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| <b>SAFETY DATA SHEET</b>  |  | Revision Date: 02/18/2019 |
|   |  | Print Date: 3/4/2019      |
|   |  | SDS Number: R0197347      |
| Performax™ CL4291 CORROSION INHIBITOR<br>™ Trademark, Solenis or its subsidiaries or affiliates,<br>registered in various countries<br>862692 |  | Version: 1.3              |

## SECTION 1. IDENTIFICATION

### Product identifier

Trade name : Performax™ CL4291  
CORROSION INHIBITOR  
™ Trademark, Solenis or its subsidiaries or affiliates,  
registered in various countries

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

|   |  |
|---|--|
| <b>Details of the supplier of the safety data sheet</b><br>Solenis LLC<br>500 Hercules Road<br>Wilmington, Delaware 19808<br>United States of America (USA)<br><br>RegulatoryRequestsNA@solenis.com | <b>Emergency telephone number</b><br>1-844-SOLENIS (844-765-3647)<br><br><b>Product Information</b><br>Contact your local Solenis representative |
|---|--|

## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with 29 CFR 1910.1200

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

### GHS label elements

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS


Substance / Mixture : Mixture

### Hazardous components

| Chemical name       | CAS-No.      | Classification                        | Concentration (%) |
|---------------------|--------------|---------------------------------------|-------------------|
| MOLYBDENUM COMPOUND | Trade Secret | Not a hazardous substance or mixture. | >= 40 - < 50      |

## SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

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- If inhaled : If breathed in, move person into fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.  
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

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## SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam  
Carbon dioxide (CO2)  
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : No hazardous combustion products are known
- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.  
Comply with all applicable federal, state, and local regulations.

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Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

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## SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.

Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No materials to be especially mentioned.


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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

| Components          | CAS-No.      | Value type<br>(Form of exposure) | Control parameters /<br>Permissible concentration | Basis    |
|---------------------|--------------|----------------------------------|---|----------|
| MOLYBDENUM COMPOUND | Trade Secret | TWA (total dust)                 | 15 mg/m <sup>3</sup><br>(Molybdenum)              | OSHA Z-1 |
|                     |              | TWA                              | 5 mg/m <sup>3</sup><br>(Molybdenum)               | OSHA Z-1 |
|                     |              | TWA<br>(Inhalable fraction)      | 10 mg/m <sup>3</sup><br>(Molybdenum)              | ACGIH    |
|                     |              | TWA<br>(Respirable fraction)     | 3 mg/m <sup>3</sup><br>(Molybdenum)               | ACGIH    |
|                     |              | TWA<br>(Respirable fraction)     | 0.5 mg/m <sup>3</sup><br>(Molybdenum)             | ACGIH    |
|                     |              | TWA (Total dust)                 | 10 mg/m <sup>3</sup><br>(Molybdenum)              | OSHA P0  |
|                     |              | TWA                              | 5 mg/m <sup>3</sup><br>(Molybdenum)               | OSHA P0  |

**Engineering measures** : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

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**Personal protective equipment**

- Respiratory protection : No personal respiratory protective equipment normally required.
  
- Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
  
- Skin and body protection : Wear as appropriate:  
 Safety shoes  
 Wear resistant gloves (consult your safety equipment supplier).
  
- Hygiene measures : General industrial hygiene practice.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance : liquid
- Colour : colourless
- Odour : No data available
- Odour Threshold : No data available
- pH : 8.5 - 10.0
- Melting point/freezing point : No data available
- Boiling point/boiling range : > 212 °F  
(1013 hPa)
- Flash point : Not applicable
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Self-ignition : No data available
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : < 17.50 mmHg (760.00 °F)
- Relative vapour density : 0.6  
AIR=1
- Relative density : No data available

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Density : 1.37 - 1.41 g/cm<sup>3</sup>

Solubility(ies)  
 Water solubility : No data available

Solubility in other solvents : No data available

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

Decomposition temperature : No data available

Viscosity  
 Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : Exposure to air or moisture over prolonged periods.

Hazardous decomposition products : molybdenum fumes

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## SECTION 11. TOXICOLOGICAL INFORMATION

### **Acute toxicity**

Not classified based on available information.

### **Skin corrosion/irritation**

Not classified based on available information.

### **Components:**

#### **MOLYBDENUM COMPOUND:**


Result: Possibly irritating to skin

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

Not classified based on available information.

### **Product:**

Remarks: Unlikely to cause eye irritation or injury.

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**Components:**

**MOLYBDENUM COMPOUND:**

Result: Possibly irritating to eyes

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**IARC**

No component 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 component 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.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.


**Aspiration toxicity**

Not classified based on available information.

**Further information**

**Product:**

Remarks: No data available

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

Toxicity to fish : LC50 (Fathead minnow (Pimephales promelas)): > 1,000 mg/l  
 Exposure time: 96 h  
 Test Type: static test  
 Method: OECD Test Guideline 203  
 GLP: no

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Daphnia magna (Water flea)): > 1,000 mg/l  
 Exposure time: 48 h  
 Test Type: static test  
 Method: OECD Test Guideline 202  
 GLP: no

### Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

### Persistence and degradability

No data available

### Bioaccumulative potential

No data available

### Mobility in soil

No data available

### Other adverse effects

No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

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## SECTION 14. TRANSPORT INFORMATION

### International transport regulations

#### REGULATION

| ID NUMBER | PROPER SHIPPING NAME | *HAZARD CLASS | SUBSIDIARY HAZARDS | PACKING GROUP | MARINE POLLUTANT / LTD. QTY. |
|-----------|----------------------|---------------|--------------------|---------------|------------------------------|
|           |                      |               |                    |               |                              |

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**U.S. DOT - ROAD**

|                     |
|---------------------|
| Not dangerous goods |
|---------------------|

**U.S. DOT - RAIL**

|                     |
|---------------------|
| Not dangerous goods |
|---------------------|

**U.S. DOT - INLAND WATERWAYS**

|                     |
|---------------------|
| Not dangerous goods |
|---------------------|

**TRANSPORT CANADA - ROAD**

|                     |
|---------------------|
| Not dangerous goods |
|---------------------|

**TRANSPORT CANADA - RAIL**

|                     |
|---------------------|
| Not dangerous goods |
|---------------------|

**INTERNATIONAL MARITIME DANGEROUS GOODS**

|                     |
|---------------------|
| Not dangerous goods |
|---------------------|

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

|                     |
|---------------------|
| Not dangerous goods |
|---------------------|

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

|                     |
|---------------------|
| Not dangerous goods |
|---------------------|

**MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES**


|                     |
|---------------------|
| Not dangerous goods |
|---------------------|

**\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

|                  |  |    |
|------------------|--|----|
| Marine pollutant |  | no |
|------------------|--|----|

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.



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## SECTION 15. REGULATORY INFORMATION

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

#### 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.

#### California Prop. 65

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

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

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory


#### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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## SECTION 16. OTHER INFORMATION

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#### Further information

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#### Full text of other abbreviations

#### Further information

Other information

: The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by the Solenis Environmental Health and Safety Department.

Sources of key data used to compile the Safety Data Sheet

Key literature references and sources of data


SOLENIS Internal data

SOLENIS internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

#### 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 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

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Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

US / EN