SAFETY DATA SHEET
THE DOW CHEMICAL COMPANY*

Product name: PARALOID™ AU-830 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-830 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 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 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

Chemical nature: Acrylic emulsion
This product is a mixture.

Component	CASRN	Concentration
Acrylic polymer(s)	Not hazardous	76.0 - 78.0 %
Individual residual monomers	Not Required	< 1.0 %
Methyl amyl ketone	110-43-0	22.0 - 24.0 %
Toluene	108-88-3	< 1.0 %
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. Consult a physician.

Skin contact: Remove contaminated clothing. Wash affected skin areas thoroughly with soap and water. See a physician. Wash contaminated clothing before reuse. Do not take clothing home to be laundered.

Eye contact: Flush eyes with water as a precaution. If eye irritation persists, consult a specialist.

Ingestion: Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Consult a physician. If vomiting occurs spontaneously, keep airway clear.

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

Suitable extinguishing media: Use the following extinguishing media when fighting fires involving this material: Carbon dioxide (CO2) Dry chemical Water spray Foam

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.

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

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: 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 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. Avoid all ignition sources. Keep container closed when not in use. 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. This material is corrosive. See SECTION 8, Exposure Controls/Personal Protection, prior to handling. 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
Methyl amyl ketone	ACGIH	TWA	50 ppm
	OSHA Z-1	TWA	465 mg/m3 100 ppm
	OSHA P0	TWA	465 mg/m3 100 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
Hydroxyethyl Acrylate	Rohm and Haas	TWA	0.5 ppm
	Rohm and Haas	TWA	SKIN, DSEN
	Rohm and Haas	STEL	1.5 ppm
	Rohm and Haas	STEL	SKIN, DSEN

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: 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): Neoprene 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.

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	liquid clear
Color	colourless
Odor	Fruity odor
Odor Threshold	no data available
pH	Not applicable
Melting point/range	-35 °C (-31 °F) Methyl amyl ketone
Freezing point	no data available
Boiling point (760 mmHg)	151 °C (304 °F) Methyl amyl ketone
Flash point	27 °C (81 °F) *Tag closed cup*
Evaporation Rate (Butyl Acetate = 1)	0.4 Methyl amyl ketone
Flammability (solid, gas)	Not Applicable
Lower explosion limit	1.1 % vol Methyl amyl ketone
Upper explosion limit	7.9 % vol Methyl amyl ketone
Vapor Pressure	2.1 mmHg at 20 °C (68 °F) Methyl amyl ketone
Relative Vapor Density (air = 1)	3.93 at 151 °C (304 °F) Methyl amyl ketone
Relative Density (water = 1)	>1
Water solubility	practically insoluble
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	393 °C (739 °F) Methyl amyl ketone
Decomposition temperature	Combustion generates toxic fumes of the following: Carbon oxides
Dynamic Viscosity	10,600 - 21,200 mPa.s at 25 °C (77 °F)
Kinematic Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available
Molecular weight	no data available
Percent volatility	22 - 24 %

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.

Acute dermal toxicity
Product test data not available.

Acute inhalation toxicity
Product test data not available.

Skin corrosion/irritation
Product test data not available.

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

Sensitization
Product test data not available.

Specific Target Organ Systemic Toxicity (Single Exposure)
Product test data not available.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Product test data not available.

Carcinogenicity
Product test data not available.

Teratogenicity
Product test data not available.

Reproductive toxicity
Product test data not available.

Mutagenicity

Product test data not available.

Aspiration Hazard
Product test data not available.

Additional information
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.

Methyl amyl ketone

Acute oral toxicity
LD50, Rat, 1,670 mg/kg

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

Acute inhalation toxicity
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

Skin corrosion/irritation
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.

Serious eye damage/eye irritation
May cause moderate eye irritation.
May cause slight corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Sensitization
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.

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.
Kidney.
Liver.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
Screening studies suggest that this material does not affect reproduction.

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

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

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.

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
Prolonged excessive exposure may cause adverse effects. Excessive exposure may cause severe irritation to the upper respiratory tract (nose and throat).

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 (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.

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

Toluene

Acute toxicity to fish
Material is moderately toxic to fish on an acute basis (LC50 between 1 and 10 mg/L).
LC50, Rainbow trout (Oncorhynchus mykiss), semi-static test, 96 Hour, 5.8 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 24 Hour, 7 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
EbC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth inhibition, 12.5 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
IC50, Bacteria, 16 Hour, 29 mg/l

Chronic toxicity to fish
NOEC, Fish., flow-through, 40 day, growth, 1.4 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 day, number of offspring, 2 mg/l
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

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.

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.

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

Biodegradation: 100 %
Exposure time: 14 d
Method: OECD Test Guideline 301C or Equivalent

Theoretical Oxygen Demand: 3.13 mg/mg Calculated.

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

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.

Methyl amyl ketone
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 1.98 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 Freshwater fish Measured

Hydroxyethyl Acrylate
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): -0.17 Measured

Mobility in soil

Methyl amyl ketone
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 24 - 60 Estimated.

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

Classification for SEA transport (IMO-IMDG):

Proper shipping name	RESIN SOLUTION
UN number	UN 1866
Class	3
Packing group	III
Marine pollutant	No
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

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.

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	**CASRN**
Toluene	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
2	3	0

Revision
Identification Number: 101163689 / 1001 / Issue Date: 05/28/2015 / Version: 2.0
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)
BEI	Biological Exposure Indices
CEIL	Acceptable ceiling concentration
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
Rohm and Haas	Rohm and Haas OEL's
SKIN, DSEN	Absorbed via Skin, Skin Sensitizer
STEL	Short term exposure limit
TWA	8-hour, 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.