



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: COREACTANT 9L10

Issue Date: 09/07/2016

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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: COREACTANT 9L10

Recommended use of the chemical and restrictions on use

Identified uses: Packaging laminating adhesives

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
2030 DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number:

800-258-2436

SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: CHEMTREC +1 800-424-9300

Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

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

Flammable liquids - Category 2

Respiratory sensitisation - Category 1

Skin sensitisation - Category 1

Specific target organ toxicity - single exposure - Category 3

Label elements

Hazard pictograms



Signal word: **DANGER!**

Hazards

Highly flammable liquid and vapour.

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause drowsiness or dizziness.

Precautionary statements**Prevention**

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.

In case of inadequate ventilation wear respiratory protection.

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

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

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

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: Polymeric isocyanate

This product is a mixture.

Component

CASRN

Concentration

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate homopolymer	53880-05-0	75.0 - 77.0 %
Isophorone diisocyanate	4098-71-9	< 0.4 %
Ethyl acetate	141-78-6	23.0 - 25.0 %

4. FIRST AID MEASURES

Description of first aid measures

Inhalation: Move to fresh air. Give artificial respiration if breathing has stopped. Get prompt medical attention. In case of shortness of breath, give oxygen.

Skin contact: Remove contaminated clothing. Wash off with soap and plenty of water. Wash contaminated clothing before re-use. Do not take clothing home to be laundered. Consult a physician.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion: Drink 1 or 2 glasses of water. Consult 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: Bronchial constriction may develop after extensive exposure to isocyanates, even in individuals who have not been shown to be previously sensitized. MATERIAL IS SEVERELY IRRITATING. It may not be advisable to induce vomiting. Possible mucosal damage may contraindicate the use of gastric lavage.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Use the following extinguishing media when fighting fires involving this material: Carbon dioxide (CO₂) Dry powder Foam Water in very large quantities.

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. During a fire, irritating and highly toxic gases and/or fumes may be generated during combustion or decomposition. DO NOT permit water to enter containers. Closed containers may explode when heated or contents contaminated with water.

Advice for firefighters

Fire Fighting Procedures: EXPLOSION HAZARD. Fight advanced fires from a protected location. Cool closed containers exposed to fire with water spray. DO NOT permit water to enter containers. Remain upwind. Avoid breathing smoke. Contain run-off.

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. MATERIAL IS A POTENTIAL SENSITIZER. If exposed to material during clean-up operations, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. See SECTION 4, First Aid Measures, for further information. Wash contaminated clothing before re-use. Do not take clothing home to be laundered.

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: 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. No sparking tools should be used. Avoid all contact. 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. This material is a potential sensitizer. See SECTION 8, Exposure Controls/Personal Protection, prior to handling. Wash after handling and shower at end of work period. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage: Residual vapors in empty containers may explode on ignition. DO NOT cut, drill, grind or weld on or near container.

Other data: CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied. Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Isophorone diisocyanate	Dow IHG	TWA	0.005 ppm

Ethyl acetate	Dow IHG	TWA	Skin and respiratory sensitiser
	ACGIH	TWA	0.005 ppm
	CAL PEL	PEL	0.045 mg/m3 0.005 ppm
	CAL PEL	STEL	0.02 ppm
	Dow IHG	TWA	150 ppm
	Dow IHG	STEL	300 ppm
	ACGIH	TWA	400 ppm
	OSHA Z-1	TWA	1,400 mg/m3 400 ppm
	CAL PEL	PEL	1,400 mg/m3 400 ppm

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): VITON Synthetic Rubber (registered Trademark of Dupont Dow Elastomers) Polyvinyl alcohol 4H Glove (Trademark of Safety 4 A/S of Denmark) Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

Other protection: Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact. 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. Above the exposure limit: 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance**Physical state**

liquid

Color

Straw color

Odor

Solvent odor

Odor Threshold

No data available

pH	Not Applicable
Melting point/range	-84.00 °C (-119.20 °F) Ethyl acetate
Freezing point	No data available
Boiling point (760 mmHg)	77.00 °C (170.60 °F) Ethyl acetate
Flash point	closed cup 5.00 °C (41.00 °F) <i>SETAFLASH CLOSED CUP</i>
Evaporation Rate (Butyl Acetate = 1)	6.20 Ethyl acetate
Flammability (solid, gas)	Not Applicable
Lower explosion limit	2.20 % vol Ethyl acetate
Upper explosion limit	11.50 % vol Ethyl acetate
Vapor Pressure	97.3333333 mmHg at 20.00 °C (68.00 °F) Ethyl acetate
Relative Vapor Density (air = 1)	3.0400 Ethyl acetate
Relative Density (water = 1)	1.0680
Water solubility	Reacts
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	426.00 °C (798.80 °F) Ethyl acetate
Decomposition temperature	No data available
Dynamic Viscosity	No data available
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Molecular weight	No data available
Percent volatility	24.000 - 26.000 %

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, keep away from moisture, heat or flame. However, this material can undergo hazardous polymerization. See Hazardous Polymerization for conditions to avoid.
Hazardous polymerization will also occur if contaminated with the following: - water (moisture)

Conditions to avoid: No data available

Incompatible materials: Avoid contact with the following: Strong Oxidizers Acids Water Bases Amines

Hazardous decomposition products: Thermal decomposition may yield the following: Hydrogen cyanide (hydrocyanic acid) isocyanate monomers acetaldehyde

11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

Acute oral toxicity

Product test data not available. Refer to component data.

Acute dermal toxicity

Product test data not available. Refer to component data.

Acute inhalation toxicity

Product test data not available. Refer to component data.

Skin corrosion/irritation

Product test data not available. Refer to component data.

Serious eye damage/eye irritation

Product test data not available. Refer to component data.

Sensitization

Has caused allergic skin reactions in humans.

Once an individual is sensitized, reexposure to very small amounts of vapor, mist or liquid isophorone diisocyanate may cause an allergic skin reaction.

May cause allergic respiratory reaction.

Reexposure to extremely low isocyanate concentrations may cause allergic respiratory reactions in individuals already sensitized.

Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Specific Target Organ Systemic Toxicity (Single Exposure)

Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Product test data not available. Refer to component data.

Carcinogenicity

Product test data not available. Refer to component data.

Teratogenicity

Product test data not available. Refer to component data.

Reproductive toxicity

Product test data not available. Refer to component data.

Mutagenicity

Product test data not available. Refer to component data.

Aspiration Hazard

Product test data not available. Refer to component data.

Additional information

No toxicity data are available for this material.

COMPONENTS INFLUENCING TOXICOLOGY:

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate homopolymer

Acute oral toxicity

LD50, Rat, male, > 5,000 mg/kg No deaths occurred at this concentration.

Acute dermal toxicity

The dermal LD50 has not been determined.

Acute inhalation toxicity

LC50, Rat, male and female, 4 Hour, dust/mist, > 5.01 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

May cause slight temporary corneal injury.

Specific Target Organ Systemic Toxicity (Single Exposure)

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

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

Blood.

Lung.

Carcinogenicity

No relevant data found.

Teratogenicity

No relevant data found.

Reproductive toxicity

No relevant data found.

Mutagenicity

In vitro genetic toxicity studies were negative.

Aspiration Hazard

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

Isophorone diisocyanate

Acute oral toxicity

LD50, Rat, 4,825 mg/kg

Acute dermal toxicity

LD50, Rat, > 7,000 mg/kg

Acute inhalation toxicity

Prolonged excessive exposure may cause serious adverse effects, even death. Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs. Excessive exposure may cause lung injury.

LC50, Rat, male and female, 4 Hour, dust/mist, 0.04 mg/l

Skin corrosion/irritation

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 eye irritation.

May cause severe corneal injury.

Vapor or mist may cause eye irritation.

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)

Decreased lung function has been associated with overexposure to isocyanates.

Carcinogenicity

No relevant data found.

Teratogenicity

No relevant data found.

Reproductive toxicity

No relevant data found.

Mutagenicity

In vitro genetic toxicity studies were negative.

Aspiration Hazard

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

Ethyl acetate**Acute oral toxicity**

LD50, Rabbit, 4,934 mg/kg

Acute dermal toxicity

LD50, Rabbit, > 17,900 mg/kg

Acute inhalation toxicity

Prolonged excessive exposure may cause adverse effects. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. May cause respiratory irritation and central nervous system depression.

LC50, Rat, 4 Hour, vapour, > 28.6 mg/l

Skin corrosion/irritation

Essentially nonirritating to skin.
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.

Specific Target Organ Systemic Toxicity (Single Exposure)

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

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.
In animals, effects have been reported on the following organs:
Liver.
Respiratory tract.

Carcinogenicity

For the hydrolysis product: Ethanol when not consumed in an alcoholic beverage is not classifiable as a human carcinogen.

Teratogenicity

Relevant data not available.

Reproductive toxicity

Relevant data not available.

Mutagenicity

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

Aspiration Hazard

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

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**3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate homopolymer**

Acute toxicity to fish

No toxicity at the limit of solubility
LC50, Cyprinus carpio (Carp), semi-static test, 96 Hour, > 1.51 mg/l, Tested according to Directive 92/69/EEC.

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna, static test, 48 Hour, > 3.36 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

ErC50, Algae (Scenedesmus subspicatus), static test, 72 Hour, Growth inhibition, > 3.1 mg/l, OECD Test Guideline 201

Toxicity to bacteria

EC50, activated sludge, static test, 3 Hour, Respiration rates., > 10,000 mg/l, OECD Test Guideline 209

Isophorone diisocyanate**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).

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.

For this family of materials:

LC50, Leuciscus idus (Golden orfe), static test, 48 Hour, 1.8 mg/l

Acute toxicity to aquatic invertebrates

LC50, Daphnia magna (Water flea), 24 Hour, 84 mg/l

Acute toxicity to algae/aquatic plants

EbC50, alga Scenedesmus sp., 72 Hour, Biomass, 119 mg/l

Toxicity to bacteria

EC10, Bacteria, 6 Hour, 554 mg/l

Ethyl acetate**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, Pimephales promelas (fathead minnow), 96 Hour, 230 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 24 Hour, 3,090 mg/l, DIN 38412

Acute toxicity to algae/aquatic plants

NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, >100 mg/l, OECD Test Guideline 201

EbC50, alga Scenedesmus sp., static test, 48 Hour, Biomass, 3,300 mg/l

Chronic toxicity to fish

NOEC, Pimephales promelas (fathead minnow), 32 d, < 9.65 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 2.4 mg/l

Persistence and degradability

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate homopolymer

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

10-day Window: Fail

Biodegradation: 0 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

Isophorone diisocyanate

Biodegradability: In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates. In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. 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. For this family of materials:

10-day Window: Fail

Biodegradation: 62 %

Exposure time: 28 d

Method: OECD Test Guideline 301E or Equivalent

Theoretical Oxygen Demand: 2.59 mg/mg

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitizer: OH radicals

Atmospheric half-life: 1.212 d

Method: Estimated.

Ethyl acetate

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

10-day Window: Pass

Biodegradation: 100 %

Exposure time: 28 d

Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 1.82 mg/mg

Bioaccumulative potential**3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate homopolymer**

Bioaccumulation: No relevant data found.

Isophorone diisocyanate

Bioaccumulation: For this family of materials: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Partition coefficient: n-octanol/water(log Pow): 4.75 Estimated.

Ethyl acetate

Bioaccumulation: Bioconcentration potential is low ($BCF < 100$ or $\log Pow < 3$).

Partition coefficient: n-octanol/water(log Pow): 0.68 Measured

Bioconcentration factor (BCF): 30 Fish Measured

Mobility in soil

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate homopolymer

No relevant data found.

Isophorone diisocyanate

For this family of materials:

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Partition coefficient (Koc): 36000 Estimated.

Ethyl acetate

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

Partition coefficient (Koc): 3 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: For disposal, incinerate this material at a facility that complies 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	Adhesives
UN number	UN 1133
Class	3
Packing group	II
Reportable Quantity	Ethyl acetate

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ADHESIVES
UN number	UN 1133
Class	3
Packing group	II
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	Adhesives
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UN number	UN 1133
Class	3
Packing group	II

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

15. REGULATORY INFORMATION

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
Fire Hazard

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.

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.

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	1

* = Chronic Effects (See Hazards Identification)

Revision

Identification Number: 101105013 / A001 / Issue Date: 09/07/2016 / Version: 5.0

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)
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
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.