

# DOW CORNING

# POF-XChange Distribution

### DOW CORNING(R) M GEAR OIL ADDITIVE

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06/12/2015

 1.2
 10/07/2015
 1587878-00003
 Date of first issue: 03/18/2015

#### **SECTION 1. IDENTIFICATION**

Product name : DOW CORNING(R) M GEAR OIL ADDITIVE

Product code : 0000000001005855

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**

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 compounds in mineral oil

### Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), solvent refined heavy paraffinic	64741-88-4	>= 70 - < 90
Mineral Oil Mixture	Not Assigned	>= 5 - < 10
Molybdenum sulfide	1317-33-5	>= 1 - < 5

#### **SECTION 4. FIRST AID MEASURES**

If inhaled : If inhaled, remove to fresh air.

Get medical attention if symptoms occur.



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In case of skin contact : Wash with water and soap as a precaution.

Get medical attention if symptoms occur.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

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 : No special precautions are necessary for first aid responders.

Notes to physician : Treat symptomatically and supportively.

#### **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

: None known.

Specific hazards during fire

fighting

: Exposure to combustion products may be a hazard to health.

Hazardous combustion prod-

ucts

: Carbon oxides Formaldehyde Metal oxides Sulfur oxides

Specific extinguishing meth-

ods

: Use extinguishing measures that are appropriate to local cir-

cumstances 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

: Wear self-contained breathing apparatus for firefighting if nec-

essary.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emer-

gency procedures

Personal precautions, protec- : Follow safe handling advice and personal protective equip-

ment recommendations.



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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 absor-

bent.

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 deter-

mine 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 : 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

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Distillates (petroleum), solvent refined heavy paraffinic	64741-88-4	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhal- able fraction)	5 mg/m3	ACGIH
		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL



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Mineral Oil Mixture	Not Assigned	TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL
		TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhal- able fraction)	5 mg/m3	ACGIH
		TWA (Mist)	5 mg/m3	OSHA P0
Molybdenum sulfide	1317-33-5	TWA (total dust)	15 mg/m3 (Molybdenum)	OSHA Z-1
		TWA (Inhal- able fraction)	10 mg/m3 (Molybdenum)	ACGIH
		TWA (Res- pirable frac- tion)	3 mg/m3 (Molybdenum)	ACGIH

**Engineering measures** 

: Processing may form hazardous compounds (see section

10).

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

Remarks : 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 re-

quire 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) or contact



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the Dow Corning customer service group.

### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Color : dark gray

Odor : slight

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 : 200 °C

Method: closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : 0.91

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

: No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : 90 cSt

Explosive properties : Not explosive

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



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Molecular weight : No data available

### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

: Use at elevated temperatures may form highly hazardous

compounds.

Can react with strong oxidizing agents.

Hazardous decomposition products will be formed at elevated

temperatures.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

Hazardous decomposition products

Thermal decomposition : Formaldehyde

### **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:

### Distillates (petroleum), solvent refined heavy paraffinic:

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

Method: OECD Test Guideline 401

Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Method: OECD Test Guideline 402

Remarks: Based on data from similar materials

Molybdenum sulfide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg



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Method: OECD Test Guideline 401

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : LC50 (Rat): > 2.82 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

#### Skin corrosion/irritation

Not classified based on available information.

### **Ingredients:**

### Distillates (petroleum), solvent refined heavy paraffinic:

Species: Rabbit

Result: No skin irritation

Remarks: Based on data from similar materials

### Molybdenum sulfide:

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

### Serious eye damage/eye irritation

Not classified based on available information.

### **Ingredients:**

### Distillates (petroleum), solvent refined heavy paraffinic:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

Remarks: Based on data from similar materials

### Molybdenum sulfide:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

### Respiratory or skin sensitization

Skin sensitization: Not classified based on available information. Respiratory sensitization: Not classified based on available information.

### **Ingredients:**

### Distillates (petroleum), solvent refined heavy paraffinic:

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative



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Remarks: Based on data from similar materials

Molybdenum sulfide:

Test Type: Maximization Test Routes of exposure: Skin contact

Species: Guinea pig Result: negative

Germ cell mutagenicity

Not classified based on available information.

**Ingredients:** 

Distillates (petroleum), solvent refined heavy paraffinic:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: Intraperitoneal injection Method: OECD Test Guideline 474

Result: negative

Remarks: Based on data from similar materials

Molybdenum sulfide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Carcinogenicity

Not classified based on available information.

**Ingredients:** 

Distillates (petroleum), solvent refined heavy paraffinic:

Species: Mouse

Application Route: Skin contact Exposure time: 78 weeks

Method: OECD Test Guideline 451

Result: negative

Remarks: Based on data from similar materials

Molybdenum sulfide:

Species: Rat

Application Route: Ingestion Exposure time: 232 days

Result: negative

IARC Group 1: Carcinogenic to humans

Mineral Oil Mixture

**OSHA**No ingredient of this product present at levels greater than or



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equal to 0.1% is identified as a carcinogen or potential carcino-

gen by OSHA.

NTP Known to be human carcinogen

Mineral Oil Mixture

### Reproductive toxicity

Not classified based on available information.

### **Ingredients:**

### Distillates (petroleum), solvent refined heavy paraffinic:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening

test

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rat

Application Route: Skin contact Method: OECD Test Guideline 414

Result: negative

Remarks: Based on data from similar materials

### STOT-single exposure

Not classified based on available information.

### STOT-repeated exposure

Not classified based on available information.

### Repeated dose toxicity

### Ingredients:

### Distillates (petroleum), solvent refined heavy paraffinic:

Species: Rabbit NOAEL: 1,000 mg/kg

Application Route: Skin contact Exposure time: 4 Weeks

Method: OECD Test Guideline 410

Remarks: Based on data from similar materials

Species: Rat

NOAEL: > 980 mg/m3

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Remarks: Based on data from similar materials

### **Aspiration toxicity**

Not classified based on available information.

#### Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:



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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:

Distillates (petroleum), solvent refined heavy paraffinic:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 10,000 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 10 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

Toxicity to bacteria : NOEC: > 1.93 mg/l

Exposure time: 10 min Method: DIN 38 412 Part 8

Remarks: Based on data from similar materials

Molybdenum sulfide:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 644.2 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 130.9 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 289.2

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to fish (Chronic tox-

icity)

: NOEC (Oncorhynchus mykiss (rainbow trout)): > 17 mg/l

Exposure time: 12 Months



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Remarks: Based on data from similar materials

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Ceriodaphnia dubia (water flea)): 156.5 mg/l

Exposure time: 21 d

Remarks: Based on data from similar materials

Toxicity to bacteria : NOEC: > 950 mg/l

Exposure time: 17 d

Remarks: Based on data from similar materials

#### Persistence and degradability

### **Ingredients:**

Distillates (petroleum), solvent refined heavy paraffinic:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 2 - 4 % Exposure time: 28 d

Method: OECD Test Guideline 301B

#### Bioaccumulative potential

No data available **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 han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

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

### **International Regulation**

**UNRTDG** 

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

**IMDG-Code** 







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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

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

SARA 302 : No chemicals in this material are subject to the reporting re-

quirements of SARA Title III, Section 302.

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

Distillates (petroleum), solvent refined heavy paraffinic	64741-88-4	70 - 90 %
Mineral Oil Mixture	Not Assigned	5 - 10 %
Molybdenum sulfide	1317-33-5	1 - 5 %
Distillates (petroleum), solvent-dewaxed	64742-65-0	0.1 - 1 %
heavy paraffinic		
Distillates (petroleum), hydrotreated light	64742-55-8	0.1 - 1 %
paraffinic		

### **New Jersey Right To Know**

Distillates (petroleum), solvent refined heavy	64741-88-4	70 - 90 %
paraffinic		
Mineral Oil Mixture	Not Assigned	5 - 10 %
Molybdenum sulfide	1317-33-5	1 - 5 %

California Prop. 65 This product does not contain any chemicals known to the

State of California to cause cancer, birth, or any other repro-

ductive defects.

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

TSCA : All chemical substances in this material are included on or

exempted from listing on the TSCA Inventory of Chemical



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Substances.

AICS : All ingredients listed or exempt.

ENCS/ISHL : All components are listed on ENCS/ISHL or exempted from

inventory listing.

PICCS : All ingredients listed or exempt.

DSL : All chemical substances in this product comply with the CEPA

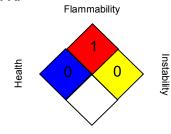
1999 and NSNR and are on or exempt from listing on the

Canadian Domestic Substances List (DSL).

#### **SECTION 16. OTHER INFORMATION**

#### **Further information**

### NFPA:



Special hazard.

#### HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, \* = Chronic

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants -

1910.1000

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

NIOSH REL / ST : STEL - 15-minute TWA exposure that should not be exceeded

at any time during a workday

OSHA P0 / TWA : 8-hour time weighted average OSHA Z-1 / TWA : 8-hour time weighted average

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 Haz-



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ardous 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 concerning 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 Agen-

cy, http://echa.europa.eu/

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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