SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY*

Product name: PARALOID™ F-10 Resin Solution

Issue Date: 02/25/2020
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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™ F-10 Resin Solution

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
Carcinogenicity - Category 2
Reproductive toxicity - Category 2
Aspiration hazard - Category 1

Label elements
Hazard pictograms

Signal word: **DANGER!**

Hazards
Flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Suspected of causing cancer.
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.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage
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.

Component	CASRN	Concentration
Acrylic polymer(s)	Not hazardous	>= 39.0 - 41.0 %
Mineral Spirits	8052-41-3	>= 53.0 - 54.0 %
Individual residual monomers	Not required	< 1.0 %

Solvent naphtha, petroleum, heavy arom.	64742-94-5	>= 5.0 - 7.0 %
Naphthalene	91-20-3	<= 0.7 %
Toluene	108-88-3	< 1.0 %
Ethylbenzene	100-41-4	< 0.3 %
1,2,4-Trimethylbenzene	95-63-6	>= 1.0 - < 5.0 %
Nonane	111-84-2	>= 1.0 - < 5.0 %
Butyl methacrylate	97-88-1	< 0.95 %
Butyl acrylate	141-32-2	>= 0.25 - < 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: Do NOT induce vomiting. Drink 1 or 2 glasses of water. IMMEDIATELY see 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: In acute cases of naphtha overexposure or ingestion, patients should be evaluated for signs of respiratory distress.

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.. 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: Move containers promptly out of fire zone. If removal is impossible, cool containers 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: CAUTION: Keep spills and cleaning runoff 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. 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. Store out of direct sunlight in a cool place. Keep tightly closed in a dry, cool and well-ventilated place. Avoid all ignition sources. Ground all metal containers during storage and handling.

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
Mineral Spirits	ACGIH	TWA	100 ppm
	Further information: CNS impair: Central Nervous System impairment; nausea: Nausea; eye dam: Eye damage; kidney dam: Kidney damage; skin dam: Skin damage		
	OSHA Z-1	TWA	2,900 mg/m3 500 ppm
	Further information: (b): The value in mg/m3 is approximate.		
Solvent naphtha, petroleum, heavy arom.	Dow IHG	TWA	100 mg/m3
	Dow IHG	STEL	300 mg/m3
	ACGIH	TWA	200 mg/m3 , total hydrocarbon vapor
	Further information: CNS impair: Central Nervous System impairment; URT irr: Upper Respiratory Tract irritation; skin irr: Skin irritation; P: Application restricted to conditions in which there are neglible aerosol exposures; A3: Confirmed animal carcinogen with unknown relevance to humans; Skin: Danger of cutaneous absorption; varies: varies		
Naphthalene	Dow IHG	TWA	10 ppm
	Further information: SKIN: Absorbed via skin		
	Dow IHG	STEL	15 ppm
	Further information: SKIN: Absorbed via skin		
	ACGIH	TWA	10 ppm
	Further information: hemolytic anemia: Hemolytic anemia; URT irr: Upper Respiratory Tract irritation; cataract: Cataract; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A3: Confirmed animal carcinogen with unknown relevance to humans; Skin: Danger of cutaneous absorption		
	OSHA Z-1	TWA	50 mg/m3 10 ppm
	Further information: (b): The value in mg/m3 is approximate.		
	OSHA P0	TWA	50 mg/m3 10 ppm
	OSHA P0	STEL	75 mg/m3 15 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		
Ethylbenzene	ACGIH	TWA	20 ppm
	Further information: cochlear imp: Cochlear impair; kidney dam (nephropathy): Kidney damage (nephropathy); URT irr: Upper Respiratory Tract irritation; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A3: Confirmed animal carcinogen with unknown relevance to humans		
	OSHA Z-1	TWA	435 mg/m3 100 ppm
	Further information: (b): The value in mg/m3 is approximate.		
	OSHA P0	TWA	435 mg/m3 100 ppm

	OSHA P0	STEL	545 mg/m3 125 ppm
1,2,4-Trimethylbenzene	ACGIH	TWA	25 ppm
	Further information: CNS impair: Central Nervous System impairment; hematologic eff: Hematologic effects; asthma: Asthma		
	CAL PEL	PEL	125 mg/m3 25 ppm
	OSHA P0	TWA	125 mg/m3 25 ppm
Nonane	ACGIH	TWA	200 ppm
	Further information: CNS impair: Central Nervous System impairment		
Butyl methacrylate	Dow IHG	TWA	50 ppm
	Dow IHG	STEL	75 ppm
Butyl acrylate	ACGIH	TWA	2 ppm
	Further information: DSEN: Dermal Sensitization; irritation: Irritation; A4: Not classifiable as a human carcinogen		
	OSHA P0	TWA	55 mg/m3 10 ppm
	CAL PEL	PEL	11 mg/m3 2 ppm

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
Ethylbenzene	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15 g/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 appartus 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	yellow Hazy
Odor	Petroleum odor
Odor Threshold	No data available
pH	Not Applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	157.00 - 203.00 °C (314.60 - 397.40 °F) Mineral spirits
Flash point	**closed cup** 42.00 °C (107.60 °F) *PENSKY MARTENS CLOSED CUP*
Evaporation Rate (Butyl Acetate = 1)	0.10 Mineral spirits
Flammability (solid, gas)	Not Applicable
Lower explosion limit	0.90 % vol Mineral spirits
Upper explosion limit	7.00 % vol Mineral spirits

Vapor Pressure	2.0000000 mmHg at 16.00 °C (60.80 °F) Mineral spirits
Relative Vapor Density (air = 1)	4.9000 Mineral spirits
Relative Density (water = 1)	0.8900
Water solubility	practically insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	254.00 °C (489.20 °F) Mineral spirits
Decomposition temperature	No data available
Dynamic Viscosity	2,800.000 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	58.00 - 62.00 %

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 hazardous 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.

Mineral Spirits
LD50, Rat, male and female, > 5,000 mg/kg OECD 401 or equivalent

Solvent naphtha, petroleum, heavy arom.
LD50, Rat, > 5,000 mg/kg

Naphthalene
LD50, Rat, > 2,000 mg/kg

Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen. Ingestion of naphthalene by humans has caused hemolytic anemia. Toxicity from swallowing may be greater in humans than in animals. In humans, symptoms may include: Confusion. Lethargy. Muscle spasms or twitches. Convulsions. Coma. Lethal Dose, Humans, 5 - 15 grams Estimated.

Toluene
LD50, Rat, 5,580 mg/kg

Ethylbenzene
LD50, Rat, 3,500 mg/kg

1,2,4-Trimethylbenzene
LD50, Rat, > 3,400 mg/kg

Nonane
For similar material(s): LD50, Rat, male and female, > 5,000 mg/kg No deaths occurred at this concentration.

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

Butyl acrylate
LD50, Rat, 3,150 mg/kg

Acute dermal toxicity
Product test data not available.

Information for components:

Acrylic polymer(s)
The dermal LD50 has not been determined.

Mineral Spirits
LD50, Rabbit, male and female, > 3,000 mg/kg OECD 402 or equivalent No deaths occurred at this concentration.

Solvent naphtha, petroleum, heavy arom.

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

Naphthalene
Human case reports suggest Naphthalene may be absorbed through the skin in toxic amounts, especially in children. LD50, Rat, > 2,500 mg/kg

LD50, Rabbit, > 2,500 mg/kg

Toluene
LD50, Rabbit, 12,267 mg/kg

Ethylbenzene
LD50, Rabbit, 15,500 mg/kg

1,2,4-Trimethylbenzene
LD50, Rabbit, > 3,160 mg/kg

Nonane
For similar material(s): LD50, Rabbit, male and female, > 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

Butyl acrylate
LD50, Rabbit, > 2,000 - 3,024 mg/kg

Acute inhalation toxicity
Product test data not available.

Information for components:

Acrylic polymer(s)
The LC50 has not been determined.

Mineral Spirits
LC50, Rat, male and female, 4 Hour, vapour, > 5.5 mg/l No deaths occurred at this concentration.

Solvent naphtha, petroleum, heavy arom.
LC50, Rat, male and female, 4 Hour, vapour, > 5.68 mg/l

Naphthalene
Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Excessive exposure may cause lung injury. Signs and symptoms of excessive exposure may include: Headache. Confusion. Sweating. Nausea and/or vomiting.

LC50, Rat, 4 Hour, vapour, > 0.41 mg/l The LC50 value is greater than the Maximum Attainable Concentration.

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

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

Ethylbenzene
LC50, Rat, 4 Hour, vapour, 17.2 mg/l

1,2,4-Trimethylbenzene
LC50, Rat, 4 Hour, vapour, 18 mg/l

Nonane
LC50, Rat, male, 4 Hour, vapour, 17 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

Butyl acrylate
LC50, Rat, 4 Hour, vapour, 10.3 mg/l

Skin corrosion/irritation
Product test data not available.

Information for components:

Acrylic polymer(s)
Essentially nonirritating to skin.

Mineral Spirits
Brief contact may cause moderate skin irritation with local redness.
May cause drying and flaking of the skin.

Solvent naphtha, petroleum, heavy arom.
Prolonged contact may cause slight skin irritation with local redness.
May cause drying and flaking of the skin.

Naphthalene
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.

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.

Ethylbenzene
Brief contact may cause moderate skin irritation with local redness.
Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.
May cause drying and flaking of the skin.

1,2,4-Trimethylbenzene
Brief contact may cause moderate skin irritation with local redness.
May cause drying and flaking of the skin.

Nonane
Brief contact may cause moderate skin irritation with local redness.

Butyl methacrylate
Brief contact may cause moderate skin irritation with local redness.

Butyl acrylate
Brief contact may cause moderate skin irritation with local redness.
Prolonged contact may cause severe skin irritation with local redness and discomfort.

Serious eye damage/eye irritation
Product test data not available.

Information for components:

Acrylic polymer(s)
Essentially nonirritating to eyes.

Mineral Spirits
Essentially nonirritating to eyes.

Solvent naphtha, petroleum, heavy arom.
May cause slight eye irritation.
Corneal injury is unlikely.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Naphthalene
May cause moderate eye irritation.
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).

Ethylbenzene
May cause moderate eye irritation.
Vapor may cause lacrimation (tears).

1,2,4-Trimethylbenzene
May cause eye irritation.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Nonane
May cause eye irritation.
Corneal injury is unlikely.

Butyl methacrylate
May cause slight eye irritation.
Corneal injury is unlikely.

Butyl acrylate

May cause pain disproportionate to the level of irritation to eye tissues.
May cause slight eye irritation.
May cause slight corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.

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.

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

For respiratory sensitization:
No relevant data found.

Solvent naphtha, petroleum, heavy arom.
Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

Naphthalene
For skin sensitization:
Skin contact may cause an allergic skin reaction in a small proportion of individuals.
Did not cause allergic skin reactions when tested in guinea pigs.

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.

Ethylbenzene
Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

1,2,4-Trimethylbenzene
For similar material(s):
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

Nonane
For similar material(s):
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Butyl methacrylate
Skin contact may cause an allergic skin reaction.

For respiratory sensitization:
No relevant data found.

Butyl acrylate
Skin contact may cause an allergic skin reaction.

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.

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

Solvent naphtha, petroleum, heavy arom.
May cause drowsiness or dizziness.
Route of Exposure: Inhalation
Target Organs: Central nervous system

Naphthalene
Available data are inadequate to determine single exposure specific target organ toxicity.

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

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

1,2,4-Trimethylbenzene
May cause respiratory irritation.
Route of Exposure: Inhalation
Target Organs: Respiratory Tract

Nonane

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

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

Aspiration Hazard
Product test data not available.

Information for components:

Acrylic polymer(s)
No aspiration toxicity classification

Mineral Spirits
May be fatal if swallowed and enters airways.

Solvent naphtha, petroleum, heavy arom.
May be fatal if swallowed and enters airways.

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

Toluene
May be fatal if swallowed and enters airways.

Ethylbenzene
Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia. May be fatal if swallowed and enters airways.

1,2,4-Trimethylbenzene
May be fatal if swallowed and enters airways.

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

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

Butyl acrylate
May be harmful 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.

Mineral Spirits
In humans, effects have been reported on the following organs:
Bone Marrow
Liver
In animals, effects have been reported on the following organs:
central nervous system damage
Kidney.
Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

Solvent naphtha, petroleum, heavy arom.
In animals, effects have been reported on the following organs:
Lung.
Gastrointestinal tract.
Thyroid.
Urinary tract.
Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.
Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.

Naphthalene
In animals, effects have been reported on the following organs:
Lung.
Nasal tissue.
Observations in animals include:
Respiratory effects.
Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen.
Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.
Ingestion of naphthalene by humans has caused hemolytic anemia.

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.

Ethylbenzene
In animals, effects have been reported on the following organs:
May cause hearing loss based on animal data.
Kidney.

Liver.
Lung.
Although one early inhalation study on ethylbenzene reported an adverse effect on the testes, recent, more comprehensive studies have not shown this effect.

1,2,4-Trimethylbenzene
In animals, effects have been reported on the following organs:
Respiratory tract.

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

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

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

Carcinogenicity
Product test data not available.

Information for components:

Acrylic polymer(s)
No relevant data found.

Mineral Spirits
No relevant data found.

Solvent naphtha, petroleum, heavy arom.
No relevant data found.

Naphthalene
Has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

Toluene
Did not cause cancer in laboratory animals.

Ethylbenzene
Ethylbenzene has been shown to cause cancer in laboratory animals. There is no evidence that these findings are relevant to humans.

1,2,4-Trimethylbenzene
No relevant data found.

Nonane
No relevant data found.

Butyl methacrylate

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

Butyl acrylate
Did not cause cancer in laboratory animals.

Carcinogenicity

Component	List	Classification
Solvent naphtha, petroleum, heavy arom.	ACGIH	A3: Confirmed animal carcinogen with unknown relevance to humans.
Naphthalene	IARC	Group 2B: Possibly carcinogenic to humans
	US NTP	Reasonably anticipated to be a human carcinogen
	ACGIH	A3: Confirmed animal carcinogen with unknown relevance to humans.
Ethylbenzene	IARC	Group 2B: Possibly carcinogenic to humans
	ACGIH	A3: Confirmed animal carcinogen with unknown relevance to humans.

Teratogenicity
Product test data not available.

Information for components:

Acrylic polymer(s)
No relevant data found.

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

Solvent naphtha, petroleum, heavy arom.
Did not cause birth defects in laboratory animals.

Naphthalene
Did not cause birth defects in laboratory animals.

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.

Ethylbenzene
Has caused birth defects in laboratory animals only at doses toxic to the mother. Has been toxic to the fetus in lab animals at doses nontoxic to the mother.

1,2,4-Trimethylbenzene
Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

Nonane
No relevant data found.

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

Butyl acrylate
Has caused birth defects in laboratory animals only at doses toxic to the mother. Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Reproductive toxicity
Product test data not available.

Information for components:

Acrylic polymer(s)
No relevant data found.

Mineral Spirits
In animal studies, did not interfere with reproduction.

Solvent naphtha, petroleum, heavy arom.
In animal studies, did not interfere with reproduction.

Naphthalene
Available data are inadequate to determine effects on reproduction.

Toluene
In animal studies, did not interfere with reproduction.

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

1,2,4-Trimethylbenzene
For similar material(s): In animal studies, did not interfere with reproduction.

Nonane
No relevant data found.

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

Butyl acrylate
Limited data in laboratory animals suggest that the material does not affect reproduction.

Mutagenicity
Product test data not available.

Information for components:

Acrylic polymer(s)
No relevant data found.

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

Solvent naphtha, petroleum, heavy arom.
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

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

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.

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

1,2,4-Trimethylbenzene
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Nonane
No relevant data found.

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

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

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.

Mineral Spirits

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).
For similar material(s):
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 2.5 mg/l

Acute toxicity to aquatic invertebrates
LC50, crustacean Chaetogammarus marinus, 96 Hour, 3.5 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, 1.2 mg/l, OECD Test Guideline 201
NOEC, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, 0.16 mg/l, OECD Test Guideline 201

Chronic toxicity to fish
For similar material(s):
NOEC, Oncorhynchus mykiss (rainbow trout), 112 d, <1.4 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, number of offspring, 0.28 mg/l

Solvent naphtha, petroleum, heavy arom.

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, Freshwater fish, 96 Hour, 10 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 3 - 10 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
ErC50, Marine algae (Skeletonema costatum), 72 Hour, Cell Density, 2.5 mg/l

Naphthalene

Acute toxicity to fish
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 0.11 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, 1.6 - 24.1 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Skeletonema costatum (marine diatom), Growth rate inhibition, 72 Hour, 0.4 mg/l

Toxicity to bacteria
IC50, Nitrosomonas sp., 24 Hour, 29 mg/l

Chronic toxicity to fish
NOEC, Other, flow-through, 40 d, mortality, 0.37 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia pulex (Water flea), 125 d, 0.59 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

Ethylbenzene

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, 4.2 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), Static, 48 Hour, 1.8 - 2.4 mg/l

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth inhibition (cell density reduction), 3.6 - 4.6 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
EC50, Bacteria, 16 Hour, > 12 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Ceriodaphnia dubia (water flea), semi-static test, 7 d, 0.96 mg/l

Toxicity to soil-dwelling organisms
LC50, Eisenia fetida (earthworms), 2 d, survival, 0.047 mg/cm2

1,2,4-Trimethylbenzene

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, 7.7 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 3.6 mg/l

Acute toxicity to algae/aquatic plants
EC50, Desmodesmus subspicatus (green algae), 96 Hour, 2.356 mg/l

Nonane

Acute toxicity to fish
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), Static, 48 Hour, 0.2 mg/l

Chronic toxicity to aquatic invertebrates
For similar material(s):
NOELR, Daphnia magna (Water flea), Static, 21 d, 1 mg/l
For similar material(s):
EC50, Daphnia magna (Water flea), Static, 21 d, 1.6 mg/l

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

Butyl 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, Oncorhynchus mykiss (rainbow trout), 96 Hour, 5.2 mg/l, OECD Test Guideline 203 or Equivalent
LC50, Cyprinodon variegatus (sheepshead minnow), 96 Hour, 2.1 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, 8.2 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth inhibition (cell density reduction), 2.65 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
EC0, Bacteria (active sludge), 3 d, > 150 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna, semi-static test, 21 d, number of offspring, 0.136 mg/l

Persistence and degradability

Acrylic polymer(s)
Biodegradability: No relevant data found.

Mineral Spirits
Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: > 63 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Theoretical Oxygen Demand: 3.49 mg/mg

Solvent naphtha, petroleum, heavy arom.
Biodegradability: Biodegradation may occur under aerobic conditions (in the presence of oxygen). 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: 30 - 41 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent

Naphthalene
Biodegradability: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Theoretical Oxygen Demand: 3.00 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	57.000 %
10 d	71.000 %
20 d	71.000 %

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 5.9 Hour
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.

Ethylbenzene

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 100 %
Exposure time: 6 d
Method: OECD Test Guideline 301E or Equivalent

Theoretical Oxygen Demand: 3.17 mg/mg Estimated.

Chemical Oxygen Demand: 2.62 mg/mg Dichromate

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	31.5 %
10 d	38.5 %
20 d	45.4 %

Photodegradation
Sensitization: OH radicals
Atmospheric half-life: 55 Hour
Method: Estimated.

1,2,4-Trimethylbenzene

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

Biodegradation: 100 %
Exposure time: 1 d

Theoretical Oxygen Demand: 3.19 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 0.641 d
Method: Estimated.

Nonane

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Not applicable
Biodegradation: 100 %
Exposure time: 25 d
Method: Other guidelines

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.

Butyl acrylate

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Not applicable
Biodegradation: 80 - 90 %
Exposure time: 14 d
Method: OECD Test Guideline 310 or Equivalent

Theoretical Oxygen Demand: 2.25 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	20 - 37 %
10 d	48 - 54 %
20 d	54 - 62 %

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 9.3 Hour
Method: Estimated.

Bioaccumulative potential

Acrylic polymer(s)

Bioaccumulation: No relevant data found.

Mineral Spirits

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient: n-octanol/water(log Pow): 5.25 Measured

Solvent naphtha, petroleum, heavy arom.

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient: n-octanol/water(log Pow): 2.9 - 6.1 OECD Test Guideline 117 or Equivalent

Bioconcentration factor (BCF): 61 - 115 Oncorhynchus mykiss (rainbow trout) Estimated.

Naphthalene

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient: n-octanol/water(log Pow): 3.3 Measured
Bioconcentration factor (BCF): 40 - 300 Fish 28 d 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

Ethylbenzene

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 3.15 Measured
Bioconcentration factor (BCF): 15 Fish Measured

1,2,4-Trimethylbenzene

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient: n-octanol/water(log Pow): 3.63 Measured
Bioconcentration factor (BCF): 33 - 275 Cyprinus carpio (Carp) 56 d Measured

Nonane

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient: n-octanol/water(log Pow): 5.65 Estimated.
Bioconcentration factor (BCF): 105 Fish Estimated.

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.

Butyl acrylate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.38 at 25 °C Measured
Bioconcentration factor (BCF): 17.27 Fish Estimated.

Mobility in soil

Acrylic polymer(s)

No relevant data found.

Mineral Spirits

Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient (Koc): 1451 Estimated.

Solvent naphtha, petroleum, heavy arom.

No relevant data found.

Naphthalene

Potential for mobility in soil is medium (Koc between 150 and 500).

Partition coefficient (Koc): 240 - 1300 Measured

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

Ethylbenzene
Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient (Koc): 518 Estimated.

1,2,4-Trimethylbenzene
Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient (Koc): 720 Estimated.

Nonane
Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient (Koc): 796 Estimated.

Butyl methacrylate
For similar material(s):
Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient (Koc): 2760 Estimated.

Butyl acrylate
Potential for mobility in soil is high (Koc between 50 and 150).
Partition coefficient (Koc): 40 - 148 Measured

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

Proper shipping name	Resin solution
UN number	UN 1866
Class	3
Packing group	III
Reportable Quantity	Naphthalene

Classification for SEA transport (IMO-IMDG):

Proper shipping name	RESIN SOLUTION
UN number	UN 1866
Class	3

Packing group	III
Marine pollutant	Stoddard solvent, Solvent naphtha (petroleum), heavy aromatic
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Resin solution
UN number	UN 1866
Class	3
Packing group	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)
Carcinogenicity
Reproductive toxicity
Aspiration hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
The following components are subject to reporting levels established by SARA Title III, Section 313:

Components	**CASRN**
1,2,4-Trimethylbenzene	95-63-6
Naphthalene	91-20-3
Ethylbenzene	100-41-4

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 Naphthalene, 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
2*	2	0

* = Chronic Effects (See Hazards Identification)

Revision
Identification Number: 10004374 / 1001 / Issue Date: 02/25/2020 / Version: 6.0
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)
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
CEIL	Acceptable ceiling concentration
Dow IHG	Dow Industrial Hygiene Guideline
OSHA P0	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
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	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