

# **SAFETY DATA SHEET**

# **ROHM & HAAS CHEMICALS LLC**

Product name: RHOPLEX™ K-3 Emulsion Issue Date: 04/28/2023 Print Date: 11/01/2023

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: RHOPLEX™ K-3 Emulsion

Recommended use of the chemical and restrictions on use

Identified uses: Coatings product

**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

Chemical nature: Acrylic emulsion

This product is a mixture.

Component CASRN Concentration

Acrylic polymer(s)	Not hazardous	>= 40.0 - < 45.0 %
Polyethylene glycol octylphenyl ether	9036-19-5	>= 1.0 - < 5.0 %
Residual monomers	Not required	< 300.0 PPM
Formaldehyde	50-00-0	600.0 PPM
Water	7732-18-5	>= 50.0 - < 55.0 %

# 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:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**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

Product name: RHOPLEX™ K-3 Emulsion Issue Date: 04/28/2023

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. This material contains trace levels of formaldehyde in the aqueous phase. The product will generate additional formaldehyde upon cure. Lack of adequate ventilation may result in airborne levels of formaldehyde above established exposure limits in the workplace. Monitoring the workplace to determine actual formaldehyde levels is recommended. See OSHA Formaldehyde Standard 29 CFR 1910.1048 forfurther information.

# 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
Formaldehyde	OSHA CARC	PEL	0.75 ppm
Further information: OSHA specifically regulated carcinogen			
	OSHA CARC	STEL	2 ppm

Further information: 0	OSHA specifically regulated	d carcinogen	
AC	GIH	TWA	0.1 ppm
Further information: DSEN: Dermal Sensitization; RSEN: Respiratory sensitization; A1: Confirmed human carcinogen			
AC	GIH	STEL	0.3 ppm
Further information: I A1: Confirmed human		n; RSEN: Respiratory sensit	ization;

#### **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 safety glasses (with side shields). **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. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** 

Physical state liquid
Color white milky
Odor acrylic-like

Odor Threshold No data available

**pH** 2.1 - 4.0

**Melting point/range** 0 °C (32 °F) Water **Freezing point** No data available

**Boiling point (760 mmHg)** 100.00 °C (212.00 °F) Water

**Product name: RHOPLEX™ K-3 Emulsion** 

Flash point Noncombustible Evaporation Rate (Butyl Acetate <1.00 Water

= 1)

Flammability (solid, gas)

Lower explosion limit

Not applicable

Upper explosion limit

Not applicable

Vapor Pressure 17.0000000 mmHg at 20.00 °C (68.00 °F) Water

Relative Vapor Density (air = 1) <1.0000

Relative Density (water = 1) 1.0000 - 1.2000
Water solubility partly miscible
Partition coefficient: n- No data available

octanol/water

**Auto-ignition temperature** Not Applicable **Decomposition temperature** No data available <100.000 mPa.s **Dynamic Viscosity Kinematic Viscosity** No data available No data available **Explosive properties Oxidizing properties** No data available Molecular weight No data available 53.5 - 54.5 % Water **Percent volatility** 

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 are 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)

Page 5 of 17

# **Acute Toxicity Endpoints:**

Not classified based on available information.

### **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, > 5,000 mg/kg

# Information for components:

# Acrylic polymer(s)

Single dose oral LD50 has not been determined.

# Polyethylene glycol octylphenyl ether

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

Typical for this family of materials. LD50, Rat, male, 2,780 mg/kg

#### **Residual monomers**

Single dose oral LD50 has not been determined.

#### Formaldehvde

LD50, Rat, 100 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)

The dermal LD50 has not been determined.

## Polyethylene glycol octylphenyl ether

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

The dermal LD50 has not been determined.

#### Residual monomers

The dermal LD50 has not been determined.

#### Formaldehyde

LD50, Rabbit, 270 mg/kg

# Acute inhalation toxicity

#### Information for the Product:

Brief (minutes) exposure to vapor, mist or dust is not likely to cause adverse effects.

As product: The LC50 has not been determined.

# Information for components:

# Acrylic polymer(s)

The LC50 has not been determined.

# Polyethylene glycol octylphenyl ether

Mist may cause irritation of upper respiratory tract (nose and throat).

The LC50 has not been determined.

## **Residual monomers**

The LC50 has not been determined.

# **Formaldehyde**

LC50, Rat, 4 Hour, vapour, 0.578 mg/l

#### Skin corrosion/irritation

Not classified based on available information.

## 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)

Essentially nonirritating to skin.

# Polyethylene glycol octylphenyl ether

Prolonged contact may cause slight skin irritation with local redness.

# Residual monomers

Essentially nonirritating to skin.

# **Formaldehyde**

Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

# Serious eye damage/eye irritation

Not classified based on available information.

#### Information for the Product:

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

# Information for components:

# Acrylic polymer(s)

Essentially nonirritating to eyes.

# Polyethylene glycol octylphenyl ether

May cause moderate eye irritation. May cause slight corneal injury.

#### **Residual monomers**

Essentially nonirritating to eyes.

## Formaldehyde

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 may cause lacrimation (tears).

Effects may be delayed.

#### Sensitization

# For skin sensitization:

Not classified based on available information.

# For respiratory sensitization:

Not classified based on available information.

#### 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.

# Polyethylene glycol octylphenyl ether

For this family of materials:

Did not cause allergic skin reactions when tested in humans.

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No specific, relevant data available for assessment.

#### Residual monomers

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

# **Formaldehyde**

Has caused allergic skin reactions in humans.

Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

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

Not classified based on available information.

#### Information for the Product:

Product test data not available.

# Information for components:

#### Acrylic polymer(s)

Available data are inadequate to determine single exposure specific target organ toxicity.

# Polyethylene glycol octylphenyl ether

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

# Residual monomers

Available data are inadequate to determine single exposure specific target organ toxicity.

# **Formaldehyde**

Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

# **Aspiration Hazard**

Not classified based on available information.

# 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.

## Polyethylene glycol octylphenyl ether

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

#### Residual monomers

Based on available information, aspiration hazard could not be determined.

#### **Formaldehyde**

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)

Not classified based on available information.

#### Information for the Product:

Product test data not available.

#### Information for components:

# Acrylic polymer(s)

No relevant data found.

# Polyethylene glycol octylphenyl ether

No specific, relevant data available for assessment.

#### Residual monomers

No relevant data found.

#### **Formaldehyde**

In animals, effects have been reported on the following organs:

Kidney.

Liver.

Respiratory tract.

Skin.

## Carcinogenicity

Not classified based on available information.

#### Information for the Product:

Product test data not available.

#### Information for components:

# Acrylic polymer(s)

No relevant data found.

# Polyethylene glycol octylphenyl ether

No specific, relevant data available for assessment.

## **Residual monomers**

No relevant data found.

#### **Formaldehyde**

Has caused cancer in humans. Has caused cancer in laboratory animals.

# Carcinogenicity

Component List Classification

Formaldehyde IARC Group 1: Carcinogenic to humans US NTP Known to be human carcinogen

OSHA CARC OSHA specifically regulated carcinogen ACGIH A1: Confirmed Human Carcinogen

Issue Date: 04/28/2023

# **Teratogenicity**

Not classified based on available information.

#### Information for the Product:

Product test data not available.

# Information for components:

# Acrylic polymer(s)

No relevant data found.

# Polyethylene glycol octylphenyl ether

For the major component(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. These effects were only observed at exaggerated doses. Did not cause birth defects in laboratory animals.

#### Residual monomers

No relevant data found.

# **Formaldehyde**

Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

# Reproductive toxicity

Not classified based on available information.

#### Information for the Product:

Product test data not available.

#### Information for components:

# Acrylic polymer(s)

No relevant data found.

# Polyethylene glycol octylphenyl ether

No specific, relevant data available for assessment.

#### **Residual monomers**

No relevant data found.

#### **Formaldehyde**

No data available.

# Mutagenicity

Not classified based on available information.

#### 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.

# Polyethylene glycol octylphenyl ether

For this family of materials: In vitro genetic toxicity studies were negative.

# Residual monomers

No relevant data found.

# **Formaldehyde**

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative in some cases and positive in other cases.

# 12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data are available.

# **Toxicity**

## Acrylic polymer(s)

# Acute toxicity to fish

No relevant data found.

# Polyethylene glycol octylphenyl ether

# Acute toxicity to fish

For this family of materials:

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).

For this family of materials:

LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 38 mg/l, OECD Test Guideline 203 or Equivalent

# Acute toxicity to aquatic invertebrates

For this family of materials:

LC50, Daphnia magna (Water flea), static test, 48 Hour, 230 mg/l, OECD Test Guideline 202 or Equivalent

## Chronic toxicity to fish

MATC (Maximum Acceptable Toxicant Level), Pimephales promelas (fathead minnow), flow-through test, 31 d, survival, 6.1 - 10.1 mg/l

# **Residual monomers**

# Acute toxicity to fish

No relevant data found.

# Formaldehyde

# Acute toxicity to fish

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Bluegill sunfish (Lepomis macrochirus), flow-through test, 96 Hour, 50 mg/l

LC50, striped bass (Morone saxatilis), static test, 96 Hour, 6.7 mg/l

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 44 mg/l, OECD Test Guideline 203 or Equivalent

# Acute toxicity to aquatic invertebrates

EC50, Daphnia pulex (Water flea), static test, 48 Hour, 5.8 mg/l, OECD Test Guideline 202 or Equivalent

# Acute toxicity to algae/aquatic plants

EC50, Desmodesmus subspicatus (green algae), Static, 72 Hour, Growth rate, 4.89 mg/l, OECD Test Guideline 201 or Equivalent

# Toxicity to bacteria

EC50, activated sludge, 3 Hour, 19.6 mg/l, OECD 209 Test

#### Chronic toxicity to fish

NOEC, Oryzias latipes (Orange-red killifish), flow-through, 28 d, mortality, >= 48 mg/l

#### Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 21 d, >= 6.4 mg/l

# Persistence and degradability

## Acrylic polymer(s)

Biodegradability: No relevant data found.

#### Polyethylene glycol octylphenyl ether

**Biodegradability:** Based on information for a similar material: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

#### **Residual monomers**

Biodegradability: No relevant data found.

# **Formaldehyde**

**Product name: RHOPLEX™ K-3 Emulsion** 

Issue Date: 04/28/2023

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready

biodegradability. 10-day Window: Pass **Biodegradation:** 90 % Exposure time: 28 d

Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 1.07 mg/mg

#### Biological oxygen demand (BOD)

Incubation	BOD	
Time		
5 d	> 100 %	
10 d	> 100 %	
20 d	> 100 %	

#### **Photodegradation**

**Test Type:** Half-life (indirect photolysis)

Sensitization: OH radicals Atmospheric half-life: 15.8 Hour

Method: Estimated.

#### Bioaccumulative potential

## Acrylic polymer(s)

Bioaccumulation: No relevant data found.

# **Residual monomers**

Bioaccumulation: No relevant data found.

#### **Formaldehyde**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): 0.35 Measured

Bioconcentration factor (BCF): 3 Fish Estimated.

# Mobility in soil

#### Acrylic polymer(s)

No relevant data found.

#### **Residual monomers**

No relevant data found.

#### Formaldehyde

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient (Koc): 1 Estimated.

Product name: RHOPLEX™ K-3 Emulsion Issue Date: 04/28/2023

# 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.

Product name: RHOPLEX™ K-3 Emulsion

# 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

WARNING: This product can expose you to chemicals including Acrylamide, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

# 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: 10077989 / 1001 / Issue Date: 04/28/2023 / Version: 7.0 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)
OSHA CARC	OSHA Specifically Regulated Chemicals/Carcinogens
PEL	Permissible exposure limit (PEL)
STEL	Short-term exposure limit
TWA	8-hour, 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.