



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Floralife® P.A.C. (Professional Agricultural Cleaner)</b>	
<b>Other means of identification</b>	None.	
<b>Recommended use</b>	Liquid concentrate cleaner.	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Company name</b>	Floralife, DBA a division of Smithers-Oasis Company	
<b>Address</b>	751 Thunderbolt Drive Walterboro, SC 29488 US US	
<b>Telephone</b>	843-538-3839	
<b>Website</b>	www.floralife.com	
<b>E-mail</b>	Not available.	
<b>Emergency phone number</b>	CHEMTREC	800-424-9300 303-623-5716 or 877-740-5015

## 2. Hazard(s) identification

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Danger	
<b>Hazard statement</b>	May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage.	
<b>Precautionary statement</b>		
<b>Prevention</b>	Keep only in original container. Do not breathe mist or vapor. Wash thoroughly after handling. Wear eye protection/face protection. Wear protective gloves/protective clothing/eye protection/face protection.	
<b>Response</b>	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.	
<b>Storage</b>	Store locked up. Store in corrosive resistant container with a resistant inner liner.	
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.	

## 3. Composition/information on ingredients

Water

### Mixtures

#### Chemical name

Floralife® P.A.C. (Professional Agricultural Cleaner)  
927657 Version #: 01 Revision date: - Issue date: 01-June-2015

SDS US

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CAS number	%
7732-18-5	> 40

Sodium hydroxide	1310-73-2	< 20
TRADE SECRET	Proprietary	< 15
Sodium chloride	7647-14-5	< 10
TRADE SECRET	Proprietary	< 5
TRADE SECRET	Proprietary	< 5
TRADE SECRET	Proprietary	< 1

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
<b>Environmental precautions</b>	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Provide adequate ventilation. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m <sup>3</sup>
TRADE SECRET (CAS Proprietary)	PEL	980 mg/m <sup>3</sup>
		400 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>
TRADE SECRET (CAS Proprietary)	STEL	400 ppm
	TWA	200 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>
TRADE SECRET (CAS Proprietary)	STEL	1225 mg/m <sup>3</sup>
	TWA	500 ppm
		980 mg/m <sup>3</sup>
		400 ppm

#### US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
TRADE SECRET (CAS Proprietary)	STEL	2 mg/m <sup>3</sup>

### Biological limit values

#### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
TRADE SECRET (CAS Proprietary)	40 mg/l	Acetone	Urine	*

\* - For sampling details, please see the source document.

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

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

#### Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

#### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

##### Other

Wear appropriate chemical resistant clothing.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Pale yellow.
<b>Odor</b>	Mild disinfectant.
<b>Odor threshold</b>	Not available.
<b>pH</b>	7.5 - 8.5
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.

### Upper/lower flammability or explosive limits

<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.

<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	1.27

### Solubility(ies)

<b>Solubility (water)</b>	100 %
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

### Other information

<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	May be corrosive to metals.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong acids. Strong oxidizing agents. Metals.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause irritation to the respiratory system.
<b>Skin contact</b>	Causes severe skin burns.

**Eye contact** Causes serious eye damage.

**Ingestion** Causes digestive tract burns.

**Symptoms related to the physical, chemical and toxicological characteristics** Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

#### Information on toxicological effects

##### Acute toxicity

Components	Species	Test Results
Sodium chloride (CAS 7647-14-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 10000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 42 mg/l, 1 Hours
<i>Oral</i>		
LD50	Rat	3550 mg/kg
TRADE SECRET (CAS Proprietary)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 20000 mg/kg 12800 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 10.5 mg/l, 1 Hours
<i>Oral</i>		
LD50	Rat	8.91 g/kg 4.7 g/kg

**Skin corrosion/irritation** Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation** Causes serious eye damage.

##### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

##### IARC Monographs. Overall Evaluation of Carcinogenicity

TRADE SECRET (CAS Proprietary) 3 Not classifiable as to carcinogenicity to humans.

##### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Sodium chloride (CAS 7647-14-5)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna) 340.7 - 469.2 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus) 1294.6 mg/l, 96 hours
Sodium hydroxide (CAS 1310-73-2)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Ceriodaphnia dubia) 34.59 - 47.13 mg/l, 48 hours
<i>Acute</i>		
Fish	LC50	Bluegill (Lepomis macrochirus) 99 mg/l, 48 hours Mosquitofish (Gambusia affinis affinis) 125 mg/l, 96 hours
TRADE SECRET		
<b>Aquatic</b>		
Algae	LC50	Green algae (Dunaliella primolecta) 0.4 mg/l Red algae (Porphyra yezoensis) 2.3 mg/l, 10 days
Crustacea	EC50	Water flea (Daphnia magna) 9.1 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus) > 1400 mg/l, 96 hours Rainbow trout (Oncorhynchus mykiss) 10.8 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential**

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

TRADE SECRET 0.05  
0.45

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

**Disposal instructions** D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]  
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]  
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

**DOT**

**UN number** UN1824  
**UN proper shipping name** Sodium hydroxide solution  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Label(s)** 8  
**Packing group** II  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**Special provisions** B2, IB2, N34, T7, TP2  
**Packaging exceptions** 154  
**Packaging non bulk** 202  
**Packaging bulk** 242

**IATA**

**UN number** UN1824  
**UN proper shipping name** Sodium hydroxide solution  
**Transport hazard class(es)**  
    **Class** 8  
    **Subsidiary risk** -  
**Packing group** II  
**Environmental hazards** No.  
**ERG Code** 8L  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

**UN number** UN1824  
**UN proper shipping name** SODIUM HYDROXIDE SOLUTION  
**Transport hazard class(es)**  
    **Class** 8  
    **Subsidiary risk** -  
**Packing group** II  
**Environmental hazards**  
    **Marine pollutant** No.  
**EmS** F-A, S-B  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Sodium hydroxide (CAS 1310-73-2)	LISTED
TRADE SECRET (CAS Proprietary)	LISTED
	LISTED
	LISTED

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
 Delayed Hazard - No  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
TRADE SECRET	Proprietary	< 5

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.



## US state regulations

### US. Massachusetts RTK - Substance List

Sodium hydroxide (CAS 1310-73-2)  
TRADE SECRET (CAS Proprietary)

### US. New Jersey Worker and Community Right-to-Know Act

Sodium hydroxide (CAS 1310-73-2)  
TRADE SECRET (CAS Proprietary)

### US. Pennsylvania Worker and Community Right-to-Know Law

Sodium hydroxide (CAS 1310-73-2)  
TRADE SECRET (CAS Proprietary)

### US. Rhode Island RTK

Sodium hydroxide (CAS 1310-73-2)  
TRADE SECRET (CAS Proprietary)

### US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

## 16. Other information, including date of preparation or last revision

Issue date	01-June-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 3 Flammability: 1 Physical hazard: 0

### List of abbreviations

PEL: Permissible Exposure Limit.  
STEL: Short term exposure limit.  
TWA: Time weighted average.

### Disclaimer

Floralife, DBA a division of Smithers-Oasis Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.