



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: PARALOID™ B-44 100% Resin

Issue Date: 07/30/2019

Print Date: 07/31/2019

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. IDENTIFICATION

Product name: PARALOID™ B-44 100% Resin

Recommended use of the chemical and restrictions on use

Identified uses: Coatings product

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
2030 DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number:

800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: CHEMTREC +1 800-424-9300

Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Combustible dust

Reproductive toxicity - Category 2

Label elements

Hazard pictograms



Signal word: **WARNING!**

Hazards

If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

Suspected of damaging fertility or the unborn child.

Precautionary statements**Prevention**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

IF exposed or concerned: Get medical advice/ attention.

Storage

Store locked up.

Disposal

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

If converted to small particles during further handling, processing, or by other means, may form combustible dust concentrations in air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Acrylic polymer(s)

This product is a substance.

Component	CASRN	Concentration
Acrylic polymer(s)	Not hazardous	>= 99.0 - <= 100.0 %
Ethyl acrylate	140-88-5	<= 0.05 %
Methyl methacrylate	80-62-6	< 0.2 %
Toluene	108-88-3	<= 0.7 %

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: Flush eyes with water as a precaution. 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

Extinguishing media

Suitable extinguishing media: Use the following extinguishing media when fighting fires involving this material: 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.

Advice for firefighters

Fire Fighting Procedures: Use water spray to cool unopened containers. Remain upwind. Avoid breathing smoke.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow.

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: Floor may be slippery; use care to avoid falling. Eliminate all ignition sources. Ventilate the area. Transfer spilled material to suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Store in a cool, dry, well ventilated place. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Do not breathe vapours/dust. Static charges can accumulate: use bonding and grounding between transfer equipment and receiving containers and for any other operations capable of generating static electricity.

Conditions for safe storage: Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Ground all metal containers during storage and handling.

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
Ethyl acrylate	ACGIH	TWA	5 ppm
	Further information: CNS impair: Central Nervous System impairment; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; skin sens: Skin sensitization; GI irr: Gastrointestinal irritation; A4: Not classifiable as a human carcinogen		
	ACGIH	STEL	15 ppm
	Further information: CNS impair: Central Nervous System impairment; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; skin sens: Skin sensitization; GI irr: Gastrointestinal irritation; A4: Not classifiable as a human carcinogen		
	OSHA Z-1	TWA	100 mg/m3 25 ppm
	Further information: X: Skin designation; (b): The value in mg/m3 is approximate.		
	CAL PEL	PEL	20 mg/m3 5 ppm
	Further information: S: Skin		
	CAL PEL	STEL	100 mg/m3 25 ppm
	Further information: S: Skin		
Methyl methacrylate	ACGIH	TWA	50 ppm
	Further information: DSEN: Dermal Sensitization; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; pulm edema: Pulmonary edema; body weight eff: body weight effects; A4: Not classifiable as a human carcinogen		
	ACGIH	STEL	100 ppm
	Further information: DSEN: Dermal Sensitization; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; pulm edema: Pulmonary edema; body weight eff: body weight effects; A4: Not classifiable as a human carcinogen		
	OSHA Z-1	TWA	410 mg/m3 100 ppm
	Further information: (b): The value in mg/m3 is approximate.		
	CAL PEL	PEL	205 mg/m3 50 ppm
	CAL PEL	STEL	410 mg/m3 100 ppm
Toluene	ACGIH	TWA	20 ppm
	Further information: visual impair: Visual impairment; female repro: Female reproductive; pregnancy loss: Pregnancy loss; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A4: Not classifiable as a human carcinogen		
	OSHA Z-1		See Further information
Further information: (2): See Table Z-2			
	OSHA Z-2	TWA	200 ppm
Further information: Z37.12-1967			

	OSHA Z-2	CEIL	300 ppm
Further information: Z37.12-1967			
	OSHA Z-2	Peak	500 ppm
Further information: Z37.12-1967			

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Toluene	108-88-3	Toluene	In blood	Prior to last shift of workweek	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g Creatinine	ACGIH BEI

Exposure controls

Engineering controls: Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Protective measures: Facilities storing or utilizing this material should be equipped with an eyewash facility.

Individual protection measures

Eye/face protection: Use safety glasses with side shields (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

Skin protection

Hand protection: Cotton or canvas 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 under normal operating conditions. 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) organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Granular solid
Color	colourless
Odor	Acrylic odor
Odor Threshold	No data available
pH	Not applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not Applicable
Flammability (solid, gas)	May form combustible dust concentrations in air during processing, handling or other means.
Lower explosion limit	Not applicable
Upper explosion limit	Not Applicable
Vapor Pressure	Not Applicable
Relative Vapor Density (air = 1)	Not Applicable
Relative Density (water = 1)	No data available
Water solubility	practically insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	Not Applicable
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Liquid Density	0.66 g/cm ³ Bulk density
Molecular weight	No data available
Percent volatility	1.00 % maximum

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.

This material is considered stable.

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.

Acute toxicity

Acute oral toxicity

LD50, Rat, > 5,000.000000 mg/kg

Acute dermal toxicity

LD50, Rabbit, >3,000.000000 mg/kg

Acute inhalation toxicity

Product test data not available. Refer to component data.

Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation

May cause slight eye irritation.

May cause slight corneal injury.

Sensitization

Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Single Exposure)

Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Product test data not available. Refer to component data.

Carcinogenicity

Product test data not available. Refer to component data.

Teratogenicity

Product test data not available. Refer to component data.

Reproductive toxicity

Product test data not available. Refer to component data.

Mutagenicity

Product test data not available. Refer to component data.

Aspiration Hazard

Product test data not available. Refer to component data.

COMPONENTS INFLUENCING TOXICOLOGY:

Acrylic polymer(s)

Acute inhalation toxicity

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)

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

Specific Target Organ Systemic Toxicity (Repeated Exposure)

No relevant data found.

Carcinogenicity

No relevant data found.

Teratogenicity

No relevant data found.

Reproductive toxicity

No relevant data found.

Mutagenicity

No relevant data found.

Aspiration Hazard

No aspiration toxicity classification

Ethyl acrylate

Acute inhalation toxicity

LC50, Rat, 4 Hour, vapour, <9.137 mg/l OECD Test Guideline 403

Sensitization

Skin contact may cause an allergic skin reaction.

Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

May cause respiratory irritation.

Route of Exposure: Inhalation

Target Organs: Respiratory Tract

Specific Target Organ Systemic Toxicity (Repeated Exposure)

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

Nasal tissue.

Carcinogenicity

An increased incidence of stomach tumors was seen in animals given daily oral doses of ethyl acrylate. Tumors were judged to result from irritation. Long-term studies by more relevant routes of exposure (skin, inhalation) were negative. Workers exposed during 1933-1945 to very high vapor concentrations of ethyl acrylate and methyl methacrylate, and to volatile by-products of the ethyl acrylate/methyl methacrylate polymerization process, showed an increase in deaths due to colorectal cancer. Such increases were not observed in workers exposed after that time. Although suggestive, these findings do not establish a causal relationship between high level exposure to these acrylates and colorectal cancer.

Teratogenicity

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

Reproductive toxicity

For similar material(s): In animal studies, did not interfere with reproduction.

Mutagenicity

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

Aspiration Hazard

May be harmful if swallowed and enters airways.

Methyl methacrylate

Acute inhalation toxicity

LC50, Rat, 4 Hour, vapour, 29.8 mg/l

Sensitization

Has caused allergic skin reactions in humans.
Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

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

Specific Target Organ Systemic Toxicity (Repeated Exposure)

In humans, effects have been reported on the following organs:
Respiratory tract.
In animals, effects have been reported on the following organs:
kidney
Liver
Gastrointestinal tract
nervous system
lung

Carcinogenicity

Did not cause cancer in laboratory animals. Workers exposed during 1933-1945 to very high vapor concentrations of ethyl acrylate and methyl methacrylate, and to volatile by-products of

the ethyl acrylate/methyl methacrylate polymerization process, showed an increase in deaths due to colorectal cancer. Such increases were not observed in workers exposed after that time. Although suggestive, these findings do not establish a causal relationship between high level exposure to these acrylates and colorectal cancer.

Teratogenicity

MMA did not cause birth defects, malformations, or fetal toxicity in pregnant rats inhaling concentrations up to 2028 ppm. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. The weight of evidence indicates that methyl methacrylate does not cause birth defects in animals.

Reproductive toxicity

In animal studies, did not interfere with fertility.

Mutagenicity

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

Aspiration Hazard

May be harmful if swallowed and enters airways.

Toluene

Acute inhalation toxicity

Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Alcohol consumption and exertion may increase the adverse effects of toluene. LC50, Rat, male, 4 Hour, vapour, 25.7 mg/l

LC50, Rat, female, 4 Hour, vapour, 30 mg/l

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)

May cause drowsiness or dizziness.
Route of Exposure: Inhalation
Target Organs: Central nervous system

Specific Target Organ Systemic Toxicity (Repeated Exposure)

In animals, effects have been reported on the following organs:
central nervous system (CNS) effects
Excessive exposure may cause neurologic signs and symptoms.
Toluene has caused hearing loss in laboratory animals upon exposure to high concentrations. Intentional misuse by deliberately inhaling toluene may cause nervous system damage, hearing loss, liver and kidney effects and death.

Carcinogenicity

Did not cause cancer in laboratory animals.

Teratogenicity

In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation.

Reproductive toxicity

In animal studies, did not interfere with reproduction.

Mutagenicity

The majority and most reliable of the many genetic toxicity studies on toluene, both in vitro and in animals, indicate that it is not genetically toxic.

Aspiration Hazard

May be fatal if swallowed and enters airways.

Carcinogenicity**Component**

Ethyl acrylate

List

IARC

Classification

Group 2B: Possibly carcinogenic to humans

12. ECOLOGICAL INFORMATION

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

General Information

There is no data available for this product.

Toxicity**Acrylic polymer(s)****Acute toxicity to fish**

No relevant data found.

Ethyl acrylate**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, Cyprinodon variegatus (sheepshead minnow), flow-through test, 96 Hour, 2.0 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, 7.9 mg/l

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth inhibition (cell density reduction), 4.5 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

EC10, activated sludge, Respiration inhibition, 72 Hour, > 100 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), flow-through test, 21 d, number of offspring, 0.19 mg/l

Methyl methacrylate**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, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, > 79 mg/l, OECD Test Guideline 203 or Equivalent
LC50, Lepomis macrochirus (Bluegill sunfish), flow-through test, 96 Hour, 233 mg/l, EPA-660-75-009

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna, flow-through test, 48 Hour, 69 mg/l

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate, > 110 mg/l, OECD Test Guideline 201
NOEC, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, 110 mg/l, OECD Test Guideline 201

Toxicity to bacteria

EC50, 14 d, > 100 mg/l

Chronic toxicity to fish

NOEC, Danio rerio (zebra fish), 35 d, 9.4 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 21 d, number of offspring, 37 mg/l

Toluene

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, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 5.8 mg/l

Acute toxicity to aquatic invertebrates

LC50, water flea Ceriodaphnia dubia, semi-static test, 48 Hour, 3.78 mg/l

Acute toxicity to algae/aquatic plants

EbC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Biomass, 12.5 mg/l, OECD Test Guideline 201

Toxicity to bacteria

IC50, Bacteria, 16 Hour, 29 mg/l

Chronic toxicity to fish

NOEC, Fish, flow-through test, 40 d, growth, 1.4 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Ceriodaphnia dubia (water flea), 7 d, number of offspring, 0.74 mg/l

Toxicity to soil-dwelling organisms

LC50, Eisenia fetida (earthworms), 150 - 280 mg/kg

Persistence and degradability

Acrylic polymer(s)

Biodegradability: No relevant data found.

Ethyl acrylate

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).

10-day Window: Pass

Biodegradation: 80 - 90 %

Exposure time: 28 d

Method: OECD Test Guideline 310 or Equivalent

10-day Window: Not applicable

Biodegradation: > 60 %

Exposure time: 11 d

Method: OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 1.92 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	18 %
10 d	27 %
20 d	50 %

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 0.984 d

Method: Estimated.

Methyl methacrylate

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

10-day Window: Not applicable

Biodegradation: 94 %

Exposure time: 14 d

Method: OECD Test Guideline 301C or Equivalent

10-day Window: Not applicable

Biodegradation: > 95 %

Exposure time: 28 d

Method: OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 1.02 mg/mg

Physico-chemical removability

Rapidly hydrolyzed under alkaline conditions.

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 6.997 d

Method: Estimated.

Toluene

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

10-day Window: Not applicable

Biodegradation: 100 %

Exposure time: 14 d

Method: OECD Test Guideline 301C or Equivalent

Theoretical Oxygen Demand: 3.13 mg/mg Calculated.

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 2 d

Method: Estimated.

Bioaccumulative potential

Acrylic polymer(s)

Bioaccumulation: No relevant data found.

Ethyl acrylate

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

Partition coefficient: n-octanol/water(log Pow): 1.18 OECD Test Guideline 107 or Equivalent

Bioconcentration factor (BCF): 2 Fish Estimated.

Methyl methacrylate

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

Partition coefficient: n-octanol/water(log Pow): 1.38 Measured

Toluene

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

Partition coefficient: n-octanol/water(log Pow): 2.73 Measured

Bioconcentration factor (BCF): 13.2 - 90 Fish Measured

Mobility in soil

Acrylic polymer(s)

No relevant data found.

Ethyl acrylate

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

Partition coefficient (Koc): 12 Estimated.

Methyl methacrylate

Potential for mobility in soil is high (Koc between 50 and 150).

Partition coefficient (Koc): 87 Estimated.

Toluene

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

Partition coefficient (Koc): 37 - 178 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: For disposal, incinerate this material at a facility that complies 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):

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

Combustible dust
Reproductive toxicity

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.

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

	CASRN	RQ (RCRA Code)
Toluene	108-88-3	1000 lbs RQ
Toluene	108-88-3	100 lbs RQ (F005)

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 Ethyl acrylate, Ethylbenzene, which is/are known to the State of California to cause cancer, and Toluene, which is/are known to the State of California to cause 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*	1	0

* = Chronic Effects (See Hazards Identification)

Revision

Identification Number: 10004502 / A001 / Issue Date: 07/30/2019 / Version: 5.4

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)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
CEIL	Acceptable ceiling concentration
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-2	USA. Occupational Exposure Limits (OSHA) - Table Z-2
Peak	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
PEL	Permissible exposure limit
STEL	Short term exposure limit
TWA	8-hour, time-weighted average

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; 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; 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.

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.

US

PARALOID™ B-44 100% Resin



WARNING

Contains: Acrylic polymer(s) / Trade Secret; Ethyl acrylate / 140-88-5; Methyl methacrylate / 80-62-6; Toluene / 108-88-3

Hazards: If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air. Suspected of damaging fertility or the unborn child. **Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/ protective clothing/ eye protection/ face protection. **Response:** IF exposed or concerned: Get medical advice/ attention. **Storage:** Store locked up. **Disposal:** Dispose of contents/ container to an approved waste disposal plant. **Supplemental information** If converted to small particles during further handling, processing, or by other means, may form combustible dust concentrations in air.

Refer to the Safety Data Sheet before use.

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
2030 DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact:
CHEMTREC +1 800-424-9300
Local Emergency Contact:
800-424-9300

Customer Information Number:
800-258-2436



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