Material Safety Data Sheet
The Dow Chemical Company

Product Name: XUS 35078.00 Developmental Photodefinable CYCLOTENE* Advanced Electronics Resin

Issue Date: 03/29/2012

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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. Product and Company Identification

Product Name

XUS 35078.00 Developmental Photodefinable CYCLOTENE* Advanced Electronics Resin

COMPANY IDENTIFICATION

The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
United States

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 989-636-4400

2. Hazards Identification

Emergency Overview

Color: Yellow
Physical State: Liquid.
Odor: Aromatic
Hazards of product:

WARNING! Combustible liquid and vapor. May cause allergic skin reaction. May cause eye irritation. May cause skin irritation. May be harmful if inhaled. May cause central nervous system effects; may cause respiratory tract irritation. Aspiration hazard. Can enter lungs and cause damage. Vapor explosion hazard. Vapors may travel a long distance; ignition and/or flash back may occur. Elevated temperatures can cause hazardous polymerization. Keep upwind of spill. Isolate area. Stay out of low areas. Eliminate ignition sources. Avoid temperatures above 40°C (104°F)

OSHA Hazard Communication Standard

This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects

Eye Contact: May cause eye irritation. Vapor may cause eye irritation experienced as mild discomfort and redness.
Skin Contact: 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. May cause drying and flaking of the skin. May cause more severe response on covered skin (under clothing, gloves).
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Skin Sensitization: A component in this mixture has caused allergic skin reactions in humans.
Inhalation: Vapor concentrations are attainable which could be hazardous on single exposure. May cause respiratory irritation and central nervous system depression.
Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Aspiration hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.
Effects of Repeated Exposure: Contains component(s) which have been reported to cause effects on the following organs in animals: Liver. Blood.
Birth Defects/Developmental Effects: Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.
Reproductive Effects: In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals.

3. Composition Information

Component	CAS #	Amount
1,3,5-Trimethylbenzene	108-67-8	>= 42.0 - <= 84.5 %
B-Staged divinylsiloxane-bis-benzocyclobutene resin	124221-30-3	>= 15.0 - <= 58.0 %
2,6-Bis((4-azidophenyl)methylene)-4-ethylcyclohexanone	114391-97-8	>= 0.0 - <= 2.0 %
1,1'-(1-Methylethylidene)bis(4-(4-azidophenoxy)benzene)	71550-57-7	0.0 - 3.0 %
Quinoline, 1,2-dihydro-2,2,4-trimethyl-, polymers	26780-96-1	0.0 - 3.0 %
Organosilicate polymer	Trade Secret	< 1.0 %

4. First-aid measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.
Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Safety shower should be located in immediate work area.
Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

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), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Maintain adequate ventilation and oxygenation of the patient. If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Suitable extinguishing media
Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.

Special hazards arising from the substance or mixture
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Aromatic hydrocarbons.
Unusual Fire and Explosion Hazards: Container may vent and/or rupture due to fire. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Electrically ground and bond all equipment. Flammable mixtures of this product are readily ignited even by static discharge. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Dense smoke is produced when product burns.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Do not use direct water stream. May spread fire. Eliminate ignition sources. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the “Accidental Release Measures” and the “Ecological Information” sections of this (M)SDS.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Isolate area. Refer to Section 7, Handling, for additional precautionary measures. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Vapor explosion hazard. Keep out of sewers. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
Methods and materials for containment and cleaning up: Contain spilled material if possible. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Collect in

suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling

General Handling: Avoid contact with eyes, skin, and clothing. Do not swallow. Avoid breathing vapor. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Keep away from heat, sparks and flame. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Electrically ground and bond all equipment. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION. This product is a poor conductor of electricity and can become electrostatically charged, even in bonded or grounded equipment. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Handling operations that can promote accumulation of static charges include but are not limited to mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations.

Storage

Minimize sources of ignition, such as static build-up, heat, spark or flame. See Section 10 for more specific information.

Storage temperature: -15 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
1,3,5-Trimethylbenzene	ACGIH	TWA	25 ppm

Personal Protection

Eye/Face Protection: Use safety glasses (with side shields). If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Viton. Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Polyvinyl alcohol ("PVA"). Examples of acceptable glove barrier materials include: Butyl rubber. Neoprene. Chlorinated polyethylene. Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In

confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge.
Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Appearance	
Physical State	Liquid.
Color	Yellow
Odor	Aromatic
Odor Threshold	No test data available
pH	Not applicable
Melting Point	Not applicable
Freezing Point	No test data available
Boiling Point (760 mmHg)	162 °C (324 °F) *Literature* .
Flash Point - Closed Cup	44 °C (111 °F) *Closed Cup* (setaflash)
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not applicable to liquids
Flammable Limits In Air	**Lower**: 0.88 %(V) *Literature* Vapor **Upper**: 6.1 %(V) *Literature* Vapor
Vapor Pressure	3.3 hPa @ 25 °C *Literature*
Vapor Density (air = 1)	4.1 *Literature*
Specific Gravity (H2O = 1)	0.9521 *Literature*
Solubility in water (by weight)	0.1 % *Literature*
Partition coefficient, n-octanol/water (log Pow)	No data available for this product. See Section 12 for individual component data.
Autoignition Temperature	550 °C (1,022 °F) *Literature*
Decomposition Temperature	No test data available
Kinematic Viscosity	10 - 2,500 mm2/s @ 25 °C *Supplier*
Explosive properties	no data available
Oxidizing properties	no data available

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions. See Storage, Section 7. Unstable at elevated temperatures.

Possibility of hazardous reactions

Can occur. Can react with itself at temperatures above 100°C (212°F).

Conditions to Avoid: Avoid temperatures above 40 °C (104 °F). Can react with itself at temperatures above 100°C (212°F). Active ingredient decomposes at elevated temperatures. Avoid static discharge. Avoid direct sunlight or ultraviolet sources.

Incompatible Materials: Avoid contact with: Strong oxidizers.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

11. Toxicological Information

Acute Toxicity

Ingestion

Single dose oral LD50 has not been determined.

Dermal

The dermal LD50 has not been determined.

Inhalation

The LC50 has not been determined.

Eye damage/eye irritation

May cause eye irritation. Vapor may cause eye irritation experienced as mild discomfort and redness.

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. May cause drying and flaking of the skin. May cause more severe response on covered skin (under clothing, gloves).

Sensitization

Skin

A component in this mixture has caused allergic skin reactions in humans.

Respiratory

No relevant information found.

Repeated Dose Toxicity

Contains component(s) which have been reported to cause effects on the following organs in animals: Liver. Blood.

Chronic Toxicity and Carcinogenicity

No relevant data found.

Developmental Toxicity

Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.

Reproductive Toxicity

In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals.

Genetic Toxicology

For the component(s) tested: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

12. Ecological Information

Toxicity

Data for Component: **1,3,5-Trimethylbenzene**

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).

Fish Acute & Prolonged Toxicity

LC50, Carassius auratus (goldfish), flow-through test, 96 h: 12.5 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, Daphnia magna (Water flea), static test, 48 h, mortality: 6 mg/l

Aquatic Plant Toxicity

EbC50, alga Scenedesmus sp., biomass growth inhibition, 48 h: 25 mg/l

Aquatic Invertebrates Chronic Toxicity Value

Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, NOEC: 0.4 mg/l

Data for Component: **B-Staged divinylsiloxane-bis-benzocyclobutene resin**

No relevant information found.

Data for Component: **2,6-Bis((4-azidophenyl)methylene)-4-ethylcyclohexanone**

No relevant information found.

Data for Component: **Quinoline, 1,2-dihydro-2,2,4-trimethyl-, polymers**

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).

Fish Acute & Prolonged Toxicity
LC50, Lepomis macrochirus (Bluegill sunfish), 96 h: 54 mg/l
LC50, Pimephales promelas (fathead minnow), 96 h: 64 mg/l
LC50, Oncorhynchus mykiss (rainbow trout), 96 h: 50 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), 24 h, immobilization: > 1,000 mg/l
Toxicity to Micro-organisms
EC50; Bacteria, 3 h: > 10,000 mg/l

Persistence and Degradability

Data for Component: **1,3,5-Trimethylbenzene**

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.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
0 %	28 d	OECD 301C Test	Not applicable
50 %	4.4 d	Calculated	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
3.51E-11 cm3/s	3.7 h	Estimated.

Theoretical Oxygen Demand: 3.19 mg/mg

Data for Component: **B-Staged divinylsiloxane-bis-benzocyclobutene resin**

No relevant information found.

Data for Component: **2,6-Bis((4-azidophenyl)methylene)-4-ethylcyclohexanone**

No relevant information found.

Data for Component: **1,1'-(1-Methylethylidene)bis(4-(4-azidophenoxy)benzene)**

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.603E-11 cm3/s	0.667 d	Estimated.

Data for Component: **Quinoline, 1,2-dihydro-2,2,4-trimethyl-, polymers**

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

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
0 %	28 d	OECD 301C Test	Not applicable

Bioaccumulative potential

Data for Component: **1,3,5-Trimethylbenzene**

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient, n-octanol/water (log Pow): 3.42 Measured
Bioconcentration Factor (BCF): 161; Pimephales promelas (fathead minnow); Measured

Data for Component: **B-Staged divinylsiloxane-bis-benzocyclobutene resin**

Bioaccumulation: No relevant data found.

Data for Component: **2,6-Bis((4-azidophenyl)methylene)-4-ethylcyclohexanone**

Partition coefficient, n-octanol/water (log Pow): 9.67 Estimated.

Data for Component: **1,1'-(1-Methylethylidene)bis(4-(4-azidophenoxy)benzene)**

Partition coefficient, n-octanol/water (log Pow): -3.98 Estimated.

Data for Component: **Quinoline, 1,2-dihydro-2,2,4-trimethyl-, polymers**
Bioaccumulation: No relevant data found.

Mobility in soil

Data for Component: **1,3,5-Trimethylbenzene**
Mobility in soil: Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient, soil organic carbon/water (Koc): 741.65 Estimated.
Henry's Law Constant (H): 1.97E-02 atm*m3/mole; 25 °C Estimated.
Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
97.26 %	0.62 %	< 0.01 %	2.08 %	0.05 %

Data for Component: **B-Staged divinylsiloxane-bis-benzocyclobutene resin**
Mobility in soil: No relevant data found.
Data for Component: **2,6-Bis((4-azidophenyl)methylene)-4-ethylcyclohexanone**
Partition coefficient, soil organic carbon/water (Koc): 20,000 Estimated.
Data for Component: **1,1'-(1-Methylethylidene)bis(4-(4-azidophenoxy)benzene)**
Partition coefficient, soil organic carbon/water (Koc): > 5,000 Estimated.
Henry's Law Constant (H): 5.26E-18 atm*m3/mole; 25 °C Estimated.
Data for Component: **Quinoline, 1,2-dihydro-2,2,4-trimethyl-, polymers**
Mobility in soil: No relevant data found.

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

14. Transport Information

DOT Non-Bulk
Proper Shipping Name: RESIN SOLUTION
Hazard Class: 3 **ID Number:** UN1866 **Packing Group:** PG III

DOT Bulk
Proper Shipping Name: RESIN SOLUTION
Hazard Class: 3 **ID Number:** UN1866 **Packing Group:** PG III

IMDG
Proper Shipping Name: RESIN SOLUTION
Hazard Class: 3 **ID Number:** UN1866 **Packing Group:** PG III
EMS Number: F-E,S-E
Marine pollutant.: Yes

ICAO/IATA
Proper Shipping Name: RESIN SOLUTION
Hazard Class: 3 **ID Number:** UN1866 **Packing Group:** PG III
Cargo Packing Instruction: 366

Passenger Packing Instruction: 355
Additional Information

MARINE POLLUTANT (1,3,5-TRIMETHYLBENZENE)

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. 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 a "Hazardous Chemical" as defined by 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

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	No
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

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

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
1,3,5-Trimethylbenzene	108-67-8	42.0 - 84.5 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. Other Information

Recommended Uses and Restrictions

Identified uses
For industrial use. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

Revision
Identification Number: 1010619 / 1001 / Issue Date 03/29/2012 / Version: 4.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.