

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

### SECTION 1. IDENTIFICATION

Product name : MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP  
GEAR OIL - ISO 460

Product code : 000000000004011045

#### Manufacturer or supplier's details

Company name of supplier : Dow Corning Corporation

Address : South Saginaw Road  
Midland Michigan 48686

Telephone : (989) 496-6000

Emergency telephone : 24 Hour Emergency Telephone : (989) 496-5900  
CHEMTREC : (800) 424-9300

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

Recommended use : Lubricants and lubricant additives

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

#### GHS label elements

Not a hazardous substance or mixture.

#### Other hazards

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Inorganic and organic compounds  
in synthetic oil

#### Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Dec-1-ene, homopolymer, hydrogenated	68037-01-4	>= 89 - <= 100
Amine phosphate	Not Assigned	>= 0.9 - <= 1.2

### SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical  
advice immediately.  
When symptoms persist or in all cases of doubt seek medical

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

---

- advice.
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water.  
Remove contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention if symptoms occur.  
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : None known.
- Protection of first-aiders : First Aid responders should pay attention to self-protection,  
and use the recommended personal protective equipment  
when the potential for exposure exists.
- Notes to physician : Treat symptomatically and supportively.
- 

### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.
-

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

---

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### SECTION 7. HANDLING AND STORAGE

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Do not get on skin or clothing. Avoid inhalation of vapor or mist. Do not swallow. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers. Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

#### Hazardous components without workplace control parameters

Ingredients	CAS-No.
Dec-1-ene, homopolymer, hydrogenated	68037-01-4
Amine phosphate	Not Assigned

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.  
Minimize workplace exposure concentrations.

#### Personal protective equipment

**Respiratory protection** : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

**Hand protection**  
**Material** : Chemical-resistant gloves

**Remarks** : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

**Eye protection** : Wear the following personal protective equipment:  
Safety glasses

**Skin and body protection** : Skin should be washed after contact.

**Hygiene measures** : Ensure that eye flushing systems and safety showers are located close to the working place.  
When using do not eat, drink or smoke.  
Wash contaminated clothing before re-use.  
These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0	Revision Date: 03/15/2017	SDS Number: 850637-00008	Date of last issue: 11/18/2016 Date of first issue: 11/28/2014
----------------	------------------------------	-----------------------------	---

require added precautions.  
For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry ([www.SEHSC.com](http://www.SEHSC.com)) or contact the Dow Corning customer service group.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	colorless
Odor	:	odorless
Odor Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	> 35 °C
Flash point	:	280 °C Method: closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	Not applicable
Self-ignition	:	The substance or mixture is not classified as pyrophoric. The substance or mixture is not classified as self heating.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	0.85
Solubility(ies) Water solubility	:	No data available

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

---

Partition coefficient: n-octanol/water : No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
|| Viscosity, kinematic : 460 mm<sup>2</sup>/s (25 °C)

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

|| Particle size : Not applicable

---

### SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Can react with strong oxidizing agents.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

---

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### Ingredients:

#### Dec-1-ene, homopolymer, hydrogenated:

|| Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

|| Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l

---

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: Based on data from similar materials

### **Skin corrosion/irritation**

Not classified based on available information.

### **Ingredients:**

#### **Dec-1-ene, homopolymer, hydrogenated:**

Species: Rabbit  
Result: No skin irritation

#### **Amine phosphate:**

Result: Skin irritation  
Remarks: Information taken from reference works and the literature.

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

Not classified based on available information.

### **Ingredients:**

#### **Dec-1-ene, homopolymer, hydrogenated:**

Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405

#### **Amine phosphate:**

Result: Irritation to eyes, reversing within 21 days  
Remarks: Information taken from reference works and the literature.

### **Respiratory or skin sensitization**

#### **Skin sensitization**

Not classified based on available information.

#### **Respiratory sensitization**

Not classified based on available information.

### **Ingredients:**

#### **Dec-1-ene, homopolymer, hydrogenated:**

Test Type: Maximization Test  
Routes of exposure: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

---

Result: negative

### **Germ cell mutagenicity**

Not classified based on available information.

### **Ingredients:**

#### **Dec-1-ene, homopolymer, hydrogenated:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

### **Carcinogenicity**

Not classified based on available information.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### **Reproductive toxicity**

Not classified based on available information.

### **Ingredients:**

#### **Dec-1-ene, homopolymer, hydrogenated:**

Effects on fertility : Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative

### **STOT-single exposure**

Not classified based on available information.

### **STOT-repeated exposure**

Not classified based on available information.

### **Repeated dose toxicity**

### **Ingredients:**

#### **Dec-1-ene, homopolymer, hydrogenated:**

Species: Rat  
NOAEL: 4,159.4 mg/kg  
Application Route: Ingestion  
Exposure time: 91 Days

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

### Aspiration toxicity

Not classified based on available information.

### Ingredients:

#### Dec-1-ene, homopolymer, hydrogenated:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Ingredients:

#### Dec-1-ene, homopolymer, hydrogenated:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l  
Exposure time: 48 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 202

Toxicity to algae : EL50 (Scenedesmus capricornutum (fresh water algae)): > 1,000 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 201

NOELR (Scenedesmus capricornutum (fresh water algae)): 1,000 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 125 mg/l  
Exposure time: 21 d  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 211

Toxicity to microorganisms : NOEC: 2 mg/l  
Exposure time: 28 d  
Method: OECD Test Guideline 301D

### Persistence and degradability

#### Ingredients:

#### Dec-1-ene, homopolymer, hydrogenated:

Biodegradability : Result: Not readily biodegradable.

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

---

Biodegradation: 2 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D

### **Bioaccumulative potential**

#### **Ingredients:**

#### **Dec-1-ene, homopolymer, hydrogenated:**

Partition coefficient: n-  
octanol/water : log Pow: > 6.5

#### **Mobility in soil**

No data available

#### **Other adverse effects**

No data available

---

### **SECTION 13. DISPOSAL CONSIDERATIONS**

#### **Disposal methods**

Resource Conservation and Recovery Act (RCRA) : This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form.

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

---

### **SECTION 14. TRANSPORT INFORMATION**

#### **International Regulations**

##### **UNRTDG**

Not regulated as a dangerous good

##### **IATA-DGR**

Not regulated as a dangerous good

##### **IMDG-Code**

Not regulated as a dangerous good

#### **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

#### **Domestic regulation**

##### **49 CFR**

Not regulated as a dangerous good

---

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

### SECTION 15. REGULATORY INFORMATION

#### EPCRA - Emergency Planning and Community Right-to-Know

##### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

##### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 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.

#### US State Regulations

##### Pennsylvania Right To Know

Dec-1-ene, homopolymer, hydrogenated      68037-01-4

##### California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

#### The ingredients of this product are reported in the following inventories:

- REACH** : For purchases from Dow Corning EU legal entities, all ingredients are currently pre/registered or exempt under REACH. Please refer to section 1 for recommended uses. For purchases from non-EU Dow Corning legal entities with the intention to export into EEA please contact your DC representative/local office.
- TSCA** : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
- AICS** : All ingredients listed or exempt.
- IECSC** : All ingredients listed or exempt.
- KECI** : All ingredients listed, exempt or notified.
- PICCS** : All ingredients listed or exempt.
- DSL** : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).
- ENCS/ISHL** : All components are listed on ENCS/ISHL or exempted from

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

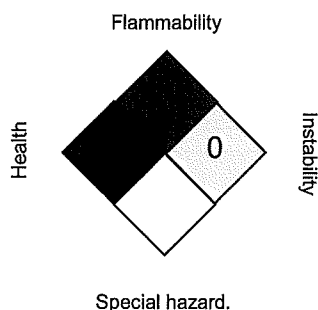
Version 4.0      Revision Date: 03/15/2017      SDS Number: 850637-00008      Date of last issue: 11/18/2016  
Date of first issue: 11/28/2014

inventory listing.

### SECTION 16. OTHER INFORMATION

#### Further information

##### NFPA:



##### HMIS® IV:

HEALTH	/	0
		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "/" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

#### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concern-

# SAFETY DATA SHEET

**DOW CORNING**

## MOLYKOTE(R) L-1146FM SYNTHETIC EXTREME TEMP GEAR OIL - ISO 460

Version	Revision Date:	SDS Number:	Date of last issue: 11/18/2016
4.0	03/15/2017	850637-00008	Date of first issue: 11/28/2014

---

ing the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Revision Date : 03/15/2017

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

