



Material Safety Data Sheet

THE DOW CHEMICAL COMPANY*

Product name: PARALOID™ KM-334 Impact Modifier

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THE DOW CHEMICAL COMPANY* 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: PARALOID™ KM-334 Impact Modifier

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY*
Agent for Rohm and Haas Chemicals LLC
100 INDEPENDENCE MALL WEST
PHILADELPHIA PA 19106-2399
UNITED STATES

Customer Information Number: 215-592-3000
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 1 800 424 9300
Local Emergency Contact: 989-636-4400

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Physical state	powder
Color	Free-flowing white
Odor	Pungent, sweet odor

Hazard Summary

CAUTION!
POWDER MAY FORM EXPLOSIVE MIXTURES WITH AIR.

Potential Health Effects

Primary Routes of Entry: Inhalation
Eye contact
Skin contact

Eyes: Like any foreign body, particles can cause mechanical irritation.
Monomer vapors from heated product can cause the following:

slight irritation

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

Inhalation: Repeated or prolonged inhalation of dust can cause the following:

Nausea

Headache

Dizziness

May cause irritation of respiratory tract.

Inhalation of monomer vapor from heated product can cause the following:

irritation of nose, throat, and lungs

Chronic Exposure: Prolonged or repeated exposure to dust can cause the following:

Lung irritation

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Acrylic copolymer

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product is a mixture.

Component	CASRN	Concentration
p(BA/MMA)	25852-37-3	98.0 - 99.0 %
Calcium carbonate	471-34-1	1.0 - 2.0 %
Individual residual monomers	Not Required	< 0.1 %

Note

Polymeric description(s) presented in this section are the U.S. Toxic Substances Control Act (TSCA) definitions.

4. FIRST AID MEASURES

Description of first aid measures

Inhalation: Move to fresh air.

Skin contact: Wash with water and soap as a precaution. Remove and wash contaminated clothing before re-use. If skin irritation persists, call a physician.

Eye contact: Rinse with 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 if 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: Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Carbon dioxide (CO₂) Dry chemical Water spray

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 as sold is combustible; burns vigorously with intense heat. Dusts at sufficient concentrations can form explosive mixtures with air. DO NOT use a solid stream of water. A solid stream of water directed at this material may create a potentially explosive airborne dust mixture.

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: Wear compatible, chemically resistant gloves. Use personal protective equipment. Avoid breathing dust. Material can create slippery conditions. Remove all sources of ignition. Ensure adequate ventilation.

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: Sweep up and shovel into suitable containers for disposal. Use water spray to keep dusting to a minimum.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not breathe dust. Do not breathe vapors, mist or gas. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep away from heat and sources of ignition. Ground all metal containers during storage and handling. Ensure adequate ventilation. Keep container tightly closed.

Conditions for safe storage: Store at room temperature in the original container. Keep away from heat and sources of ignition. Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Avoid all ignition sources. This material is not hazardous under normal storage

conditions. However, all materials of this type release some monomer vapors or gases when stored for prolonged periods at elevated temperatures.

Other data: Avoid high concentrations of dust in air and accumulation of dust on equipment. An airborne dust of this material can create a dust explosion. When handling and processing this material local exhaust ventilation may be required to control dust and reduce exposure to vapors. To prevent dust explosions employ bonding and grounding for operations capable of generating static electricity. Protect all equipment from explosions by following the guidelines in NFPA-68 and NFPA-69. For electrical equipment follow local codes and electrical classification NFPA-70 (the National Electrical Code), class II, division 2, group G.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

	Regulation	Type of listing	Value/Notation
Product	Rohm and Haas	TWA Respirable fraction.	1 mg/m ³
Component	Regulation	Type of listing	Value/Notation
Calcium carbonate	Rohm and Haas	TWA	1 mg/m ³
	Rohm and Haas	STEL	3 mg/m ³

Exposure controls

Engineering controls: Use explosion-proof 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: 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: For prolonged or repeated contact use protective gloves.

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. When dusty conditions are encountered, wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. Air-purifying respirators should be equipped with NIOSH approved (or equivalent) N95 filters. If oil mist is present, use R95 or P95 filters.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	powder
Color	Free-flowing white
Odor	Pungent, sweet odor
Odor Threshold	no data available
pH	no data available

Melting point/range	132.00 - 149.00 °C (269.60 - 300.20 °F)
Freezing point	no data available
Boiling point (760 mmHg)	not applicable
Flash point	no data available
Evaporation Rate (Butyl Acetate = 1)	not applicable
Flammability (solid, gas)	no data available
Lower explosion limit	no data available
Upper explosion limit	not applicable
Vapor Pressure	not applicable
Relative Vapor Density (air = 1)	not applicable
Relative Density (water = 1)	1.1100
Water solubility	insoluble
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	400.00 °C (752.00 °F)
Decomposition temperature	no data available
Dynamic Viscosity	not applicable
Kinematic Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available
Molecular weight	no data available

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: no data available

Possibility of hazardous reactions: None known.
Product will not undergo polymerization.
Stable

Conditions to avoid: no data available

Incompatible materials: Prolonged contact with acids, alkalies and strong oxidizing agents may attack or dissolve the polymer.

Hazardous decomposition products: Heating above the decomposition temperature will release 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

LD50, rat, > 5,000 mg/kg

Acute dermal toxicity

LD50, rabbit, > 5,000 mg/kg

Acute inhalation toxicity

LC50, rat, 4 Hour, dust/mist, > 3.4 mg/l The LC50 value is greater than the Maximum Attainable Concentration.

Skin corrosion/irritation

slight irritation

Serious eye damage/eye irritation

slight 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)

A 13-week inhalation study in rats of a compositionally similar acrylic powder showed inflammatory effects in the lung at concentrations of 6 mg/m³ for 6 hours per day, 5 days per week. These findings were consistent with high concentration exposure effects reported for other non-soluble dusts such as titanium dioxide and toner. Maintaining airborne dust concentrations within the recommended exposure limit is not expected to produce adverse effects within the lung.

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.

Additional information

Information given is based on data obtained from similar substances.

COMPONENTS INFLUENCING TOXICOLOGY:**Calcium carbonate****Sensitization**

Did not demonstrate the potential for contact allergy in mice.

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.

Carcinogenicity

No relevant data found.

Teratogenicity

Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity

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

Mutagenicity

In vitro genetic toxicity studies were negative.

Aspiration Hazard

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

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.

Toxicity**Calcium carbonate****Acute toxicity to fish**

Material is practically non-toxic to fish on an acute basis (LC50 > 100 mg/L).

Persistence and degradability**Calcium carbonate**

Biodegradability: Biodegradation is not applicable.

Bioaccumulative potential**Calcium carbonate**

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Mobility in soil**Calcium carbonate**

No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Place powder in air-tight bags. For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

DOT

Reportable Quantity Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Transport in bulk Not regulated for transport
according to Annex I or II Consult IMO regulations before transporting ocean bulk
of MARPOL 73/78 and the
IBC or IGC Code

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

OSHA Hazard Communication Standard

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Chronic Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

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.

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.

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.

16. OTHER INFORMATION

Hazard Rating System**HMIS**

Health	Flammability	Physical Hazard
1	1	0

Revision

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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

Rohm and Haas	Rohm and Haas OEL's
STEL	Short term exposure limit
TWA	Time Weighted Average (TWA):

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.

THE DOW CHEMICAL COMPANY* 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.