



**SAFETY DATA SHEET**  
**FLOCON® 135**

## 1. Identification

### Product identifier

**Product name** FLOCON® 135  
**Chemical name** Phosphinocarboxylic acid  
**Product number** 100496, 100497, 100498, 100499, 100500, 100501, 100502, 100503, 101305, 101306, 101423, 101550

### Recommended use of the chemical and restrictions on use

**Application** Antiscalant

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

**Supplier** BWA Water Additives US LLC  
1979 Lakeside Parkway, Suite 925  
Tucker, GA 30084 USA  
T: +1 800-600-4523  
(Technical/commercial enquiries)  
F: +1 678-802-3050  
E: msds@wateradditives.com

**Distributed by:**

### Emergency telephone number

**Emergency telephone** Chemtrec Phone: 1-800-424-9300  
**National emergency telephone number** For Medical Emergency: 1-303-623-5716  
For Transport Emergency: 1-800-424-9300 (CHEMTREC)

## 2. Hazard(s) identification

### Classification of the substance or mixture

**Physical hazards** Not Classified  
**Health hazards** Not Classified  
**Environmental hazards** Not Classified

### Label elements

**Hazard statements** NC Not Classified

## 3. Composition/information on ingredients

### Mixtures

**Composition comments** Aqueous solution of phosphinocarboxylic acid

## 4. First-aid measures

### Description of first aid measures

## FLOCON® 135

<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Do not induce vomiting. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
<b>Skin Contact</b>	Immediately remove contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

### **Most important symptoms and effects, both acute and delayed**

<b>Inhalation</b>	No specific symptoms known.
<b>Ingestion</b>	No specific symptoms known. May cause discomfort if swallowed.
<b>Skin contact</b>	No specific symptoms known. May cause skin irritation/eczema.
<b>Eye contact</b>	No specific symptoms known. May cause temporary eye irritation.

### **Indication of immediate medical attention and special treatment needed**

<b>Notes for the doctor</b>	Treat symptomatically.
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## 5. Fire-fighting measures

### **Extinguishing media**

<b>Suitable extinguishing media</b>	The product is non-combustible. Extinguish with the following media: Water spray, fog or mist. Foam, carbon dioxide or dry powder.
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### **Special hazards arising from the substance or mixture**

<b>Specific hazards</b>	The product is non-combustible. Irritating gases or vapors. No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Oxides of: Phosphorus.

### **Advice for firefighters**

<b>Protective actions during firefighting</b>	Move containers from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses.
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<b>Special protective equipment for firefighters</b>	Leave danger zone immediately.
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## 6. Accidental release measures

### **Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Follow precautions for safe handling described in this safety data sheet.
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### **Environmental precautions**

<b>Environmental precautions</b>	Avoid release to the environment. To prevent release, place container with damaged side up.
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### **Methods and material for containment and cleaning up**

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**Methods for cleaning up** Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb in vermiculite, dry sand or earth and place into containers. Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor. Containers with collected spillage must be properly labeled with correct contents and hazard symbol.

**Reference to other sections** For waste disposal, see section 13.

### 7. Handling and storage

#### Precautions for safe handling

**Usage precautions** Good personal hygiene procedures should be implemented. Avoid spilling. Avoid contact with skin and eyes.

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

**Storage precautions** Store in tightly-closed, original container in a dry and cool place. Store at temperatures not exceeding «Value in °C»°C/«Value in °F»°F. Do not store for extended periods below freezing point or in direct sunlight. IF FROZEN: once fully thawed, agitate container vigorously to ensure the product is homogeneous. Store away from the following materials: Alkalis. Oxidizing materials. Reducing agents. Keep separate from food, feedstuffs, fertilizers and other sensitive material.

**Storage class** Unspecified storage.

#### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

### 8. Exposure Controls/personal protection

#### Exposure controls

##### Protective equipment



**Appropriate engineering controls** Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

**Eye/face protection** The following protection should be worn: Chemical splash goggles.

**Hand protection** Selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Wear protective gloves made of the following material: Neoprene. Nitrile rubber. Polyethylene. Polyvinyl chloride (PVC). It should be noted that liquid may penetrate the gloves. Frequent changes are recommended.

**Other skin and body protection** Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear apron or protective clothing in case of contact.

**Hygiene measures** No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.

**Respiratory protection** No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.

### 9. Physical and Chemical Properties

#### Information on basic physical and chemical properties

**Appearance** Liquid.

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<b>Color</b>	Colorless.
<b>Odor</b>	Slight.
<b>Odor threshold</b>	Not available. Not available.
<b>pH</b>	pH (concentrated solution): 3.5-4.5
<b>Melting point</b>	Not available.
<b>Initial boiling point and range</b>	101 - 103 @°C @ 760 mm Hg
<b>Flash point</b>	> 93°C PMCC (Pensky-Martens closed cup).
<b>Freezing Point:</b>	
<b>Evaporation rate</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not applicable.
<b>Vapor pressure</b>	Not available.
<b>Relative density</b>	1.17-1.20 @ 20c
<b>Solubility(ies)</b>	Miscible with water.
<b>Partition coefficient</b>	log Pow: < 0
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	35 - 60 cSt @ 25°C
<b>Oxidizing properties</b>	Does not meet the criteria for classification as oxidizing.
<b>Other information</b>	Not available.

**10. Stability and reactivity**

<b>Reactivity</b>	Reacts with alkalis and generates heat.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
<b>Possibility of hazardous reactions</b>	Will not polymerize.
<b>Conditions to avoid</b>	Avoid excessive heat for prolonged periods of time.
<b>Materials to avoid</b>	Strong alkalis. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Oxides of the following substances: Phosphorus.

**11. Toxicological information****Information on toxicological effects**

<b>Supplemental Toxicological Information</b>	A 90-day oral toxicity study in rats indicated bone damage and kidney effects at high doses. The effect for humans is unknown.
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**Acute toxicity - oral**

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<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	5,000.0
<b>Species</b>	Rat
<b>Inhalation</b>	No specific health hazards known.
<b>Ingestion</b>	May cause discomfort if swallowed. May cause stomach pain or vomiting.
<b>Skin Contact</b>	Non Irritant. Not a Skin Sensitiser
<b>Eye contact</b>	Non irritant.

**12. Ecological Information**

<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: > 1000 , LC <sub>50</sub> , 96 hours: >1000 mg/l, Fish
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 320 mg/l, Daphnia magna EC <sub>50</sub> , 48 hours: 320 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	IC <sub>50</sub> , 72 hours: 130 mg/l, Marinewater algae IC <sub>50</sub> , 72 hours: 130 mg/l, Algae
<b><u>Persistence and degradability</u></b>	
<b>Persistence and degradability</b>	Not readily biodegradable
<b>Chemical oxygen demand</b>	370 g O <sub>2</sub> /l
<b><u>Bioaccumulative potential</u></b>	
<b>Bio-Accumulative Potential</b>	The product does not contain any substances expected to be bioaccumulating.
<b>Partition coefficient</b>	log Pow: < 0
<b><u>Mobility in soil</u></b>	
<b>Mobility</b>	The product is miscible with water. May spread in water systems.
<b><u>Other adverse effects</u></b>	
<b>Other adverse effects</b>	Not available.

**13. Disposal considerations****Waste treatment methods**

<b>General information</b>	When handling waste, the safety precautions applying to handling of the product should be considered.
<b>Disposal methods</b>	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**14. Transport information**

<b>General</b>	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).
<b>Rail transport notes</b>	Not classified.
<b>Sea transport notes</b>	Not classified.

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**Air transport notes** Not classified.

**UN proper shipping name**

**Packing group**

**Environmental hazards**

**Environmentally Hazardous Substance**  
No.

**15. Regulatory information****US Federal Regulations**

**SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**  
None of the ingredients are listed.

**CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**  
None of the ingredients are listed.

**SARA Extremely Hazardous Substances EPCRA Reportable Quantities**  
None of the ingredients are listed.

**SARA 313 Emission Reporting**  
None of the ingredients are listed.

**CAA Accidental Release Prevention**  
None of the ingredients are listed.

**FDA - Essential Chemical**  
None of the ingredients are listed.

**FDA - Precursor Chemical**  
None of the ingredients are listed.

**SARA (311/312) Hazard Categories**  
Threshold Planning Quantity 10,000lbs.

**OSHA Highly Hazardous Chemicals**  
None of the ingredients are listed.

**US State Regulations**

**California Proposition 65 Carcinogens and Reproductive Toxins**  
None of the ingredients are listed.

**California Air Toxics "Hot Spots" (A-I)**  
None of the ingredients are listed.

**California Air Toxics "Hot Spots" (A-II)**  
None of the ingredients are listed.

**Massachusetts "Right To Know" List**  
None of the ingredients are listed.

**Rhode Island "Right To Know" List**  
None of the ingredients are listed.

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### Minnesota "Right To Know" List

None of the ingredients are listed.

### New Jersey "Right To Know" List

None of the ingredients are listed.

### Pennsylvania "Right To Know" List

None of the ingredients are listed.

### Inventories

#### EU - EINECS/ELINCS

All the ingredients are listed or exempt.

#### Canada - DSL/NDSL

All the ingredients are listed or exempt.

#### US - TSCA

All the ingredients are listed or exempt.

#### US - TSCA 12(b) Export Notification

None of the ingredients are listed.

#### Australia - AICS

All the ingredients are listed or exempt.

#### Japan - MITI

All the ingredients are listed or exempt.

#### JAPAN- IHSL

#### Korea - KECI

All the ingredients are listed or exempt.

#### China - IECSC

All the ingredients are listed or exempt.

#### Philippines - PICCS

All the ingredients are listed or exempt.

#### New Zealand - NZIOC

All the ingredients are listed or exempt.

#### Taiwan -TCSI

### 16. Other information

#### General information

Flocon 135 is certified by NSF International for use as an antiscalant in reverse osmosis plants. The maximum approved dose level is 10 mg/l in the feedwater. For advice on chemical emergencies, spillages, fires or first aid in relation to this product please contact the relevant emergency number below : EU/English Speakers - +44 (0) 1235 239 670 (NCEC) Arabic Speakers - +44 (0) 1235 239 671 Asia/Pacific countries - +65 3158 1074 For emergencies within China - +86 10 5100 3039

#### Revision comments

4.2 KIWA certification added

#### Issued by

BWA Water Additives Regulatory Group, +44(0)1618646699

#### Revision date

6/22/2017

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<b>Revision</b>	4.2
<b>SDS No.</b>	10251
<b>KIWA Certification</b>	PLANT AT Trafford Park, Manchester, England. Maximum Dose 10mg/l. K20750.
<b>NFPA - instability hazard</b>	Normally stable. (0)
<b>NFPA - special hazard</b>	N/A
<b>ACA HMIS Health rating.</b>	Minimal Hazard. (0)
<b>NFPA - health hazard</b>	No health hazards specifically noted for fire situations. (0)
<b>NFPA - flammability hazard</b>	Will not burn. (0)
<b>NSF/ANSI Standard 60</b>	Plant#1 Taiwan Maximum Dose 10mg/L Plant at Manchester, UK Maximum dose: 10 mg/L
<b>ACA HMIS Flammability rating.</b>	Will not burn. (0)
<b>ACA HMIS Physical hazard rating.</b>	Normally stable. (0)
<b>ACA HMIS Personal protection rating.</b>	C

For safety reasons it is IMPERATIVE that customers:-

1. Ensure that all those within their control who use the products are supplied with all relevant information contained within the Safety Data Sheet and Technical Bulletin concerning the applications for which the product is designed and any instructions and warnings contained therein.
2. Consult BWA Water Additives before using or supplying the product for any other applications. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.