



SAFETY DATA SHEET

ROHM AND HAAS SINGAPORE (PTE) LTD

Product name: ELASTENE™ 3772 Acrylic Emulsion

Issue Date: 03/04/2015

Print Date: 04/16/2015

ROHM AND HAAS SINGAPORE (PTE) LTD 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. PRODUCT AND COMPANY IDENTIFICATION

Product name: ELASTENE™ 3772 Acrylic Emulsion

Recommended use of the chemical and restrictions on use

Identified uses: Coatings product

COMPANY IDENTIFICATION

ROHM AND HAAS SINGAPORE (PTE) LTD
A Subsidiary of The Dow Chemical Company
260 ORCHARD RD, #18-01 THE HEEREN
SINGAPORE 238855
SINGAPORE

Customer Information Number:

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EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 1800 332 3543

Local Emergency Contact: 1800-332-3543

2. HAZARDS IDENTIFICATION

Hazard classification

This product is not hazardous per the Globally Harmonized System of Classification and Labelling (GHS).

Other hazards

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
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Diphenyl Ketone	119-61-9	>= 0.1 - < 1.0 %
Ammonia, aqueous solution	1336-21-6	>= 0.1 - < 1.0 %

4. FIRST AID MEASURES

Description of first aid measures

Inhalation: Move to fresh air.

Skin contact: Wash with water and soap as a precaution. If skin irritation persists, call a physician.

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

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

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

5. FIREFIGHTING MEASURES

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

Unsuitable extinguishing media: no data available

Special hazards arising from the substance or mixture

Hazardous combustion products: no data available

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

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

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Diphenyl Ketone	US WEEL	TWA	0.5 mg/m ³
	Rohm and Haas	TWA	5 mg/m ³
	Rohm and Haas	STEL	10 mg/m ³
Ammonia, aqueous solution	ACGIH	TWA	25 ppm, Ammonia
	ACGIH	STEL	35 ppm, Ammonia
	SG OEL	PEL (long term)	17 mg/m ³ 25 ppm, Ammonia
	SG OEL	PEL (short term)	24 mg/m ³ 35 ppm, Ammonia

Exposure controls

Engineering controls: Use only in area provided with appropriate exhaust ventilation.

Protective measures: 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: The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): Neoprene gloves

Respiratory protection: Use certified respiratory protection equipment meeting EU requirements(89/656/EEC, 89/686/EEC), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	liquid milky
Color	white
Odor	no data available
Odor Threshold	no data available
pH	7.5 - 9.0
Melting point/range	0 °C Water
Freezing point	no data available
Boiling point (760 mmHg)	100 °C Water
Flash point	Noncombustible
Evaporation Rate (Butyl Acetate = 1)	<1 Water
Flammability (solid, gas)	Not Applicable
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	17 mmHg at 20 °C Water
Relative Vapor Density (air = 1)	<1 Water
Relative Density (water = 1)	1.00 - 1.20
Water solubility	Dilutable
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
Dynamic Viscosity	1 - 500 mPa.s
Kinematic Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available
Molecular weight	no data available
Percent volatility	44.0 - 46.0 % Water
Particle size	280 - 420 nm

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

10. STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Stable

Possibility of hazardous reactions: None known.
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 on this product or its components appear in this section when such data is available.

Acute toxicity

Acute oral toxicity

Product test data not available.

Acute dermal toxicity

Product test data not available.

Acute inhalation toxicity

Product test data not available.

Skin corrosion/irritation

May cause transient irritation.

Serious eye damage/eye irritation

No eye irritation

Sensitization

Product test data not available.

Specific Target Organ Systemic Toxicity (Single Exposure)

Product test data not available.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Product test data not available.

Carcinogenicity

Product test data not available.

Teratogenicity

Product test data not available.

Reproductive toxicity

Product test data not available.

Mutagenicity

Product test data not available.

Aspiration Hazard

Product test data not available.

COMPONENTS INFLUENCING TOXICOLOGY:

Diphenyl Ketone

Acute oral toxicity

LD50, Rat, > 10,000 mg/kg

Acute dermal toxicity

LD50, Rabbit, 3,535 mg/kg

Acute inhalation toxicity

At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. The LC50 has not been determined.

Sensitization

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

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

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

Blood

Liver

Kidney

Bone Marrow

Carcinogenicity

Has caused cancer in laboratory animals. However, the relevance of this to humans is unknown.

Teratogenicity

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

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

Mutagenicity

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

Aspiration Hazard

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

Ammonia, aqueous solution**Acute inhalation toxicity**

Vapor concentrations are attainable which could be hazardous on single exposure. Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs. Excessive exposure may cause lung injury.

The LC50 has not been determined.

Sensitization

For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

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

Specific Target Organ Systemic Toxicity (Repeated Exposure)

No relevant data found.

Carcinogenicity

Did not cause cancer in laboratory animals.

Teratogenicity

No relevant data found.

Reproductive toxicity

No relevant data found.

Mutagenicity

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

Aspiration Hazard

Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

Carcinogenicity

Component
Diphenyl Ketone

List
IARC

Classification

Group 2B: Possibly carcinogenic to humans

12. ECOLOGICAL INFORMATION

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

General Information

There is no data available for this product.

Ecotoxicity

Diphenyl Ketone

Acute toxicity to fish

Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

LC50, Fathead minnow (*Pimephales promelas*), 96 Hour, 14.7 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates

EC50, ceriodaphnia dubia (water flea), 48 Hour, 7.6 mg/l, Method Not Specified.

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 3.5 mg/l, Method Not Specified.

Chronic toxicity to fish

NOEC, *Pimephales promelas* (fathead minnow), flow-through test, 32 d, survival, 0.54 mg/l

LOEC, *Pimephales promelas* (fathead minnow), flow-through test, 32 d, survival, 0.99 mg/l

MATC (Maximum Acceptable Toxicant Level), *Pimephales promelas* (fathead minnow), flow-through test, 32 d, survival, 0.73 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, *Daphnia* (water flea), 21 d, 0.20 mg/l

Ammonia, aqueous solution

Acute toxicity to fish

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

LC50, *Lepomis macrochirus* (Bluegill sunfish), 96 Hour, 0.87 mg/l

LC50, *Pimephales promelas* (fathead minnow), 96 Hour, 1.2 mg/l

Persistence and degradability

Diphenyl Ketone

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

10-day Window: Not applicable

Biodegradation: 0 %

Exposure time: 14 d

Method: OECD Test Guideline 301C or Equivalent

Ammonia, aqueous solution

Biodegradability: Biodegradation may occur under aerobic conditions (in the presence of oxygen). Biodegradation rate may increase in soil and/or water with acclimation.

Bioaccumulative potential

Diphenyl Ketone

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 3.18 Measured
Bioconcentration factor (BCF): 3.4 - 9.2 Cyprinus carpio (Carp) 42 d Measured

Ammonia, aqueous solution

Bioaccumulation: No bioconcentration is expected because of the relatively high water solubility.

Mobility in Soil

Diphenyl Ketone

Potential for mobility in soil is medium (Koc between 150 and 500).
Partition coefficient(Koc): 430 Measured

Ammonia, aqueous solution

Potential for mobility in soil is very high (Koc between 0 and 50).

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

Diphenyl Ketone

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

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 chemical sewer. For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport:

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

Workplace Classification

This product is not classified as hazardous according to Singapore Standards, Act and Regulations.

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16. OTHER INFORMATION

Revision

Identification Number: 101268986 / 1897 / Issue Date: 03/04/2015 / Version: 2.0

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)
PEL (long term)	Permissible Exposure Level (PEL) Long Term
PEL (short term)	Permissible Exposure Level (PEL) Short Term
Rohm and Haas	Rohm and Haas OEL's
SG OEL	Singapore. Workplace Safety and Health Act - First Schedule Permissible Exposure Limits of Toxic Substances
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

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 AND HAAS SINGAPORE (PTE) LTD 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

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