



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY\*

**Product name:** PARALOID™ AU-946 Resin

**Issue Date:** 02/25/2020

**Print Date:** 02/27/2020

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™ AU-946 Resin

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Coatings product

### COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY\*  
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 29 CFR 1910.1200

Flammable liquids - Category 3

Skin sensitisation - Category 1

Reproductive toxicity - Category 2

Specific target organ toxicity - single exposure - Category 3

### Label elements

#### Hazard pictograms



Signal word: **WARNING!**

**Hazards**

Flammable liquid and vapour.  
May cause an allergic skin reaction.  
May cause drowsiness or dizziness.  
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.  
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
Keep container tightly closed.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ ventilating/ lighting equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
IF exposed or concerned: Get medical advice/ attention.  
If skin irritation or rash occurs: Get medical advice/ attention.  
Wash contaminated clothing before reuse.  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage**

Store in a well-ventilated place. Keep container tightly closed.  
Store in a well-ventilated place. Keep cool.  
Store locked up.

**Disposal**

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

**Other hazards**

No data available

---

---

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

---

---

**Chemical nature:** Acrylic polymer solvent based  
This product is a mixture.

<b>Component</b>	<b>CASRN</b>	<b>Concentration</b>
------------------	--------------	----------------------

---

Acrylic polymer(s)	Not hazardous	>= 66.0 - 68.0 %
Individual residual monomers	Not required	<= 0.6 %
Methyl amyl ketone	110-43-0	>= 32.0 - 34.0 %
Butyl methacrylate	97-88-1	< 0.4 %
Hydroxyethyl Acrylate	818-61-1	< 0.2 %
Toluene	108-88-3	< 1.0 %

---

#### 4. FIRST AID MEASURES

---

**Description of first aid measures**

**Inhalation:** Move to fresh air. Give artificial respiration if breathing has stopped. In case of shortness of breath, give oxygen. Consult a physician.

**Skin contact:** Remove contaminated clothing. Wash off with soap and plenty of water. If symptoms persist, call a physician. Do not take clothing home to be laundered.

**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 vomiting occurs spontaneously, keep airway clear. 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:** Massive ingestion of methyl amyl ketone may cause gastric irritation with absorption leading to metabolic acidosis with an anion gap.

---

#### 5. FIREFIGHTING MEASURES

---

**Extinguishing media**

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide..

**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:** Vapors can travel to a source of ignition and flash back.. Heated material can form flammable or explosive vapors with air.. Closed containers

may rupture via pressure build-up when exposed to fire or extreme heat.. During a fire, irritating and highly toxic gases and/or fumes may be generated during combustion or decomposition..

### Advice for firefighters

**Fire Fighting Procedures:** EXPLOSION HAZARD. Fight advanced fires from a protected location.. Cool closed containers exposed to fire with water spray.. Remain upwind.. Avoid breathing smoke..

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus..

---

## 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:** WARNING: KEEP SPILLS AND CLEANING RUNOFFS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER.

**Methods and materials for containment and cleaning up:** Eliminate all ignition sources. Evacuate personnel to safe areas. Ventilate the area. Floor may be slippery; use care to avoid falling. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up or vacuum up spillage and collect in suitable container for disposal. No sparking tools should be used. Avoid breathing vapor. NOTE: Spills on porous surfaces can contaminate groundwater.

---

## 7. HANDLING AND STORAGE

---

**Precautions for safe handling:** Vapors can be evolved when material is heated during processing operations. See SECTION 8, Exposure Controls/Personal Protection, for types of ventilation required. Use non-sparking tools and grounding cables when transferring. Wash after handling and shower at end of work period. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied.

**Conditions for safe storage:** Avoid temperature extremes during storage; ambient temperature preferred. Store away from excessive heat (e.g. steampipes, radiators), from sources of ignition and from reactive materials. Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Store out of direct sunlight in a cool place. Keep containers tightly closed in a cool, well-ventilated place. Avoid all ignition sources. Ground all metal containers during storage and handling.

**Storage class according to TRGS 510:** Flammable liquids

## 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
Methyl amyl ketone	ACGIH	TWA	50 ppm
	Further information: eye irr: Eye irritation; skin irr: Skin irritation		
	OSHA Z-1	TWA	465 mg/m3 100 ppm
	Further information: (b): The value in mg/m3 is approximate.		
Butyl methacrylate	Dow IHG	TWA	50 ppm
	Dow IHG	STEL	75 ppm
Hydroxyethyl Acrylate	Dow IHG	TWA	0.5 ppm
	Further information: SKIN, DSEN: Absorbed via Skin, Skin Sensitizer		
	Dow IHG	STEL	1.5 ppm
	Further information: SKIN, DSEN: Absorbed via Skin, Skin Sensitizer		
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 explosion-proof local exhaust ventilation with a minimum capture velocity of 100 ft/min (0.5 m/sec) at the point of vapor 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 and a safety shower.

#### Individual protection measures

**Eye/face protection:** Chemical resistant goggles must be worn. Eye protection worn must be compatible with respiratory protection system employed.

#### Skin protection

**Hand protection:** Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation.

(Gloves of other chemically resistant materials may not provide adequate protection):  
Nitrile rubber butyl-rubber Solvent-resistant gloves  
Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

**Other protection:** Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact. Where splashing is possible, full chemically resistant protective clothing (e.g. acid suit) and boots are required.

**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. Up to 10 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. Up to 1000 ppm organic vapor: Wear a properly fitted NIOSH approved (or equivalent) full-facepiece, air-purifying respirator, OR full-facepiece, airline respirator in the pressure demand mode. Above 1000 ppm organic vapor or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-facepiece, airline respirator in the pressure demand mode with emergency escape provision. 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	liquid
Color	Pale yellow clear
Odor	Fruity odor
Odor Threshold	No data available
pH	Not Applicable
Melting point/range	-35.00 °C ( -31.00 °F) Methyl n-amyl ketone
Freezing point	No data available
Boiling point (760 mmHg)	151.00 °C ( 303.80 °F) Methyl n-amyl ketone
Flash point	<b>closed cup</b> 26.60 °C ( 79.88 °F) <i>Tag closed cup</i>

Evaporation Rate (Butyl Acetate = 1)	0.40 Methyl amyl ketone
Flammability (solid, gas)	Not Applicable
Lower explosion limit	1.10 % vol Methyl amyl ketone
Upper explosion limit	7.90 % vol Methyl amyl ketone
Vapor Pressure	2.1000000 mmHg at 20.00 °C (68.00 °F) Methyl amyl ketone
Relative Vapor Density (air = 1)	3.9300 at 151.00 °C (303.80 °F) Methyl amyl ketone
Relative Density (water = 1)	1.0300
Water solubility	practically insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	393.00 °C (739.40 °F) Methyl amyl ketone
Decomposition temperature	No data available
Dynamic Viscosity	6,000.000 - 11,500.000 mPa.s maximum
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Molecular weight	No data available
Percent volatility	32.00 - 34.00 %

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:** This material is considered stable. However, avoid contact with ignition sources (e.g. sparks, open flame, heated surfaces).  
Product will not undergo polymerization.

**Conditions to avoid:** No data available

**Incompatible materials:** Avoid contact with the following: Strong oxidizing agents Strong acids and strong bases

**Hazardous decomposition products:** There are no known hazardous decomposition products for this material..

---

---

## 11. TOXICOLOGICAL INFORMATION

---

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

**Information on likely routes of exposure**

Inhalation, Skin contact, Eye contact.

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

**Acute oral toxicity**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

Single dose oral LD50 has not been determined.

**Methyl amyl ketone**

LD50, Rat, 1,670 mg/kg

**Butyl methacrylate**

LD50, Rat, male and female, > 2,000 mg/kg OECD Test Guideline 401 No deaths occurred at this concentration.

**Hydroxyethyl Acrylate**

LD50, Rat, male and female, 960.5 mg/kg

**Toluene**

LD50, Rat, 5,580 mg/kg

**Acute dermal toxicity**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

The dermal LD50 has not been determined.

**Methyl amyl ketone**

LD50, Rat, > 2,000 mg/kg No deaths occurred at this concentration.

**Butyl methacrylate**

LD50, Rabbit, male and female, > 2,000 mg/kg OECD Test Guideline 402

**Hydroxyethyl Acrylate**

LD50, Rat, male and female, > 1,000 mg/kg No deaths occurred at this concentration.

**Toluene**

LD50, Rabbit, 12,267 mg/kg

**Acute inhalation toxicity**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

The LC50 has not been determined.

**Methyl amyl ketone**



Vapor concentrations are attainable which could be hazardous on single exposure. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

Maximum attainable concentration. LC50, Rat, 4 Hour, vapour, > 16.7 mg/l

**Butyl methacrylate**

Prolonged exposure is not expected to cause adverse effects. Vapor may cause irritation of the upper respiratory tract (nose and throat).

LC50, Rat, male and female, 4 Hour, dust/mist, 29 mg/l OECD Test Guideline 403

**Hydroxyethyl Acrylate**

The LC50 has not been determined.

**Toluene**

LC50, Rat, male, 4 Hour, vapour, 25.7 mg/l

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

**Skin corrosion/irritation**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

Essentially nonirritating to skin.

**Methyl amyl ketone**

Prolonged contact may cause skin irritation with local redness.

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

**Butyl methacrylate**

Brief contact may cause moderate skin irritation with local redness.

**Hydroxyethyl Acrylate**

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

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

**Toluene**

Brief contact may cause slight skin irritation with local redness.

Prolonged contact may cause moderate skin irritation with local redness.

May cause drying and flaking of the skin.

**Serious eye damage/eye irritation**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

Essentially nonirritating to eyes.

**Methyl amyl ketone**

May cause moderate eye irritation.

May cause slight corneal injury.

Vapor may cause eye irritation experienced as mild discomfort and redness.

**Butyl methacrylate**

May cause slight eye irritation.

Corneal injury is unlikely.

**Hydroxyethyl Acrylate**

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.

**Toluene**

May cause slight eye irritation.

May cause slight temporary corneal injury.

Vapor may cause eye irritation experienced as mild discomfort and redness.

Vapor may cause lacrimation (tears).

**Sensitization**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Methyl amyl ketone**

Did not cause allergic skin reactions when tested in humans.

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

Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

**Butyl methacrylate**

Skin contact may cause an allergic skin reaction.

For respiratory sensitization:

No relevant data found.

**Hydroxyethyl Acrylate**

Has caused allergic skin reactions in humans.

Has caused allergic skin reactions when tested in guinea pigs.

Has demonstrated the potential for contact allergy in mice.

Individuals having an allergic skin reaction to this product may have an allergic skin reaction to similar material(s).

Hydroxyethyl methacrylate.  
2-Hydroxypropyl methacrylate.  
2-Hydroxyethyl acrylate.

For respiratory sensitization:  
No relevant data found.

**Toluene**

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)**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

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

**Methyl amyl ketone**

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

**Butyl methacrylate**

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

**Hydroxyethyl Acrylate**

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

**Toluene**

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

**Aspiration Hazard**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

No aspiration toxicity classification

**Methyl amyl ketone**

Aspiration into the lungs may occur during ingestion or vomiting, resulting in rapid absorption and injury to other body systems.

**Butyl methacrylate**

Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

**Hydroxyethyl Acrylate**

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

**Toluene**

May be fatal if swallowed and enters airways.

**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)**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

No relevant data found.

**Methyl amyl ketone**

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

Central nervous system.

Kidney.

Liver.

**Butyl methacrylate**

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

**Hydroxyethyl Acrylate**

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

**Toluene**

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**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

No relevant data found.

**Methyl amyl ketone**

No relevant data found.

**Butyl methacrylate**

For similar material(s): Did not cause cancer in laboratory animals.

**Hydroxyethyl Acrylate**

Did not cause cancer in laboratory animals.

**Toluene**

Did not cause cancer in laboratory animals.

**Teratogenicity**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

No relevant data found.

**Methyl amyl ketone**

No relevant data found.

**Butyl methacrylate**

Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

**Hydroxyethyl Acrylate**

Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

**Toluene**

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**

Product test data not available.

**Information for components:**

**Acrylic polymer(s)**

No relevant data found.

**Methyl amyl ketone**

Screening studies suggest that this material does not affect reproduction.

**Butyl methacrylate**

In animal studies, a similar material has been shown not to interfere with reproduction.

**Hydroxyethyl Acrylate**

Based on analogy. In animal studies, did not interfere with reproduction.

**Toluene**

In animal studies, did not interfere with reproduction.

**Mutagenicity**

Product test data not available.

**Information for components:****Acrylic polymer(s)**

No relevant data found.

**Methyl amyl ketone**

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

**Butyl methacrylate**

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

**Hydroxyethyl Acrylate**

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

**Toluene**

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.

---

---

**12. ECOLOGICAL INFORMATION**

---

---

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

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

No relevant data found.

**Methyl amyl ketone****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, Pimephales promelas (fathead minnow), static test, 96 Hour, 131 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna, semi-static test, 48 Hour, > 90.1 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, Algae (Selenastrum capricornutum), 72 Hour, 98.2 mg/l, OECD Test Guideline 201  
NOEC, Algae (Selenastrum capricornutum), 72 Hour, 42.7 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

EC50, Pseudomonas putida, Static, 16 Hour, Growth inhibition, 690 mg/l, Other guidelines

**Butyl methacrylate****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, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 11 mg/l, OECD Test Guideline 203

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

LC50, Oryzias latipes (Japanese medaka), semi-static test, 96 Hour, 5.57 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 48 Hour, 25.4 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (algae), static test, 72 Hour, Growth rate, 31.2 mg/l, OECD Test Guideline 201

NOEC, Pseudokirchneriella subcapitata (algae), static test, 72 Hour, Growth rate, 24.8 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

EC10, Pseudomonas putida, 18 Hour, 253.6 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia (water flea), semi-static test, 21 d, 1.1 mg/l

**Hydroxyethyl 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, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 4.8 mg/l, OECD Test Guideline 203 or Equivalent

LC50, Oryzias latipes (Orange-red killifish), static test, 96 Hour, 6.5 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), 48 Hour, 5.2 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 6 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC10, Bacteria (active sludge), 72 Hour, Respiration rates., > 100 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna, semi-static test, 21 d, number of offspring, 0.48 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.

**Methyl amyl ketone**

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

10-day Window: Pass

**Biodegradation:** 69 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 310 or Equivalent

**Theoretical Oxygen Demand:** 2.80 mg/mg

**Biological oxygen demand (BOD)**

Incubation Time	BOD
10 d	17.8 %

**Photodegradation**

**Atmospheric half-life:** 16 Hour

**Method:** Estimated.

**Butyl methacrylate**

**Biodegradability:** 10-day Window: Not applicable

**Biodegradation:** 88 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301C

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

**Hydroxyethyl Acrylate**

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

10-day Window: Pass

**Biodegradation:** 79 %



**Exposure time:** 28 d  
**Method:** OECD Test Guideline 301B or Equivalent

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	22 %
10 d	33 %
20 d	47 %

**Physico-chemical removability**

Rapidly hydrolyzed under alkaline conditions.

**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.

**Methyl amyl ketone**

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

**Partition coefficient: n-octanol/water(log Pow):** 1.98 Measured

**Butyl methacrylate**

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

**Partition coefficient: n-octanol/water(log Pow):** 3 at 25 °C Estimated.

**Bioconcentration factor (BCF):** 70 Fish Calculated.

**Hydroxyethyl Acrylate**

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

**Partition coefficient: n-octanol/water(log Pow):** -0.21 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.

**Methyl amyl ketone**

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

**Partition coefficient (Koc):** 24 - 60 Estimated.**Butyl methacrylate**

For similar material(s):

Potential for mobility in soil is low (Koc between 500 and 2000).

**Partition coefficient (Koc):** 2760 Estimated.**Hydroxyethyl Acrylate**

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

**Partition coefficient (Koc):** 1 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:** Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.

(See 40 CFR 268)

**Contaminated packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

---

**14. TRANSPORT INFORMATION**

---

**DOT**

<b>Proper shipping name</b>	Resin solution
<b>UN number</b>	UN 1866
<b>Class</b>	3
<b>Packing group</b>	III

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

<b>Proper shipping name</b>	RESIN SOLUTION
<b>UN number</b>	UN 1866
<b>Class</b>	3
<b>Packing group</b>	III
<b>Marine pollutant</b>	No
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	Consult IMO regulations before transporting ocean bulk

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

<b>Proper shipping name</b>	Resin solution
<b>UN number</b>	UN 1866
<b>Class</b>	3
<b>Packing group</b>	III

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**

Flammable (gases, aerosols, liquids, or solids)  
Respiratory or skin sensitisation  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)

**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.

**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 Styrene, 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](http://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
2	3	0

**Revision**

Identification Number: 10077824 / 1001 / Issue Date: 02/25/2020 / Version: 4.0

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

**Legend**

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
CEIL	Acceptable ceiling concentration
Dow IHG	Dow Industrial Hygiene Guideline
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
STEL	Short term exposure limit
TWA	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