



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY\*

Product name: PARALOID™ B-48N 100%

Issue Date: 04/29/2016

Print Date: 05/26/2016

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™ B-48N 100%

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  
100 INDEPENDENCE MALL WEST  
PHILADELPHIA PA 19106-2399  
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

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## 2. HAZARDS IDENTIFICATION

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### Hazard classification

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

Skin sensitisation - Category 1

Reproductive toxicity - Category 2

### Label elements

#### Hazard pictograms



Signal word: **WARNING!**

**Hazards**

May cause an allergic skin reaction.

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.

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response**

IF ON SKIN: Wash with plenty of soap and water.

IF exposed or concerned: Get medical advice/ attention.

If skin irritation or rash occurs: Get medical advice/ attention.

Wash contaminated clothing before reuse.

**Storage**

Store locked up.

**Disposal**

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

**Other hazards**

If converted to small particles during further handling, processing, or by other means, may form combustible dust concentrations in air.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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**Chemical nature:** Acrylic copolymer

This product is a mixture.

| <b>Component</b>   | <b>CASRN</b> | <b>Concentration</b> |
|--------------------|--------------|----------------------|
| Acrylic polymer(s) | Nonhazardous | 98.0 - 100.0 %       |
| Residual monomers  | Not required | <= 0.5 %             |
| Toluene            | 108-88-3     | <= 0.99 %            |
| Butyl methacrylate | 97-88-1      | 0.1 - 0.5 %          |

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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 with water and soap as a precaution. If skin irritation persists, call a physician.

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

**Ingestion:** Drink 1 or 2 glasses of water. Consult a physician if necessary. 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:** Use the following extinguishing media when fighting fires involving this material: 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:** No data available

**Unusual Fire and Explosion Hazards:** Material as sold is combustible; burns vigorously with intense heat.

**Advice for firefighters**

**Fire Fighting Procedures:** Use water spray to cool unopened containers. Remain upwind. Avoid breathing smoke.

**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:** 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:** Floor may be slippery; use care to avoid falling. Eliminate all ignition sources. Ventilate the area. Transfer spilled material to suitable containers for recovery or disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Store in a cool, dry, well ventilated place. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Do not breathe vapours/dust. Static charges can accumulate: use bonding and grounding between transfer equipment and receiving containers and for any other operations capable of generating static electricity.

**Conditions for safe storage:** Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Ground all metal containers during storage and handling.

**Other data:** Monomer vapors can be evolved when material is heated during processing operations. See SECTION 8, for types of ventilation required.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Exposure limits are listed below, if they exist.

| Component          | Regulation | Type of listing | Value/Notation                |
|--------------------|------------|-----------------|-------------------------------|
| Toluene            | ACGIH      | TWA             | 20 ppm                        |
|                    | OSHA Z-2   | TWA             | 200 ppm                       |
|                    | ACGIH      | TWA             | BEI                           |
|                    | OSHA Z-2   | CEIL            | 300 ppm                       |
|                    | OSHA Z-2   | Peak            | 500 ppm                       |
|                    | CAL PEL    | PEL             | 37 mg/m <sup>3</sup> 10 ppm   |
|                    | CAL PEL    | C               | 500 ppm                       |
|                    | CAL PEL    | STEL            | 560 mg/m <sup>3</sup> 150 ppm |
| Butyl methacrylate | Dow IHG    | TWA             | 50 ppm                        |
|                    | Dow IHG    | STEL            | 75 ppm                        |

### Exposure controls

**Engineering controls:** Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist 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:** Use safety glasses with side shields (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

#### Skin protection

**Hand protection:** Cotton or canvas 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 under normal operating conditions. When dusty conditions are encountered, wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. 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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|   |   |
|---|---|
| <b>Appearance</b>                             |   |
| <b>Physical state</b>                         | Granular solid                                    |
| <b>Color</b>                                  | clear   |
| <b>Odor</b>                                   | Acrylic odor                                      |
| <b>Odor Threshold</b>                         | No data available                                 |
| <b>pH</b>                                     | Not applicable                                    |
| <b>Melting point/range</b>                    | No data available                                 |
| <b>Freezing point</b>                         | No data available                                 |
| <b>Boiling point (760 mmHg)</b>               | Not applicable                                    |
| <b>Flash point</b>                            | Not applicable                                    |
| <b>Evaporation Rate (Butyl Acetate = 1)</b>   | Not Applicable                                    |
| <b>Flammability (solid, gas)</b>              | Not expected to form explosive dust-air mixtures. |
| <b>Lower explosion limit</b>                  | Not Applicable                                    |
| <b>Upper explosion limit</b>                  | Not Applicable                                    |
| <b>Vapor Pressure</b>                         | Not Applicable                                    |
| <b>Relative Vapor Density (air = 1)</b>       | Not Applicable                                    |
| <b>Relative Density (water = 1)</b>           | 1.1500  |
| <b>Water solubility</b>                       | practically insoluble                             |
| <b>Partition coefficient: n-octanol/water</b> | No data available                                 |
| <b>Auto-ignition temperature</b>              | 393.00 °C (739.40 °F) estimated                   |
| <b>Decomposition temperature</b>              | No data available                                 |
| <b>Dynamic Viscosity</b>                      | 6,000.000 - 11,500.000 mPa.s                      |
| <b>Kinematic Viscosity</b>                    | No data available                                 |
| <b>Explosive properties</b>                   | No data available                                 |
| <b>Oxidizing properties</b>                   | No data available                                 |
| <b>Molecular weight</b>                       | No data available                                 |
| <b>Percent volatility</b>                     | 2.00 % maximum                                    |

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.  
This material is considered stable.

**Conditions to avoid:** No data available

**Incompatible materials:** There are no known materials which are incompatible with this product.

**Hazardous decomposition products:** Thermal decomposition may yield acrylic monomers.

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## 11. TOXICOLOGICAL INFORMATION

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

### **Acute toxicity**

#### **Acute oral toxicity**

LD50, Rat, > 5,000 mg/kg

#### **Acute dermal toxicity**

LD50, Rabbit, > 3,000 mg/kg

#### **Acute inhalation toxicity**

Product test data not available. Refer to component data.

### **Skin corrosion/irritation**

slight irritation

### **Serious eye damage/eye irritation**

slight irritation

### **Sensitization**

Product test data not available. Refer to component data.

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

Product test data not available. Refer to component data.

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

Product test data not available. Refer to component data.

### **Carcinogenicity**

Product test data not available. Refer to component data.

### **Teratogenicity**

Product test data not available. Refer to component data.

### **Reproductive toxicity**

Product test data not available. Refer to component data.

### **Mutagenicity**

Product test data not available. Refer to component data.

### **Aspiration Hazard**

Product test data not available. Refer to component data.

**Additional information**

No data are available for this material. The information shown is based on profiles of compositionally similar materials.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Acrylic polymer(s)**

**Acute inhalation toxicity**

The LC50 has not been determined.

**Residual monomers**

**Acute inhalation toxicity**

The LC50 has not been determined.

**Toluene**

**Acute inhalation toxicity**

LC50, Rat, male and female, 4 Hour, vapour, > 20 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)**

May cause drowsiness or dizziness.

Route of Exposure: Inhalation

Target Organs: Central nervous system

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

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

central nervous system (CNS) effects

Excessive exposure may cause neurologic signs and symptoms.

Toluene has caused hearing loss in laboratory animals upon exposure to high concentrations.

Intentional misuse by deliberately inhaling toluene may cause nervous system damage, hearing loss, liver and kidney effects and death.

**Carcinogenicity**

Did not cause cancer in laboratory animals.

**Teratogenicity**

In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation.

**Reproductive toxicity**

In animal studies, did not interfere with reproduction.

**Mutagenicity**

The majority and most reliable of the many genetic toxicity studies on toluene, both in vitro and in animals, indicate that it is not genetically toxic.

**Aspiration Hazard**

May be fatal if swallowed and enters airways.

**Butyl methacrylate**

**Acute inhalation toxicity**

No adverse effects are anticipated from single exposure to mist.

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

**Sensitization**

Skin contact may cause an allergic skin reaction.

For respiratory sensitization:

No relevant data found.

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

May cause respiratory irritation.

Route of Exposure: Inhalation

Target Organs: Respiratory Tract

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

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

**Carcinogenicity**

Animal testing did not show any carcinogenic effects.

**Teratogenicity**

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

**Reproductive toxicity**

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

**Mutagenicity**

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

**Aspiration Hazard**

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

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**12. ECOLOGICAL INFORMATION**

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*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.

**Residual monomers**



**Acute toxicity to fish**

No relevant data found.

**Toluene****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 5.8 mg/l

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

**Acute toxicity to aquatic invertebrates**

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

LC50, water flea Ceriodaphnia dubia, semi-static test, 48 Hour, 3.78 mg/l

**Acute toxicity to algae/aquatic plants**

EbC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Biomass, 12.5 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

IC50, Bacteria, 16 Hour, 29 mg/l

**Chronic toxicity to fish**

NOEC, Fish, flow-through test, 40 d, growth, 1.4 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Ceriodaphnia dubia (water flea), 7 d, number of offspring, 0.74 mg/l

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

**Toxicity to soil-dwelling organisms**

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

**Butyl methacrylate****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

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

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

**Acute toxicity to aquatic invertebrates**

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

**Acute toxicity to algae/aquatic plants**

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

**Chronic toxicity to aquatic invertebrates**

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

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

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

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

**Persistence and degradability**

**Acrylic polymer(s)****Biodegradability:** No relevant data found.**Residual monomers****Biodegradability:** No relevant data found.**Toluene****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 100 %**Exposure time:** 14 d**Method:** OECD Test Guideline 301C or Equivalent**Theoretical Oxygen Demand:** 3.13 mg/mg Calculated.**Photodegradation****Test Type:** Half-life (indirect photolysis)**Sensitizer:** OH radicals**Atmospheric half-life:** 2 d**Method:** Estimated.**Butyl methacrylate****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 88 %**Exposure time:** 28 d**Method:** OECD Test Guideline 301C or Equivalent**Bioaccumulative potential****Acrylic polymer(s)****Bioaccumulation:** No relevant data found.**Residual monomers****Bioaccumulation:** No relevant data found.**Toluene****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** 2.73 Measured**Bioconcentration factor (BCF):** 13.2 - 90 Fish Measured**Butyl methacrylate****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** 2.88 Estimated.**Bioconcentration factor (BCF):** 70 Calculated.**Mobility in soil****Acrylic polymer(s)**

No relevant data found.

**Residual monomers**

No relevant data found.

**Toluene**

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

**Partition coefficient (Koc):** 37 - 178 Estimated.

**Butyl methacrylate**

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

**Partition coefficient (Koc):** 878 Estimated.

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal methods:** For disposal, incinerate this material at a facility that complies 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 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**

Acute Health Hazard  
Chronic Health Hazard

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

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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

Calculated RQ exceeds reasonably attainable upper limit.

| <b>Components</b> | <b>CASRN</b> | <b>RQ</b>   |
|-------------------|--------------|-------------|
| Toluene           | 108-88-3     | 1000 lbs RQ |

**Pennsylvania**

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

**California (Proposition 65)**

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

| <b>Components</b> | <b>CASRN</b> |
|-------------------|--------------|
| Toluene           | 108-88-3     |

**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:

| <b>Components</b> | <b>CASRN</b> |
|-------------------|--------------|
| Benzene           | 71-43-2      |

**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 |
|--------|--------------|-----------------|
| 1      | 1            | 0               |

**Revision**

Identification Number: 101083184 / 1001 / Issue Date: 04/29/2016 / Version: 3.0

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   |
| C        | Ceiling   |
| CAL PEL  | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| CEIL     | Acceptable ceiling concentration  |
| Dow IHG  | Dow Industrial Hygiene Guideline  |
| 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   |

**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.