

# Performance Chemical Co.

Product: Pro-Flow-589

Current Issue Date: June 1, 2016

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## Pro-Flow 589

## GHS

## Safety Data Sheet

**From: Performance Chemical Company**

9105 W Interstate 20  
Midland, TX 79706

Phone: (432) 332-3059  
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All non-emergency questions should be directed to (432) 332-3059 for assistance.

24 Hour Emergency Telephone  
CHEM-TEL, INC. 1-800-255-3924

**NOTE:** CHEM-TEL emergency number to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals.

## 1. Product Identification

**Trade Name:** Pro-Flow 589 Surfactant  
**CAS Number:** Mixture – See Section 2  
**Product Family:** Complex Mixture. Contains Phosphoric Acid  
**Synonyms:** N/AP

## 2. Hazards Identification

**GHS Classifications:** Corrosive Liquid  
Acute Toxicity-Category 4  
Aspiration Hazard-Category 1  
Skin Irritation-Category 2  
Eye Irritation-Category 2  
TOST (Repeated)-Category 2  
Reproductive Toxicity-Category 1B  
Chronic Aquatic Toxicity-Category IV



**DANGER**

**Hazard Statements:**

CORROSIVE LIQUID, – IRRITANT – ABSORBED THROUGH THE SKIN - CENTRAL NERVOUS SYSTEM -HARMFUL OR FATAL IF SWALLOWED - ASPIRATION HAZARD

**Precautionary Statements:**

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This product contains Phosphoric Acid which may cause severe eye and skin burns.

If swallowed, and patient is fully conscious and alert, give 2 to 4 glasses of water or milk, DO NOT INDUCE VOMITING. Get medical attention immediately.

Contact with this product may cause severe eye, skin, and mucous membrane irritation, with possible destruction of tissues. Harmful if absorbed through the skin. Avoid prolonged breathing of vapors or mists. Inhalation may cause severe irritation, anesthetic effects (dizziness, nausea, headache, intoxication) and respiratory system effects. Excessive exposure may affect the liver, kidneys, and heart.

## 3. Composition/Information on Ingredients

Component Name	CAS Registry No.	Concentration % (Wt.)
Phosphoric Acid	7664-38-2	5- 10%
Phosphonic Acid (Nitrilo Tris (Methylene)) Tris-	6419-19-8	2- 10%
Quaternary Ammonium Chloride	68909-18-2	2- 10%

## 4. First Aid Measures:

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

### Inhalation

Immediately move individual to fresh air. If individual is not breathing, immediately begin artificial respiration. If heart has stopped, immediately begin CardioPulmonary Resuscitation (CPR). If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately.

### Eye Contact

Check for and remove contact lenses. Immediately flush eyes with cool, clean low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. Do not use eye ointment. Seek medical attention immediately. **Possible destruction of eye tissues if not irrigated immediately.**

### Skin Contact

Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.

### Ingestion

If patient is fully conscious and alert, give 2 to 4 cups of water or milk, DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. If spontaneous vomiting is about to occur, place individual's head below his knees. If individual is drowsy or unconscious, place on his left side with head down. Do not leave individual unattended. Seek medical attention immediately.

### Notes to Physician

**This product contains Phosphoric Acid**, which can cause severe burns. If severe inhalation exposure is suspected, observe for 48 to 72 hours for delayed pulmonary edema. Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Vigorous anti-inflammatory / steroid treatment may be required at first evidence of upper airway or pulmonary edema. Administer 100 percent humidified supplemental oxygen with assisted ventilation as required.

## 5. Fire Fighting Measures

### NFPA Flammability Classification

#### Flash Point Method

CLOSED CUP: > 200 ° F. (37.7 ° C.). (Tagliabue [ASTM D-56])

#### Flammable Limits

Lower: App. 1.0% Upper: App. 10.0%

#### Autoignition Temperature

No Data

#### Hazardous Combustion Products

Burning or excessive heating may produce smoke, carbon monoxide, carbon dioxide, oxides of phosphorous, and possibly other harmful gasses and/or vapors.

#### Fire and Explosion Hazards

Corrosive Liquid. Low pH material causes formation of flammable and explosive hydrogen gas on contact with most metals.  
Combustible Liquid! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash

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fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. May create vapor/air explosion hazard in confined spaces such as sewers. If container is not properly cooled, it can rupture in the heat of a fire. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

## Extinguishing Media

Use dry chemicals, carbon dioxide (CO<sub>2</sub>), foam, water fog, or inert gas (nitrogen).

## Fire Fighting Instructions

NEVER use a water jet directly on the fire because it may spread the fire to a larger area. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS. Notify appropriate authorities if liquid(s) enter sewers / waterways.

## 6. Accidental Release Measures

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

### General

CORROSIVE LIQUID. Low pH material may cause severe tissue burns on contact. Neutralize with alkaline material (soda ash, lime). Liquid may react (self-neutralize) on contact with concrete or caliche.

### Small Spills

Neutralize with alkaline material (soda ash, lime), then absorb liquid on vermiculite, floor absorbent, or other absorbent material and transfer to container for disposal.

### Large Spills

Secure area and control access. Dike far ahead of a liquid spill to ensure complete collection. Water mist or spray may be used to reduce or disperse vapors; but, it may not prevent ignition in closed spaces. This material's run-off may create an explosion or fire hazard. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If run-off occurs, notify proper authorities that a spill has occurred. Pump or vacuum transfer spilled product to clean containers for recovery. Neutralize with alkaline material (soda ash, lime). Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

## 7. Handling and Storage

### Handling

A spill or leak can cause an immediate fire / explosion hazard. Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Bond and ground all equipment before transferring this material from one container to another. Do not contact with oxidizable materials. Do not breathe vapor. Use only with adequate ventilation / personal protection. Never siphon by mouth or take internally. Avoid contact with eyes, skin and clothing. Prevent contact with food, chewing, or smoking materials.

### Storage

Store and transport in accordance with all applicable laws. Keep containers tightly closed and store in a cool, dry, well-ventilated place, plainly labeled, and out of closed vehicles. Keep away from all ignition sources! Ground all equipment containing this material. Containers should be able to withstand pressures expected from warming and cooling in storage. This product should be stored in a cool, well-ventilated area. All electrical equipment in areas where this material is stored or handled should be installed in accordance with applicable requirements of the NFPA's National Electrical Code (NEC).

## 8. Exposure Controls and Personal Protection

### Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and/or mists below the pertinent exposure limits (see below). All electrical equipment should comply with the NFPA NEC Standards. Ensure that an emergency eye wash station and safety shower are near the work-station location.

### Personal Protective Equipment (PPE)

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional Personal Protective Equipment may be required.

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<b>Eye Protection</b>	Safety glasses with side shields are recommended as a minimum protection. During transfer operations or when there is a likelihood of misting, splashing, or spraying, chemical goggles and face shield should be worn. Suitable eye wash equipment should be readily available.
<b>Hand Protection</b>	Avoid skin contact and use gloves (disposable PVC, neoprene, Nitrile, vinyl, or PVC/NBR). Before eating, drinking, smoking, use of toilet facilities, or leaving work, wash hands with plenty of mild soap and water. DO NOT use gasoline, kerosene, other solvents, or harsh abrasive skin cleaners.
<b>Body Protection</b>	Avoid skin contact. It is recommended that fire-retardant garments (e.g. Nomex™) be worn while working with flammable and combustible liquids. If splashing or spraying is expected, chemical-resistant protective clothing (Tyvek®, Nitrile, or neoprene) should be worn. This might include long sleeves, apron, slicker suit, boots, and additional facial protection. If general contact occurs, IMMEDIATELY remove soaked clothing and take a shower. Contaminated leather goods should be removed promptly and discarded.
<b>Respiratory Protection</b>	For unknown vapor concentrations use a positive-pressure, pressure-demand, self-contained breathing apparatus (SCBA). For known vapor concentrations above the occupational exposure guidelines (see below), use a NIOSH-approved organic vapor respirator if adequate protection is provided. Protection factors vary depending upon the type of respirator used. Respirator use should follow OSHA requirements (29 CFR 1910.134) or equivalent standard (e.g. ANSI Z88.2).
<b>General Comments</b>	Warning! Odor is an inadequate warning for hazardous conditions.

## Occupational Exposure Guidelines

### Substance

Phosphoric Acid

### Applicable Workplace Exposure Levels

Airborne Exposure Limits:

US(OSHA)/2003	1 mg/m3	TWA
US(ACGIH)/2003	1mg/m3	TWA
US(ACGIH)/2003	3 mg/m3	STEL

## 9. Physical and Chemical Properties

<b>Physical State</b>	Liquid	<b>Color</b>	Amber, Water-Clear.
<b>Odor</b>	Alcohol Odor	<b>pH</b>	< 2.0
<b>Specific Gravity</b>	1.048 g/mL	<b>Liquid Density</b>	8.74 Lbs. / Gallon
<b>Vapor Pressure</b>	31.5 mm Hg @ 68 ° F.	<b>Vapor Density</b>	~ 1.2 (Air = 1)
<b>Boiling Point / Range</b>	> 200° F.	<b>Freezing Point</b>	App. + 20° F.
<b>Evaporation Rate</b>	Slower than Ethyl Ether	<b>Solubility in Water</b>	Soluble at all temperatures

## 10. Stability and Reactivity

<b>Chemical Stability</b>	Stable
<b>Hazardous Polymerization</b>	Not expected to occur.
<b>Conditions to Avoid</b>	Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.
<b>Materials Incompatibility</b>	Strong oxidizing agents, Chlorine, Coatings, Rubber, Certain forms of plastics. Aluminum metals. Zinc (i.e. Galvanized steel). Iron, Copper, or Bronze. Any reactive metal which will displace hydrogen.
<b>Hazardous Decomposition Products</b>	May form carbon monoxide, carbon dioxide, and other oxides of carbon, and phosphorous.

## 11. Toxicological Information

<b>Product Summary</b>	This product contains Methanol, which can cause blindness and be life threatening. Methanol is a human poison. It can produce severe metabolic acidosis, blindness and death. The onset of
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	symptoms may be delayed for 18 to 24 hours after ingestion. Toxicity is related to the degree of acidosis produced.
<b>Carcinogenicity</b>	None of the intentional materials in this product are listed by ACGIH, IARC, NIOSH, NTP or OSHA.
<b>Reproductive Effects</b>	Phosphoric Acid: No Data
<b>Neurotoxicity</b>	No information available
<b>Mutagenicity</b>	Phosphoric Acid: No Data
<b>Immediate (Acute) Effects</b>	<b>Low pH material</b> , may cause severe eye and skin burns, with possible destruction of tissues.
<b>Delayed (Subchronic and Chronic) Effects</b>	No Data Available.
<b>Other Studies</b>	Phosphoric Acid: No Data

## 12. Ecological Information

### Ecotoxicity

Ecological effects testing has not been conducted on this material. If spilled, this material, its storage tank water bottoms and sludge, and any contaminated soil or water may be hazardous to human, animal, and aquatic life. The Methanol content of this product is volatile and might contribute to the creation of atmospheric smog.

### Environmental Fate

When released into the soil, this material may leach into groundwater. When released to water, acidity may be readily reduced by natural water hardness minerals; the phosphate, however, may persist indefinitely. This material is potentially toxic to freshwater and saltwater ecosystems. The Methanol component of this product will normally evaporate rapidly. Methanol is expected to biodegrade in soil and water very rapidly.

## 13. Disposal Considerations

### Waste Management Information

Dispose of in accordance with all applicable local, state, and federal regulations. Recovered non-usable material may be regulated by US EPA as a hazardous waste due to its ignitability and/or its toxic characteristics. In addition, conditions of use may cause this material to become a hazardous waste, as defined by Federal or State regulations. It is the responsibility of the user to determine if the material is a RCRA "hazardous waste" at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR Parts 260 through 271). State and/or local regulations might be even more restrictive. Contact the RCRA/Superfund Hotline at (800) 424-9436 or your regional US EPA office for guidance concerning case specific disposal issues.

## 14. Transport Information

### DOT Information - 49 CFR 172.101

<b>Proper Shipping Name</b>	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (Phosphoric acid), UN 3265, II	
<b>Hazard Class</b>	Class 8: Corrosive Liquid	
<b>Packing Group</b>	II	
<b>UN / NA ID</b>	UN 3265	
<b>NOS Component</b>	Phosphoric Acid	
<b>RQ (Reportable Quantity) - 49 CFR 172.101</b>	<u>Component</u>	<u>Product Quantity (Lbs.)</u>
<b>ERG No.</b>	153	Phosphoric Acid 5,000 Lbs.
<b>Placards Required</b>		



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## 15. Regulatory Information

<b>TSCA Inventory</b>	The intentional ingredients of this product are listed.		
<b>CERCLA RQ - 40 CFR 302.4(a)</b>	<u>Component</u>	<u>CAS Number</u>	<u>RQ (Lbs.)</u>
	Phosphoric Acid	7664-38-2	5,000 Lbs.
<b>SARA 302 Components – 40 CFR 355 Appendix A</b>	None identified		
<b>SARA 311/312 - 40 CFR 370.2</b>	Fire Hazard, Acute (Immediate) Health Hazard.		
<b>SARA 313 Components - 40 CFR 372.65</b>			
<b>OSHA Process Safety Management – 29 CFR 1910</b>	None Listed		
<b>EPA Accidental Release Prevention – 40 CFR 68</b>	None Listed		
<b>California Proposition 65</b>	None for Methanol.		
<b>New Jersey RTK Label Information</b>	<u>Section 313 Component(s)</u>	<u>CAS Number</u>	
	Phosphoric Acid	7664-38-2	
<b>Pennsylvania RTK Label Information</b>	<u>Section 313 Component(s)</u>	<u>CAS Number</u>	
	Phosphoric Acid	7664-38-2	

## 16. Other Information

### Disclaimer of Liability:

The information in this msds 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. This msds was prepared and is to be used only for this product.

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 the product.

### Abbreviations:

App. = Approximately    EQ = Equal    > = Greater Than    < = Less Than    N/AP = Not Applicable    ND = No Data  
NE = Not Established

ACGIH = American Conference of Governmental Industrial Hygienists  
IARC = International Agency for Research on Cancer  
NIOSH = National Institute of Occupational Safety and Health  
NPCA = National Paint and Coating Manufacturers Association  
NFPA = National Fire Protection Association

AIHA = American Industrial Hygiene Association  
NTP = National Toxicology Program  
OSHA = Occupational Safety and Health Administration  
HMIS = Hazardous Materials Information System  
EPA = Environmental Protection Agency

### Explanation of the HMIS® Ratings

#### HMIS® III - HEALTH HAZARD RATINGS

\* **Chronic Hazard** Chronic (long-term) health effects may result from repeated overexposure

**0 Minimal Hazard** No significant risk to health

**1 Slight Hazard** Irritation or minor reversible injury possible

**2 Moderate Hazard** Temporary or minor injury may occur

**3 Serious Hazard** Major injury likely unless prompt action is taken and medical treatment is given

**4 Severe Hazard** Life-threatening, major or permanent damage may result from single or repeated overexposures

#### HMIS® III - FLAMMABILITY RATINGS

**0 Minimal Hazard** Materials that will not burn

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- 1 Slight Hazard** Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
- 2 Moderate Hazard** Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)
- 3 Serious Hazard** Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)
- 4 Severe Hazard** Flammable gases, or very volatile flammable liquids with flash points below 73 F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA)

## HMIS<sup>®</sup> III - PHYSICAL HAZARD RATINGS

- 0 Minimal Hazard** Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
- 1 Slight Hazard** Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
- 2 Moderate Hazard** Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.
- 3 Serious Hazard** Materials that may form explosive mixtures with water and are capable of detonation or explosive reaction in the presence of a strong initiating source. Materials may polymerize, decompose, self-react, or undergo other chemical change at normal temperature and pressure with moderate risk of explosion.
- 4 Severe Hazard** Materials that are readily capable of explosive water reaction, detonation or explosive decomposition, polymerization, or self-reaction at normal temperature and pressure.