



SILVER FERN CHEMICAL, INC.

Safety Data Sheet

Fernplas 141

Version 1.0

Revision Date: 01/12/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Fernplas 141

Recommended use of the chemical and restrictions on use

Recommended use : Additive

Details of the supplier of the safety data sheet

Distributor : Silver Fern Chemical, Inc.
2226 Queen Anne Avenue North, Suite C
Seattle WA 98109, USA
Phone: 1-866-282-3384

Business Contact Customer Service: 1-866-282-3384
info@silverfernchemical.com

Emergency phone number : 24 Hour Emergency Contact
Infotrac 1-800-535-5053 (USA & Canada)
Outside USA & Canada 1-352-323-3500

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Potential Health Effects

Carcinogenicity:

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.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater



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than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Emergency Overview

Appearance	liquid
Colour	Clear, Colorless
Hazard Summary	No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
115-86-6	Triphenyl phosphate	1 - 5

SECTION 4. FIRST AID MEASURES

- General advice : Do not leave the victim unattended.
- If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Wash off with soap and plenty of water.
Get medical attention if irritation develops and persists.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Unsuitable extinguishing : High volume water jet



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| 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 | : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Further information | : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. |
| Special protective equipment for firefighters | : Wear self-contained breathing apparatus for fire-fighting if necessary.
Use personal protective equipment. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

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|---|--|
| Environmental precautions | : Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal. |

SECTION 7. HANDLING AND STORAGE

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| Advice on safe handling | : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area. |
| Conditions for safe storage | : Containers which are opened must be carefully resealed and kept upright to prevent leakage.
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

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
115-86-6	Triphenyl phosphate	TWA	3 mg/m ³	ACGIH
		TWA	3 mg/m ³	NIOSH REL
		TWA	3 mg/m ³	OSHA Z-1
		TWA	3 mg/m ³	OSHA P0

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.
In the case of vapour formation use a respirator with an approved filter.

Eye protection : Safety glasses

Skin and body protection : Protective suit

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : Clear, Colorless

Odour : No data available

Odour Threshold : No data available

pH : No data available

Freezing Point (Melting point/freezing point) : Estimated -30 °C (-22 °F)

Boiling Point (Boiling point/boiling range) : 239 °C (462 °F)
(13 hPa)

Flash point : 224.0 °C (435.2 °F)

Evaporation rate : No data available



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Flammability (solid, gas)	: No data available
Burning rate	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: 0.2 mmHg @ 150 °C (302 °F)
Relative vapour density	: No data available
Relative density	: 1.09 @ 25 °C (77 °F) Reference substance: (water = 1)
Density	: No data available
Bulk density	: No data available
Solubility(ies)	
Water solubility	: 0.00005 g/l
Solubility in other sol- vents	: No data available
Partition coefficient: n- octanol/water	: No data available
Auto-ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, kinematic	: 16.4 mm ² /s @ 25 °C (77 °F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: None known.



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Incompatible materials : Strong oxidizing agents

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

115-86-6:

Acute oral toxicity : LD50 (Rat, male and female): > 20,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rabbit): > 10,000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Components:

115-86-6:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation

Components:

115-86-6:

Species: Rabbit
Result: No eye irritation
Exposure time: 24 h
Method: OECD Test Guideline 405

Respiratory or skin sensitisation

Components:

115-86-6:

Test Type: Maximisation Test (GPMT)
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Did not cause sensitisation on laboratory animals.
GLP: yes



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Germ cell mutagenicity

Components:

115-86-6:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test species: Chinese hamster lung fibroblasts
Metabolic activation: with and without metabolic activation
Method: Mutagenicity (in vitro mammalian cytogenetic test)
Result: negative
GLP: yes

Germ cell mutagenicity-Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Components:

115-86-6:

Remarks: This information is not available.

Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

Reproductive toxicity

Components:

115-86-6:

Effects on fertility : Test Type: One generation study
Species: Rat, male and female
Application Route: oral
Dose: 166, 341, 516, 690 mg/kg
General Toxicity - Parent: NOAEL: 690 mg/kg bw
Method: OECD Test Guideline 415
Result: Animal testing did not show any effects on fertility.
GLP: No data available

Effects on foetal development : Species: Rat
Application Route: oral
Dose: 166, 341, 516, 690 mg/kg
Duration of Single Treatment: 91 d
General Toxicity Maternal: NOAEL: > 690 mg/kg bw
Teratogenicity: NOAEL: > 690 mg/kg bw
Method: OECD Test Guideline 414
GLP: No data available

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.
Did not show teratogenic effects in animal experiments



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STOT - single exposure

Product: No data available

Components:

115-86-6: No data available

STOT - repeated exposure

Product: No data available

Components:

115-86-6: No data available

Repeated dose toxicity

Components:

115-86-6:

Species: Rat, male and female

NOAEL: 250 ppm

Application Route: Oral

Exposure time: 4 wk

Number of exposures: daily

Dose: 0, 250, 1000 or 4000 ppm

Method: OECD Test Guideline 407

GLP: yes

Aspiration toxicity

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

115-86-6:

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): 0.4 mg/l



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	Exposure time: 96 h
	Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 1 mg/l Exposure time: 48 h
Toxicity to algae	: LOEC (Desmodesmus subspicatus (green algae)): 1 mg/l Exposure time: 72 h Test Type: Growth inhibition
M-Factor (Acute aquatic toxicity)	: 1
Ecotoxicology Assessment	
Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

115-86-6:

Biodegradability	: aerobic Inoculum: Activated sludge, domestic, adaption not specified Concentration: 100 mg/l Result: Readily biodegradable Biodegradation: 83 % Exposure time: 28 d Remarks: Readily biodegradable
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Bioaccumulative potential

Components:

115-86-6:

Bioaccumulation	: Species: Oncorhynchus mykiss (rainbow trout) Bioconcentration factor (BCF): 271 Exposure time: 90 d
Partition coefficient: n-octanol/water	: log Pow: 4.63 (20 °C)

Mobility in soil

No data available

Other adverse effects

No data available



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Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

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

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): Not regulated as a dangerous good

IMDG-Code: Not regulated as a dangerous good

DOT (Department of Transportation): Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

WHMIS Classification : : Not Rated

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.



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- SARA 311/312 Hazards** : No SARA Hazards
- SARA 302** : No chemicals in this material are subject to the reporting requirements 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.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCOMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. Clean-Water Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

115-86-6	Triphenyl phosphate	1 - 5 %
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Pennsylvania Right To Know

	Non-Hazardous Ingredients	90 - 100 %
115-86-6	Triphenyl phosphate	1 - 5 %

New Jersey Right To Know

	Non-Hazardous Ingredients	90 - 100 %
115-86-6	Triphenyl phosphate	1 - 5 %

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:

United States TSCA Inventory	: y (positive listing) (On TSCA Inventory)
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Canadian Domestic Substances List (DSL)	:	y (positive listing) (All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
New Zealand. Inventory of Chemical Substances	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Japan. ENCS - Existing and New Chemical Substances Inventory	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)	:	y (positive listing) (On the inventory, or in compliance with the inventory)



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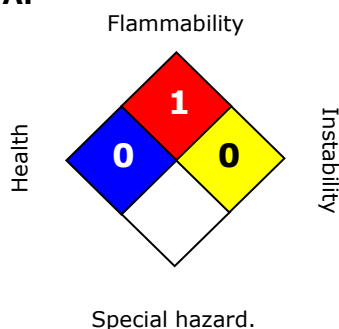
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SECTION 16. OTHER INFORMATION **Further information**

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

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

DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit



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EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50			Lethal Concentration 50%