



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY*

Product name: PARALOID™ AU-608TBZ Resin

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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. IDENTIFICATION

Product name: PARALOID™ AU-608TBZ Resin

Recommended use of the chemical and restrictions on use

Identified uses: This product is used in coatings, textiles, binders and adhesives.

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:

215-592-3000
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

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Flammable liquids - Category 2

Skin sensitisation - Category 1

Reproductive toxicity - Category 2

Specific target organ toxicity - single exposure - Category 3

Label elements

Hazard pictograms



Signal word: **DANGER!**

Hazards

Highly flammable liquid and vapour.
May cause an allergic skin reaction.
May cause respiratory irritation.
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 should not be allowed out of the workplace.
Wear protective gloves/ eye protection/ face protection.
Use personal protective equipment as required.

Response

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician 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 for extinction.

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

This product is a mixture.

Component	CASRN	Concentration
Acrylic polymer(s)	Nonhazardous	>= 57.0 - 60.0 %
Individual residual monomers	Not Required	< 0.95 %
t-Butyl acetate	540-88-5	>= 40.0 - 43.0 %
Toluene	108-88-3	< 1.0 %
Butyl methacrylate	97-88-1	< 0.75 %
Hydroxyethyl Acrylate	818-61-1	< 0.2 %

4. FIRST AID MEASURES

Description of first aid measures

Inhalation: Move to fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult, give oxygen. Get prompt medical attention.

Skin contact: Remove contaminated clothing. Wash affected skin areas thoroughly with soap and water. Get prompt medical attention. Wash contaminated clothing before re-use. Do not take clothing home to be laundered.

Eye contact: IMMEDIATELY flush eyes with a large amount of water for at least 15 minutes. Get prompt medical attention.

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

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 the following extinguishing media when fighting fires involving this material: polar solvent (alcohol) foam Carbon dioxide (CO₂) Dry chemical Water spray

Unsuitable extinguishing media: No data available

Special hazards arising from the substance or mixture

Hazardous combustion products: Combustion generates toxic fumes of the following: Carbon oxides

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.

Advice for firefighters

Fire Fighting Procedures: Move containers promptly out of fire zone. If removal is impossible, cool containers with water spray. Remain upwind. Avoid breathing smoke. Contain run-off.

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: Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up: Evacuate personnel to safe areas. Eliminate all ignition sources including those beyond the immediate spill area. Ventilate the area. Avoid breathing vapor. Floor may be slippery; use care to avoid falling. Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

Precautions for safe handling: Provide sufficient air exchange and/or exhaust in work rooms. Avoid exceeding the given occupational exposure limits (see section 8). In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin and eyes. Do not breathe vapours or spray mist. Wear personal protective equipment. For personal protection see section 8. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all MSDS 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. Ground all metal containers during storage and handling. Keep away from direct sunlight. Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Keep container tightly closed when not in use. Avoid all ignition sources. Store in a cool, dry, well ventilated place.

Other data: Vapors can be evolved when material is heated during processing operations. See SECTION 8, Exposure Controls/Personal Protection, for types of ventilation required. Ground all containers when transferring material. Wash after handling and shower at end of work period. Use

non-sparking tools and grounding cables when transferring. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all MSDS and label warnings even after container is emptied. Residual vapors in empty containers may explode on ignition. DO NOT cut, drill, grind or weld on or near container. Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations. Dispose empty container in a sanitary landfill or by incineration as allowed by state and local authorities.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
t-Butyl acetate	Dow IHG	TWA	75 ppm
	Dow IHG	STEL	150 ppm
	ACGIH	TWA	50 ppm
	OSHA Z-1	TWA	950 mg/m3 200 ppm
	NIOSH REL	TWA	950 mg/m3 200 ppm
	CAL PEL	PEL	950 mg/m3 200 ppm
	ACGIH	STEL	150 ppm
Toluene	ACGIH	TWA	20 ppm
	OSHA Z-2	TWA	200 ppm
	ACGIH	TWA	BEI
	OSHA Z-2	CEIL	300 ppm
	OSHA Z-2	Peak	500 ppm
	CAL PEL	PEL	37 mg/m3 10 ppm
	CAL PEL	C	500 ppm
Butyl methacrylate	CAL PEL	STEL	560 mg/m3 150 ppm
	Dow IHG	TWA	50 ppm
	Dow IHG	STEL	75 ppm
Hydroxyethyl Acrylate	Dow IHG	TWA	0.5 ppm
	Dow IHG	TWA	SKIN, DSEN
	Dow IHG	STEL	1.5 ppm
	Dow IHG	STEL	SKIN, DSEN

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 and a safety shower.

Individual protection measures

Eye/face protection: Use chemical splash goggles (ANSI Z87.1 or approved equivalent).

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): Norfoil (Trademark of Siebe North, Inc.) Polyvinyl alcohol 4H Glove (Trademark of Safety 4 A/S of Denmark) 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.

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 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	Clear to hazy liquid
Color	Pale yellow
Odor	Fruity odor Sweet odor
Odor Threshold	No data available
pH	Not applicable
Melting point/range	-62 °C (-80 °F) Solvent
Freezing point	No data available
Boiling point (760 mmHg)	approximately 98 °C (208 °F)
Flash point	16 °C (61 °F) <i>Tagliabue Closed Cup</i>
Evaporation Rate (Butyl Acetate = 1)	2.8 Solvent
Flammability (solid, gas)	Not Applicable
Lower explosion limit	1.26 % vol Solvent
Upper explosion limit	6.88 % vol Solvent
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	>1 solvent-like
Relative Density (water = 1)	1.014
Water solubility	practically insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	517.8 °C (964.0 °F) Solvent
Decomposition temperature	No data available
Dynamic Viscosity	3,000 - 7,000 mPa.s
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Molecular weight	No data available
Percent volatility	40 - 43 %

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 acids, alkalies and strong oxidizing agents.

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

Product test data not available. Refer to component data.

Acute dermal toxicity

Product test data not available. Refer to component data.

Acute inhalation toxicity

Product test data not available. Refer to component data.

Skin corrosion/irritation

Product test data not available. Refer to component data.

Serious eye damage/eye irritation

Product test data not available. Refer to component data.

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.

Additional information

No toxicity data are available for this material.

The information shown in SECTION 3, Hazards Identification, is based on to present in this material.

COMPONENTS INFLUENCING TOXICOLOGY:

Acrylic polymer(s)

Acute oral toxicity

Single dose oral LD50 has not been determined.

Acute dermal toxicity

The dermal LD50 has not been determined.

Acute inhalation toxicity

The LC50 has not been determined.

t-Butyl acetate

Acute oral toxicity

LD50, Rat, 4,500 mg/kg

Acute dermal toxicity

LD50, Rabbit, > 2,000 mg/kg

Acute inhalation toxicity

Excessive exposure may cause irritation to upper respiratory tract (nose and throat). May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

LC50, Rat, male and female, 6 Hour, vapour, 4211 ppm

LC50, Rat, 4 Hour, dust/mist, 1.5 mg/l

Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.

Prolonged contact may cause skin irritation with local redness.

May cause drying and flaking of the skin.

Serious eye damage/eye irritation

May cause slight corneal injury.

Corneal injury is unlikely.

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

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

Specific Target Organ Systemic Toxicity (Repeated Exposure)

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

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 reproduction.

Mutagenicity

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

Aspiration Hazard

May be harmful if swallowed and enters airways.

Toluene

Acute oral toxicity

LD50, Rat, 5,580 mg/kg

Acute dermal toxicity

LD50, Rabbit, 12,267 mg/kg

Acute inhalation toxicity

LC50, Rat, male and female, 4 Hour, vapour, > 20 mg/l

Skin corrosion/irritation

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

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

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.

Butyl methacrylate

Acute oral toxicity

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

Acute dermal toxicity

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

Acute inhalation toxicity

No adverse effects are anticipated from single exposure to mist.

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

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.
Prolonged contact may cause skin irritation with local redness.

May cause more severe response if skin is abraded (scratched or cut).

Serious eye damage/eye irritation

May cause slight eye irritation.

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

Sensitization

Skin contact may cause an allergic skin reaction.

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)

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

Carcinogenicity

Animal testing did not show any carcinogenic effects.

Teratogenicity

Has caused birth defects in laboratory animals. Has been toxic to the fetus in laboratory animal tests.

Reproductive toxicity

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

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.

Hydroxyethyl Acrylate

Acute oral toxicity

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

Acute dermal toxicity

LD50, Rat, male and female, > 1,000 mg/kg

Acute inhalation toxicity

The LC50 has not been determined.

Skin corrosion/irritation

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.

Serious eye damage/eye irritation

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.

Sensitization

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.

Specific Target Organ Systemic Toxicity (Single Exposure)

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

Specific Target Organ Systemic Toxicity (Repeated Exposure)

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

Carcinogenicity

Did not cause cancer in laboratory animals.

Teratogenicity

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

Reproductive toxicity

Based on analogy. 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 negative.

Aspiration Hazard

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

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.

t-Butyl acetate

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, Rainbow trout (*Oncorhynchus mykiss*), Static, 96 Hour, 240 mg/l

Acute toxicity to aquatic invertebrates

EC50, water flea *Daphnia magna*, Static, 48 Hour, 350 mg/l

Acute toxicity to algae/aquatic plants

EC50, *Pseudokirchneriella subcapitata* (green algae), Static, 96 Hour, Biomass, 64 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

LC50, Fish, flow-through test, 96 Hour, 5.5 mg/l

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), static test, 24 Hour, 7 mg/l, OECD Test Guideline 202

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

NOEC, *Daphnia magna* (Water flea), 21 day, number of offspring, 2 mg/l

Toxicity to soil-dwelling organisms

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

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).

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

LC50, *Oryzias latipes* (Orange-red killifish), semi-static test, 96 Hour, 5.57 mg/l

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 25.4 mg/l

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, 31.2 mg/l

Chronic toxicity to aquatic invertebrates

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

LOEC, Daphnia (water flea), semi-static test, 21 d, 3.35 mg/l

NOEC, Daphnia (water flea), flow-through test, 21 d, 2.6 mg/l

LOEC, Daphnia (water flea), flow-through test, 21 d, 4.9 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

Persistence and degradability

Acrylic polymer(s)

Biodegradability: No relevant data found.

t-Butyl acetate

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

10-day Window: Fail

Biodegradation: 50 %

Exposure time: 28 d

Method: OECD Test Guideline 301D or Equivalent

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)

Sensitizer: OH radicals

Atmospheric half-life: 2 d

Method: Estimated.

Butyl methacrylate

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

10-day Window: Not applicable

Biodegradation: 88 %

Exposure time: 28 d

Method: OECD Test Guideline 301C or Equivalent

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.

Bioaccumulative potential

Acrylic polymer(s)

Bioaccumulation: No relevant data found.

t-Butyl acetate

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

Partition coefficient: n-octanol/water(log Pow): 1.64 OECD Test Guideline 107

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

Butyl methacrylate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.88 Estimated.
Bioconcentration factor (BCF): 70 Calculated.

Hydroxyethyl Acrylate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): -0.21 Measured

Mobility in soil

Acrylic polymer(s)

No relevant data found.

t-Butyl acetate

No relevant data found.

Toluene

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): 37 - 178 Estimated.

Butyl methacrylate

Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient (Koc): 878 Estimated.

Hydroxyethyl Acrylate

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): 1 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Resin solution
UN number	UN 1866
Class	3
Packing group	II
Reportable Quantity	Butyl acetates

Classification for SEA transport (IMO-IMDG):

Proper shipping name	RESIN SOLUTION
UN number	UN 1866
Class	3
Packing group	II
Marine pollutant	No
Transport in bulk	Consult IMO regulations before transporting ocean bulk

according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Resin solution
UN number	UN 1866
Class	3
Packing group	II

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

Fire Hazard
Acute Health Hazard
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 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

Calculated RQ exceeds reasonably attainable upper limit.

Components	CASRN	RQ
t-Butyl acetate	540-88-5	5000 lbs RQ

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 (Proposition 65)

This product contains a component or components known to the state of California to cause birth defects or other reproductive harm:

Components

Toluene

CASRN

108-88-3

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
3*	3	

* = Chronic Effects (See Hazards Identification)

Revision

Identification Number: 101126133 / 1001 / Issue Date: 04/19/2016 / Version: 3.1

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)
BEI	Biological Exposure Indices
C	Ceiling
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
CEIL	Acceptable ceiling concentration
Dow IHG	Dow Industrial Hygiene Guideline
NIOSH REL	USA. NIOSH Recommended Exposure Limits
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
SKIN, DSEN	Absorbed via Skin, Skin Sensitizer
STEL	Short term exposure limit
TWA	Time weighted average

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.