



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY\*

**Product name:** PARALOID™ EXL-3691J ENGINEERING RESIN  
ADDITIVE

**Issue Date:** 03/27/2015

**Print Date:** 08/04/2015

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.

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## 1. IDENTIFICATION

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**Product name:** PARALOID™ EXL-3691J ENGINEERING RESIN ADDITIVE

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

**Identified uses:** Plastics Additive

### COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY\*  
Agent for Rohm and Haas Chemicals LLC  
100 INDEPENDENCE MALL WEST  
PHILADELPHIA PA 19106-2399  
UNITED STATES

**Customer Information Number:**

215-592-3000

[SDSQuestion@dow.com](mailto:SDSQuestion@dow.com)

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 1 800 424 9300

**Local Emergency Contact:** 800-424-9300

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## 2. HAZARDS IDENTIFICATION

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### Hazard classification

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

### Other hazards

no data available

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

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**Chemical nature:** MBS copolymer

This product is a mixture.

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Component	CASRN	Concentration
MBS polymer	Not Hazardous	90.0 - 98.0 %
Individual residual monomers	Not Required	< 0.01 %
Octadecyl-3,5-di-t-butyl-4-hydroxyhydrocinnamate	2082-79-3	1.0 - 5.0 %

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#### 4. FIRST AID MEASURES

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##### Description of first aid measures

**Inhalation:** Move to fresh air.

**Skin contact:** Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.

**Eye contact:** Rinse with plenty of water. If eye irritation persists, consult a specialist.

**Ingestion:** Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

##### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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#### 5. FIREFIGHTING MEASURES

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**Suitable extinguishing media:** Carbon dioxide (CO<sub>2</sub>) 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:** Material as sold is combustible; burns vigorously with intense heat.

##### Advice for firefighters

**Fire Fighting Procedures:** Cool containers/tanks with water spray.

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

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Material can create slippery conditions. Wear compatible, chemically resistant gloves. Ventilate the area.

**Environmental precautions:** WARNING: KEEP SPILLS OF PRODUCT AS SUPPLIED OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER. DO NOT DISCHARGE CLEANING RUNOFFS DIRECTLY TO OPEN BODIES OF WATER. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Sweep up and shovel into suitable containers for disposal.

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## 7. HANDLING AND STORAGE

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**Precautions for safe handling:** Static charges can accumulate: use bonding and grounding between transfer equipment and receiving containers and for any other operations capable of generating static electricity. Avoid inhalation of vapour or mist. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed.

**Conditions for safe storage:** Store at room temperature in the original container. Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Avoid all ignition sources. Keep away from heat and sources of ignition. This material is not hazardous under normal storage conditions. However, all materials of this type release some monomer vapors or gases when stored for prolonged periods at elevated temperatures.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Octadecyl-3,5-di-t-butyl-4-hydroxyhydrocinnamate	Dow IHG	TWA Total dust	10 mg/m <sup>3</sup>

### Exposure controls

**Engineering controls:** Use 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.

### Individual protection measures

**Eye/face protection:** Safety glasses with side-shields. Eye protection worn must be compatible with respiratory protection system employed.

#### Skin protection

**Hand protection:** For prolonged or repeated contact use protective gloves.

**Respiratory protection:** A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required 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 50 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) full-facepiece, air-purifying respirator, OR full-facepiece, airline respirator in the pressure demand mode. Above 50 times the exposure limit 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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

Physical state	solid
Color	white opaque
Odor	sweet
Odor Threshold	no data available
pH	6 - 8
Melting point/range	no data available
Freezing point	no data available
Boiling point (760 mmHg)	no data available
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	no data available
Flammability (solid, gas)	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapor Pressure	no data available
Relative Vapor Density (air = 1)	no data available
Relative Density (water = 1)	no data available
Water solubility	insoluble
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	> 120 °C (> 248 °F)
Kinematic Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available
Molecular weight	no data available

Percent volatility < 0.5 %

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** no data available

**Chemical stability:** no data available

**Possibility of hazardous reactions:** None known.  
Product will not undergo polymerization.  
Stable

**Conditions to avoid:** no data available

**Incompatible materials:** Prolonged contact with acids, alkalies and strong oxidizing agents may attack or dissolve the polymer.

**Hazardous decomposition products:** Heating above the decomposition temperature will release acrylic monomers.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information on this product or its components appear in this section when such data is available.*

### Acute toxicity

#### Acute oral toxicity

LD50, Rat, > 5,000 mg/kg

#### Acute dermal toxicity

LD50, Rabbit, > 5,000 mg/kg

#### Acute inhalation toxicity

Dust generated at a maximum concentration of 3.4 mg/L for 4 hours was not fatal to any of 24 test animals (12 male and 12 female).

The LC50 has not been determined.

### Skin corrosion/irritation

slight irritation

### Serious eye damage/eye irritation

slight irritation

### 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**

Information given is based on data obtained from similar substances.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Octadecyl-3,5-di-t-butyl-4-hydroxyhydrocinnamate**

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, Dust, 1.8 mg/l

**Sensitization**

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

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

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

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

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

**Carcinogenicity**

Did not cause cancer in laboratory animals.

**Teratogenicity**

Did not cause birth defects 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**

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

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**12. ECOLOGICAL INFORMATION**

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*Ecotoxicological information on this product or its components appear in this section when such data is available.*

**General Information**

no data available

**Toxicity**

**Octadecyl-3,5-di-t-butyl-4-hydroxyhydrocinnamate**

**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 Hour, > 100 mg/l  
LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, > 100 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l

**Acute toxicity to algae/aquatic plants**

Toxicity to aquatic species occurs at concentrations above material's water solubility.  
EC50, alga Scenedesmus sp., 72 Hour, Biomass, > 11.3 mg/l

**Toxicity to bacteria**

EC50, activated sludge, 3 Hour, > 100 mg/l, OECD 209 Test

**Persistence and degradability**

**Octadecyl-3,5-di-t-butyl-4-hydroxyhydrocinnamate**

**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. Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).  
10-day Window: Fail

**Biodegradation:** 32 %

**Exposure time:** 29 d

**Method:** OECD Test Guideline 301B or Equivalent

10-day Window: Not applicable

**Biodegradation:** 47 %

**Exposure time:** 35 d

**Method:** OECD Test Guideline 302B or Equivalent

**Stability in Water (1/2-life)**

, half-life, 7.2 year, pH 7, Half-life Temperature 25 °C, Estimated.

**Photodegradation**

**Atmospheric half-life:** 3 Hour

**Method:** Estimated.

**Bioaccumulative potential**

**Octadecyl-3,5-di-t-butyl-4-hydroxyhydrocinnamate**

**Bioaccumulation:** Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

**Partition coefficient: n-octanol/water(log Pow):** 13.41 Estimated.

**Mobility in soil**

**Octadecyl-3,5-di-t-butyl-4-hydroxyhydrocinnamate**

Expected to be relatively immobile in soil (Koc > 5000).

**Partition coefficient(Koc):** > 5000 Estimated.

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### 13. DISPOSAL CONSIDERATIONS

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**Disposal methods:** For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations.

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### 14. TRANSPORT INFORMATION

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**DOT**

Not regulated for transport

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

Not regulated for transport

**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):**

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.



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## 15. REGULATORY INFORMATION

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### OSHA Hazard Communication Standard

This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR1910.1200).

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

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

Components	CASRN	RQ
Butadiene	106-99-0	10 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 trace levels of a component or components known to the state of California to cause cancer and birthdefects or other reproductive harm:

Components	CASRN
Butadiene	106-99-0

### 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.

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## 16. OTHER INFORMATION

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### Hazard Rating System

#### HMIS

Health	Flammability	Physical Hazard
0	1	0

**Revision**

Identification Number: 101272258 / 1001 / Issue Date: 03/27/2015 / Version: 3.0

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

**Legend**

Dow IHG	Dow Industrial Hygiene Guideline
TWA	Time Weighted Average (TWA):

**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.