

# 0-54-0 Defluorinated Phosphoric Acid

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : 0-54-0 Defluorinated Phosphoric Acid  
Product code : M12011

#### 1.2. Recommended use and restrictions on use

#### 1.3. Supplier

No additional information available

#### 1.4. Emergency telephone number

### SECTION 2: Hazard(s) identification

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

##### GHS US classification

Corrosive to metals Category 1 H290 May be corrosive to metals  
Acute toxicity (dermal) Category 4 H312 Harmful in contact with skin  
Skin corrosion/irritation Category 1 H314 Causes severe skin burns and eye damage

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H290 - May be corrosive to metals  
H312 - Harmful in contact with skin  
H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS US) :

P234 - Keep only in original container.  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting  
P302+P352 - If on skin: Wash with plenty of water  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
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 center or doctor  
P312 - Call a poison center or doctor if you feel unwell  
P321 - Specific treatment (see supplemental first aid instruction on this label)  
P322 - Specific treatment (see supplemental first aid instruction on this label)  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P363 - Wash contaminated clothing before reuse.  
P390 - Absorb spillage to prevent material-damage.  
P405 - Store locked up.  
P406 - Store in corrosive resistant container with a resistant inner liner.  
P501 - Dispose of contents/container to ...in accordance with local/regional/national regulations

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

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### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
phosphoric acid (7664-38-2)	(CAS-No.) 7664-38-2		Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314
Proprietary*	(CAS-No.) Not Applicable		Not classified

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
- First-aid measures after skin contact : Immediately call a poison center or doctor/physician. Specific measures (see supplemental first aid instruction on this label). Wash with plenty of soap and water. Wash contaminated clothing before reuse. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician. Do not induce vomiting. Call a physician immediately.

#### 4.2. Most important symptoms and effects (acute and delayed)

- Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful in contact with skin.
- Symptoms/effects : Causes severe skin burns and eye damage.
- Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin. Burns.
- Symptoms/effects after eye contact : Serious damage to eyes.
- Symptoms/effects after ingestion : Burns.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin, eyes and clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

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### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Absorb spillage to prevent material-damage.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : May be corrosive to metals.
- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact during pregnancy/while nursing. Do not get in eyes, on skin, or on clothing.
- Hygiene measures : Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use. Store in a well-ventilated place. Keep cool. Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight. Metals.
- Packaging materials : Store in corrosive resistant container with a resistant inner liner.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>0-54-0 Defluorinated Phosphoric Acid</b>	
No additional information available	
<b>phosphoric acid (7664-38-2) (7664-38-2)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
ACGIH STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
<b>Proprietary* (Not Applicable)</b>	
No additional information available	

### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

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### Hand protection:

Wear protective gloves.

### Eye protection:

Chemical goggles or face shield. Safety glasses

### Skin and body protection:

Wear suitable protective clothing

### Respiratory protection:

Wear appropriate mask

### Personal protective equipment symbol(s):



### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Color	: Green
Odor	: Odorless when cold; pungent when hot.
Odor threshold	: No data available
pH	: < 1
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: Approx. 270°F @ 1 atmosphere
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: 5.0 @ 78°F
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 14.09 lb/gal
Solubility	: Soluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapors.

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### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Exothermic reaction with water, produces heat.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases. metals. May be corrosive to metals.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Not classified

ATE US (dermal)	1527.778 mg/kg body weight
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#### phosphoric acid (7664-38-2) (7664-38-2)

LD50 oral rat	1530 mg/kg (Rat)
LD50 dermal rat	≥ 1260 mg/kg body weight

Skin corrosion/irritation	: Causes severe skin burns. pH: < 1
Serious eye damage/irritation	: Assumed to cause serious eye damage pH: < 1
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful in contact with skin.
Symptoms/effects	: Causes severe skin burns and eye damage.
Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin. Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. Before neutralisation, the product may represent a danger to aquatic organisms.
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<b>phosphoric acid (7664-38-2) (7664-38-2)</b>	
LC50 fish 1	138 mg/l (96 h; Pisces; Pure substance)

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phosphoric acid (7664-38-2) (7664-38-2)	
LC50 other aquatic organisms 1	240 mg/l (96 h; Protozoa; Pure substance)
LC50 fish 2	100 – 1000 mg/l (Pisces; Pure substance)
LC50 other aquatic organisms 2	100 – 1000 mg/l (Pure substance)
TLM fish 1	138 ppm (24 h; Gambusia affinis; Pure substance)
Threshold limit other aquatic organisms 1	240 mg/l (96 h; Protozoa; Pure substance)
Threshold limit other aquatic organisms 2	100 - 1000, Pure substance

### 12.2. Persistence and degradability

0-54-0 Defluorinated Phosphoric Acid	
Persistence and degradability	Not established.
phosphoric acid (7664-38-2) (7664-38-2)	
Persistence and degradability	Biodegradability: not applicable. No (test) data on mobility of the components available. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
Proprietary* (Not Applicable)	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

0-54-0 Defluorinated Phosphoric Acid	
Bioaccumulative potential	Not established.
phosphoric acid (7664-38-2) (7664-38-2)	
Partition coefficient n-octanol/water (Log Pow)	-0.77 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.
Proprietary* (Not Applicable)	
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid unintentional release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.  
Ecology - waste materials : Avoid unintentional release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1805 Phosphoric acid solution, 8, III  
UN-No.(DOT) : UN1805  
Proper Shipping Name (DOT) : Phosphoric acid solution  
Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136  
Packing group (DOT) : III - Minor Danger

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Hazard labels (DOT) : 8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Special Provisions (49 CFR 172.102) : A7 - Steel packaging must be corrosion-resistant or have protection against corrosion.  
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.  
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Other information : No supplementary information available.

### Transportation of Dangerous Goods

#### Transport by sea

Transport document description (IMDG) : UN 1805 PHOSPHORIC ACID SOLUTION, 8, III

UN-No. (IMDG) : 1805

Proper Shipping Name (IMDG) : PHOSPHORIC ACID SOLUTION

Class (IMDG) : 8 - Corrosive substances

Packing group (IMDG) : III - substances presenting low danger

Limited quantities (IMDG) : 5 L

#### Air transport

Transport document description (IATA) : UN 1805 Phosphoric acid, solution, 8, III

UN-No. (IATA) : 1805

Proper Shipping Name (IATA) : Phosphoric acid, solution

Class (IATA) : 8 - Corrosives

Packing group (IATA) : III - Minor Danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### 0-54-0 Defluorinated Phosphoric Acid

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Proprietary*	CAS-No. Not Applicable	%
<b>phosphoric acid (7664-38-2) (7664-38-2)</b>		
CERCLA RQ	5000 lb	

### 15.2. International regulations

#### CANADA

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### phosphoric acid (7664-38-2) (7664-38-2)

Listed on the Canadian DSL (Domestic Substances List)

### Proprietary\* (Not Applicable)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
phosphoric acid (7664-38-2)(7664-38-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

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Other information : None.

Full text of H-phrases:

H290	May be corrosive to metals
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*