



P&WC

Version: 9.3  
Effective date: 10/10/2019  
Previous Date: 30/05/2018

## SAFETY DATA SHEET

# FLOGARD POT6101 (ChemiPure PT 28)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Trade name or designation of the mixture FLOGARD POT6101 (ChemiPure PT 28)

Version number 9.3

Revision date 10/10/2019

Supersedes date 30/05/2018

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Corrosion inhibitor

Uses advised against None known.

#### 1.3. Details of the supplier of the safety data sheet

JV Process and Water Chemicals LLC

Address: Street V. Kadirov 10, Chirchik city,  
Tashkent Region, Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

Email address: info@pwch.uz

www.pwch.uz

#### 1.4. Emergency telephone number

Multilingual emergency number (24/7)

Street V. Kadirov 10, Chirchik city,  
Tashkent Region,  
Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

##### Physical hazards

Corrosive to metals Category 1 H290 - May be corrosive to metals.

##### Health hazards

Acute toxicity, oral Category 4 H302 - Harmful if swallowed.

Skin corrosion/irritation Category 1 H314 - Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Category 1 H318 - Causes serious eye damage.

##### Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard Category 2 H411 - Toxic to aquatic life with long lasting effects.

#### 2.2. Label elements



P&WC

# SAFETY DATA SHEET

## FLOGARD POT6101 (ChemiPure PT 28)

Version: 9.3  
Effective date: 10/10/2019  
Previous Date: 30/05/2018

Label according to Regulation (EC) No. 1272/2008 as amended

**Contains:** Phosphoric acid, Zinc sulphate

**Hazard pictograms**



**Signal word** Danger

**Hazard statements**

H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention**

P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTRE/doctor.

**Storage** Not available.

**Disposal** Not available.

**Supplemental label information** None.

**2.3. Other hazards** The classification as corrosive is due to the extreme pH.

### SECTION 3: Composition/information on ingredients

**Mixtures**

**Chemical description** Aqueous acidic solution of inorganic salts

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Phosphoric acid	20 - < 30	7664-38-2 231-633-2	01-2119485924-24	015-011-00-6	#
<b>Classification:</b>	Met. Corr. 1;H290, Acute Tox. 4;H302, Skin Corr. 1B;H314				B
Zinc sulphate	10 - < 25	7733-02-0 231-793-3	01-2119474684-27	030-006-00-9	
<b>Classification:</b>	Acute Tox. 4;H302, Eye Dam. 1;H318, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				

The classification of the above substance(s) is given, including the hazard class, category code and hazard statements which are assigned in accordance with their physicochemical, health and environmental hazards. Please refer to section 16 where the full text of each relevant H-statement is listed.

### SECTION 4: First aid measures

**4.1. Description of first aid measures**

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.

**Skin contact** Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.

**Eye contact** Rinse immediately with plenty of water for at least 15 minutes. Get medical attention immediately.



P&WC

## SAFETY DATA SHEET

# FLOGARD POT6101 (ChemiPure PT 28)

Ingestion	Rinse mouth. Do not give anything to eat or drink. Do not induce vomiting. Call a physician or poison control centre immediately.
-----------	--

**4.2. Most important symptoms and effects, both acute and delayed** Corrosive effects.

**4.3. Indication of any immediate medical attention and special treatment needed** Not available.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media** Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Unsuitable extinguishing media** Not available.

**5.2. Special hazards arising from the substance or mixture** Oxides of phosphorus evolved in fire.  
Oxides of sulphur evolved in fire.

#### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Self contained breathing apparatus. (CEN : EN 137)  
Protective clothing (CEN : EN 469)  
Protective gloves (CEN : EN 659)  
Helmet (CEN : EN 443)

**Special fire fighting procedures** Use standard firefighting procedures and consider the hazards of other involved materials.  
Prevent spillage and fire-fighting water from entering in public sewers or the immediate environment.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** Wear protective clothing, gloves and safety goggles.

**For emergency responders** Use personal protection recommended in Section 8 of the SDS.

**6.2. Environmental precautions** Prevent from entering sewers or the immediate environment.  
Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.

**6.3. Methods and material for containment and cleaning up** Absorb onto inert material and dispose of according to Hazardous Waste Regulations.  
Remove small spills with plenty of water.

**6.4. Reference to other sections** Please refer also to section no. 8 'Exposure controls' for further information.

### SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Acidic.  
Do not mix with alkaline material.

**7.2. Conditions for safe storage, including any incompatibilities** Use approved containers only.  
Store in cool, well ventilated area.  
Contact with metals may release flammable hydrogen gas.

**7.3. Specific end use(s)** Only for professional and industrial users

**Shelf life** 720 days

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters



# SAFETY DATA SHEET

## FLOGARD POT6101 (ChemiPure PT 28)

### Occupational exposure limits

#### UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>
	TWA	1 mg/m <sup>3</sup>

#### EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	STEL	2 mg/m <sup>3</sup>
	TWA	1 mg/m <sup>3</sup>

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Recommended monitoring procedures** Not available.

### Derived no effect levels (DNELs)

#### Workers

Components	Value	Assessment factor	Notes
Phosphoric acid (CAS 7664-38-2)	Long-term, Local, Inhalation	1 mg/m <sup>3</sup>	Repeated dose toxicity
	Long-term, Systemic, Inhalation	10,7 mg/m <sup>3</sup>	
	Short-term, Local, Inhalation	2 mg/m <sup>3</sup>	50
Zinc sulphate (CAS 7733-02-0)	Long-term, Systemic, Dermal	8,3 mg/kg	1
	Long-term, Systemic, Inhalation	1 mg/m <sup>3</sup>	1

### Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Zinc sulphate (CAS 7733-02-0)	Freshwater	20,6 µg/l	1
	Marine water	6,1 µg/l	1
	Sediment (freshwater)	117,8 mg/kg	1
	Sediment (marine water)	56,5 mg/kg	1
	Soil	35,6 mg/kg	1
	STP	52 µg/l	100

### 8.2. Exposure controls

**Appropriate engineering controls** Adequate ventilation to maintain air contaminants below exposure limits.  
Eye wash facilities and emergency shower must be available when handling this product.

#### Individual protection measures, such as personal protective equipment

**Eye/face protection** Splash proof chemical goggles.  
Face shield.  
CEN : EN 166

#### Skin protection

**- Hand protection** Gauntlet type neoprene gloves (Protection against unintentional short-term contact)  
Gauntlet type nitrile gloves (Protection against unintentional short-term contact)  
Coating thickness: 0.5 mm  
Penetration time: > 480 min  
CEN : EN 374-1/2/3/4; EN 420

**- Other** Chemical resistant apron.  
CEN : EN ISO 13688; EN ISO 6530; EN ISO 6529; EN 14605

**Respiratory protection** In case of insufficient ventilation, use a breathing mask with filter type: P2  
CEN : EN 140; EN 143; EN 149

**Thermal hazards** Not available.

**Environmental exposure controls** Prevent from entering in public sewers or the immediate environment.  
Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.



P&WC

# SAFETY DATA SHEET

## FLOGARD POT6101 (ChemiPure PT 28)

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

##### Appearance

Colour Colourless

Physical state Liquid

Odour None

Odour threshold Not available.

pH (concentrated product) 1,4

pH in aqueous solution Not available.

Melting point/freezing point -25 °C

Initial boiling point and boiling range 104 °C

Flash point Not applicable.

Evaporation rate < 1 (Ether = 1)

Flammability (solid, gas) Not applicable.

##### Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure 18 mm Hg

Vapour pressure temp. 21 °C

Vapour density < 1 (Air = 1)

Relative density 1,4

Relative density temperature 21 °C

##### Solubility

Solubility (water) 100 %

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not applicable.

Decomposition temperature Not available.

Viscosity 10 cps

Viscosity temperature 21 °C

Explosive properties Not available.

Oxidising properties Not available.

#### 9.2. Other information

Pour point -28 °C

Shelf life 720 days

VOC 0 % (Calculated)

### SECTION 10: Stability and reactivity

10.1. Reactivity Not available.

10.2. Chemical stability Material is stable under normal conditions.

10.3. Possibility of hazardous reactions Not applicable.

10.4. Conditions to avoid None known.

10.5. Incompatible materials Avoid contact with strong bases.

10.6. Hazardous decomposition products Oxides of phosphorus evolved in fire.  
Oxides of sulphur evolved in fire.



P&WC

# SAFETY DATA SHEET

## FLOGARD POT6101 (ChemiPure PT 28)

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Product	Test Results
FLOGARD POT6101 (ChemiPure PT 28) (Mixture)	Acute Dermal LD50 Rabbit: > 5000 mg/kg (Calculated according to GHS additivity formula) Acute Oral LD50 Rat: 1136 mg/kg (Calculated according to GHS additivity formula)

Components	Test Results
Phosphoric acid (7664-38-2)	Acute Dermal LD50 Rabbit: 2740 mg/kg Acute Oral LD50 Rat: 300 mg/kg
Zinc sulphate (7733-02-0)	Acute Dermal LD50 Rabbit: > 2000 mg/kg Acute Oral LD50 Rat: 1710 mg/kg

<b>Acute toxicity</b>	Harmful if swallowed.
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.
<b>Serious eye damage/irritation</b>	Causes serious eye damage.
<b>Respiratory or skin sensitisation</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - single exposure</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.

#### Information on likely routes of exposure

<b>Ingestion</b>	Causes digestive tract burns. Harmful if swallowed.
<b>Inhalation</b>	May cause irritation to the respiratory system.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.
<b>Symptoms</b>	Not available.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.
<b>Mixture versus substance information</b>	None known.
<b>Other information</b>	Not available.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Product	Species	Test Results	
FLOGARD POT6101 (ChemiPure PT 28) (CAS Mixture)			
<b>Aquatic</b>			
Crustacea	LC50	Daphnia magna	3,8 mg/l, Static Acute Bioassay, 48 hour
	NOEL	Daphnia magna	3,2 mg/l, Static Acute Bioassay, 48 hour
Fish	LC50	Fathead minnow	16 mg/l, Acute toxicity, 96 hour, (Estimated)
		Rainbow trout	21,3 mg/l, Static Acute Bioassay, 96 hour



P&WC

# SAFETY DATA SHEET

## FLOGARD POT6101 (ChemiPure PT 28)

Product	Species	Test Results
	NOEL	Fathead minnow
		6,3 mg/l, Acute toxicity, 96 hour, (Estimated)
		Rainbow trout
		15,5 mg/l, Static Acute Bioassay, 96 hour

### 12.2. Persistence and degradability

No data available

### 12.3. Bioaccumulative potential

Not available.

### Partition coefficient n-octanol/water (log Kow)

Not available.

### Bioconcentration factor (BCF)

Not available.

### 12.4. Mobility in soil

Not available.

### 12.5. Results of PBT and vPvB assessment

Not a PBT or vPvB substance or mixture.

### 12.6. Other adverse effects

Heavy metals: Zn = 74,4 mg/g (calculated data)

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Contaminated packaging

According to Hazardous Waste Regulations.

EWC ( European Waste Code ) recommendation : 15 01 10 15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified. 15 01 Packaging (including separately collected municipal packaging waste). 15 01 10 Packaging containing residues of or contaminated by dangerous substances. Depending on the origin and state of the waste, other EWC numbers may be applicable too.

#### Disposal methods/information

According to Hazardous Waste Regulations.

EWC ( European Waste Code ) recommendation : 16 03 03  
 16 Wastes not otherwise specified in the list.  
 16 03 Off-specification batches and unused products.  
 16 03 03 Inorganic wastes containing dangerous substances.  
 Depending on the origin and state of the waste, other EWC numbers may be applicable too.

## SECTION 14: Transport information

### ADR

- 14.1. UN number UN3264
- 14.2. UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Zinc sulphate, mixture)
- 14.3. Transport hazard class(es)
  - Class 8
  - Subsidiary risk -
  - Tunnel restriction code (E)
- 14.4. Packing group II
- 14.5. Environmental hazards Yes
- 14.6. Special precautions for user Not available.

### RID

- 14.1. UN number UN3264
- 14.2. UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Zinc sulphate, mixture)
- 14.3. Transport hazard class(es)
  - Class 8
  - Subsidiary risk -
- 14.4. Packing group II
- 14.5. Environmental hazards Yes
- 14.6. Special precautions for user Not available.



P&WC

# SAFETY DATA SHEET

## FLOGARD POT6101 (ChemiPure PT 28)

### ADN

- 14.1. UN number UN3264  
14.2. UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Zinc sulphate, mixture)  
14.3. Transport hazard class(es)  
    Class 8  
    Subsidiary risk -  
14.4. Packing group II  
14.5. Environmental hazards Yes  
14.6. Special precautions for user Not available.

### IATA

- 14.1. UN number UN3264  
14.2. UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Zinc sulphate, mixture)  
14.3. Transport hazard class(es)  
    Class 8  
    Subsidiary risk -  
14.4. Packing group II  
14.5. Environmental hazards Yes  
ERG Code Not available.  
14.6. Special precautions for user Not available.

### IMDG

- 14.1. UN number UN3264  
14.2. UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Zinc sulphate, mixture)  
14.3. Transport hazard class(es)  
    Class 8  
    Subsidiary risk -  
14.4. Packing group II  
14.5. Environmental hazards  
    Marine pollutant Yes  
EmS F-A, S-B  
14.6. Special precautions for user Not available.  
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code This substance/mixture is not intended to be transported in bulk.

ADN; ADR; IATA; IMDG; RID







P&WC

# SAFETY DATA SHEET

## FLOGARD POT6101 (ChemiPure PT 28)

Marine pollutant



### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

Zinc sulphate (CAS 7733-02-0)

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

##### Authorisations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

##### Restrictions on use

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

Not listed.

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

Not listed.

##### Other EU regulations

**Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**

Zinc sulphate (CAS 7733-02-0)

##### National regulations

Not available.

##### 15.2. Chemical safety assessment

Not available.

##### NSF Registered and/or meets USDA (according to 1998 guidelines):

Registration No. – 140825

Category Code(s):

G5 Cooling and retort water treatment products

G7 Boiler, steam line treatment products – nonfood contact

##### Inventory status

###### Country(s) or region

Europe

###### Inventory name

European Inventory of Existing Commercial Chemical Substances (EINECS)

###### On inventory (yes/no)\*

Yes



P&WC

## SAFETY DATA SHEET

# FLOGARD POT6101 (ChemiPure PT 28)

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European List of Notified Chemical Substances (ELINCS)	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### SECTION 16: Other information

#### List of abbreviations

COD: Chemical Oxygen Demand  
EC-No: European Commission Number  
IATA: International Air Transport Association  
CAS: Chemical Abstract Service.  
CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.  
CEN: European Committee for Standardization (Comité Européen de Normalisation).  
TWA: Time Weighted Average.  
STEL: Short-term Exposure Limit.  
LD50: Lethal Dose 50%.  
LC50: Lethal Concentration 50%.  
EC50: Effective Concentration 50%.  
NOEL: No observed effect level.  
BOD: Biochemical oxygen demand.  
TOC: Total Organic Carbon.  
ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route).  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures).  
IMDG Code: International Maritime Dangerous Goods Code.  
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).  
Safety data sheets of raw materials.

#### References

#### Information on evaluation method leading to the classification of mixture

The physical, health and environmental hazards of this mixture are assessed by applying the classification criteria for each hazard class or differentiation in Parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008 (CLP).

#### Full text of any H-statements not written out in full under Sections 2 to 15

H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

#### Revision information

This document has undergone significant changes and should be reviewed in its entirety.

#### Training information

Provide training on safe handling while considering the type of application and exposure scenarios.

#### Based on EC Directive / Regulations

(EC) No 1907/2006 (REACH)  
(EU) 2015/830  
(EC) No 1272/2008  
(EU) No 1357/2014

#### Further information

Correction in Section: 2,8,11,14