hour, 100 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**
For similar material(s):
EC50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l, OECD Test Guideline 202
For similar material(s):
NOEC, Daphnia magna (Water flea), 48 Hour, 100 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**
For similar material(s):
EC50, Selenastrum capricornutum (green algae), 72 Hour, Growth rate, > 999 mg/l, OECD Test Guideline 201
For similar material(s):
NOEC, Selenastrum capricornutum (green algae), 72 Hour, Growth rate, 92 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**
For similar material(s):
EC50, activated sludge, 3 Hour, Respiration rates., > 100 mg/l, OECD Test Guideline 209

**Polyether modified trisiloxane**

**Acute toxicity to fish**
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Lepomis macrochirus (Bluegill sunfish), 96 Hour, 15 mg/l

**Acute toxicity to aquatic invertebrates**
EC50, Daphnia magna, 48 Hour, 177 mg/l

**Triethylamine**

**Acute toxicity to fish**
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Rainbow trout (Oncorhynchus mykiss), flow-through test, 96 Hour, 36 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**
LC50, water flea Ceriodaphnia dubia, semi-static test, 48 Hour, 17 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**
ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 8 mg/l
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 1.1 mg/l

**Toxicity to bacteria**
EC50, Pseudomonas putida, Static, 17 Hour, Growth inhibition, 95 mg/l

**Chronic toxicity to fish**

LOEC, Rainbow trout (Oncorhynchus mykiss), semi-static test, 60 d, mortality, > 100 mg/l

**Chronic toxicity to aquatic invertebrates**
NOEC, Ceriodaphnia dubia (water flea), semi-static test, 7 d, mortality, 7.1 mg/l

**Persistence and degradability**

**Acrylic polymer(s)**

**Biodegradability:** For similar material(s): Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

**Polyether modified trisiloxane**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
**Biodegradation:** > 60 %
**Exposure time:** 28 d
**Method:** OECD Test Guideline 301F

**Stability in Water (1/2-life)**
Hydrolysis, half-life, 2.06 d, pH 4, Half-life Temperature 50 °C
Hydrolysis, half-life, 330 d, pH 7, Half-life Temperature 50 °C
Hydrolysis, half-life, 8.31 d, pH 9, Half-life Temperature 50 °C
Hydrolysis, half-life, 3.22 d, pH 4, Half-life Temperature 35 °C
Hydrolysis, half-life, 20.8 d, pH 9, Half-life Temperature 35 °C
Hydrolysis, half-life, 2.57 d, pH 4, Half-life Temperature 20 °C
Hydrolysis, half-life, 12.5 d, pH 9, Half-life Temperature 20 °C

**Triethylamine**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material has inherent, primary biodegradability according to OECD test (s) guidelines (reaches > 20% biodegradation in OECD test(s).
10-day Window: Pass
**Biodegradation:** 96 %
**Exposure time:** 21 d
**Method:** OECD Test Guideline 301A or Equivalent
10-day Window: Not applicable
**Biodegradation:** 25 - 34 %
**Exposure time:** 28 d
**Method:** OECD Test Guideline 302C or Equivalent

**Theoretical Oxygen Demand:** 3.49 mg/mg

**Photodegradation**
**Test Type:** Half-life (indirect photolysis)
**Sensitization:** OH radicals
**Atmospheric half-life:** 0.116 d
**Method:** Estimated.

**Bioaccumulative potential**

**Acrylic polymer(s)**

**Bioaccumulation:** No relevant data found.

**Polyether modified trisiloxane**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient: n-octanol/water(log Pow):** Pow: 1.59

**Triethylamine**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient: n-octanol/water(log Pow):** 1.45 Measured
**Bioconcentration factor (BCF):** < 4.9 Cyprinus carpio (Carp) 42 d Measured

**Mobility in soil**

**Acrylic polymer(s)**

No relevant data found.

**Polyether modified trisiloxane**

No relevant data found.

**Triethylamine**

**Partition coefficient (Koc):** 11 - 146 Estimated.

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods:** Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant and flush to a chemicalsewer. For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations.

**Contaminated packaging:** Empty containers retain product residues. Follow label warnings even after container is emptied. Improper disposal or reuse of this container may be dangerous and illegal. Refer to applicable federal, state and local regulations.

## 14. TRANSPORT INFORMATION

**DOT**

Not regulated for transport

**Classification for SEA transport (IMO-IMDG):**

Not regulated for transport

| | |
|---|---|
| **Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code** | Consult IMO regulations before transporting ocean bulk |

**Classification for AIR transport (IATA/ICAO):**

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container

volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## 15. REGULATORY INFORMATION

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**
No SARA Hazards

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 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.

**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.

**California Prop. 65**
This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

**United States TSCA Inventory (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.

## 16. OTHER INFORMATION

**Hazard Rating System**
**HMIS**

| Health | Flammability | Physical Hazard |
|---|---|---|
| 1 | 0 | 0 |

**Revision**
Identification Number: 99102272 / 1001 / Issue Date: 12/29/2021 / Version: 4.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

| | |
|---|---|
| ACGIH | USA. ACGIH Threshold Limit Values (TLV) |
| Dow IHG | Dow Industrial Hygiene Guideline |
| OSHA Z-1 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| STEL | Short term exposure limit |
| TWA | Time weighted average |

**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

ROHM & HAAS CHEMICALS LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here

pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US