

## SAFETY DATA SHEET

### PermaClean PC-11

#### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : PermaClean PC-11

Other means of identification : Not applicable.

Recommended use : BIOCIDES

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630)305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 06/06/2016

#### Section: 2. HAZARDS IDENTIFICATION

##### GHS Classification

Acute toxicity (Oral) : Category 3  
Acute toxicity (Inhalation) : Category 3  
Skin irritation (Dermal) : Category 2  
Serious eye damage : Category 1  
Skin sensitization : Category 1

##### GHS Label element

Hazard pictograms :



Signal Word :

Danger

Hazard Statements :

Causes serious eye damage.  
May cause an allergic skin reaction.  
Causes skin irritation.  
Toxic if swallowed or if inhaled

Precautionary Statements :

**Prevention:**

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair):

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Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position 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 or doctor/ physician. If skin irritation or rash occurs: Get medical advice/ attention. Wash contaminated clothing before reuse.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards** : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Polyethylene Glycol	25322-68-3	30 - 60
2,2-Dibromo-3-nitrilopropionamide	10222-01-2	10 - 30
Sodium Bromide	7647-15-6	1 - 5
Dibromoacetonitrile	3252-43-5	0.1 - 1

### Section: 4. FIRST AID MEASURES

- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
- If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention immediately.
- Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
- Notes to physician : Treat symptomatically.
- Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

### Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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- Unsuitable extinguishing media : None known.
- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Hydrogen halides
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

### Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

### Section: 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid contact with skin and eyes. Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
- Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: PVC, Polypropylene, Polyethylene, Hastelloy C-276, HDPE (high density polyethylene), PTFE, Fluoroelastomer
- Unsuitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Copper, Brass, Aluminum, Mild steel, Buna-N, Ethylene propylene, Neoprene, Polyurethane, Stainless Steel 304, Stainless Steel 316L, Carbon steel, Chlorosulfonated polyethylene rubber

### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

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Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Polyethylene Glycol	25322-68-3	TWA (Aerosol.)	10 mg/m <sup>3</sup>	AIHA WEEL

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Wear suitable protective clothing.

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : colourless

Odour : Mild, Disinfectant

Flash point : > 182 °C, Method: ASTM D-92, COC

pH : 1.5 - 5.0, 100 %, Method: ASTM E 70

Odour Threshold : no data available

Melting point/freezing point : POUR POINT: -45 °C, ASTM D-97  
FREEZING POINT: -50 °C

Initial boiling point and boiling range : > 70 °C, Decomposes on heating.

Evaporation rate : no data available

Flammability (solid, gas) : no data available

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : < 0.1 mm Hg, (21 °C),

Relative vapour density : no data available

Relative density : 1.20 - 1.30, (23 °C), ASTM D-1298

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Density	:	10.0 - 10.8 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition temperature	:	no data available
Viscosity, dynamic	:	138 mPa.s (20 °C)
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	no data available

### Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Heat Extremes of temperature  None known.
Incompatible materials	:	Contact with strong alkalis (e.g. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors. Oxidizing agents Aluminum
Hazardous decomposition products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Hydrogen halides Bromine cyanogenbromide and dibromoacetonitrile

### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

#### Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes skin irritation. May cause allergic skin reaction.

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Ingestion : Toxic if swallowed.  
Inhalation : Toxic if inhaled.  
Chronic Exposure : Health injuries are not known or expected under normal use.

### Experience with human exposure

Eye contact : Redness, Pain, Corrosion  
Inhalation : Respiratory irritation, Cough

### Toxicity

#### Product

Acute oral toxicity : LD50 rat: 178 - 235 mg/kg  
Test substance: Active Substance  
LD50 guinea pig: 118 mg/kg  
Test substance: Active Substance  
rabbit: 118 mg/kg  
Test substance: Active Substance

Acute inhalation toxicity : LC50 rat: 1.4 mg/l  
Exposure time: 4 hrs  
Test substance: Product  
rat: 1.25 mg/l  
Exposure time: 4 hrs  
Test substance: Product

Acute dermal toxicity : no data available

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : no data available

Respiratory or skin sensitization : no data available

#### Carcinogenicity

IARC **Group 2B: Possibly carcinogenic to humans** Active ingredient did not cause cancer in laboratory animals. There is evidence that dibromoacetonitrile (DBAN), a possible by-product of 2,2-dibromo-3-nitrilopropionamide (DBNPA), can produce cancer in laboratory animals. However, the relevance of this to humans is unknown.  
Dibromoacetonitrile 3252-43-5

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Reproductive effects : no data available  
Germ cell mutagenicity : no data available  
Teratogenicity : no data available  
STOT - single exposure : no data available  
STOT - repeated exposure : no data available  
Aspiration toxicity : no data available

#### Components

Acute dermal toxicity : Polyethylene Glycol  
LD50 rabbit: 20,000 mg/kg  
Sodium Bromide  
LD50 rabbit: > 2,000 mg/kg

### Section: 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Environmental Effects : Toxic to aquatic life.

#### Product

Toxicity to fish : LC50 *Lepomis macrochirus* (Bluegill sunfish): 8.9 mg/l  
Exposure time: 96 hrs  
Test substance: Product  
  
LC50 *Oncorhynchus mykiss* (rainbow trout): 3.6 mg/l  
Exposure time: 96 hrs  
Test substance: Product  
  
LC50 *Cyprinodon variegatus* (sheepshead minnow): 7.5 mg/l  
Exposure time: 96 hrs  
Test substance: Product  
  
LC50 *Pimephales promelas* (fathead minnow): 1.36 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance  
  
LC50 *Oncorhynchus mykiss* (rainbow trout): 1 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance  
  
LC50 *Cyprinodon variegatus* (sheepshead minnow): 1.4 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance  
  
LC50 Bluegill Sunfish: 1.3 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance  
  
LC50 *Leuciscus idus* (Golden orfe): 4.7 mg/l  
Exposure time: 96 hrs

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Test substance: Product

NOEC *Lepomis macrochirus* (Bluegill sunfish): 6.5 mg/l

Exposure time: 96 hrs

Test substance: Product

NOEC *Oncorhynchus mykiss* (rainbow trout): 2.8 mg/l

Exposure time: 96 hrs

Test substance: Product

NOEC *Cyprinodon variegatus* (sheepshead minnow): 3.2 mg/l

Exposure time: 96 hrs

Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 *Mysid Shrimp* (*Mysidopsis bahia*): 4.2 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 *Daphnia magna* (Water flea): 4.3 mg/l

Exposure time: 48 hrs

Test substance: Product

LC50 *Daphnia magna* (Water flea): 1.24 mg/l

Exposure time: 48 hrs

Test substance: Active Substance

LC50 Grass Shrimp: 11.5 mg/l

Exposure time: 96 hrs

Test substance: Active Substance

LC50 *Acartia tonsa*: 1.78 mg/l

Exposure time: 48 hrs

Test substance: Product

LC50 *Ceriodaphnia dubia*: 6.67 mg/l

Exposure time: 48 hrs

Test substance: Product

EC50 *Mysid Shrimp* (*Mysidopsis bahia*): 3.2 mg/l

Exposure time: 96 hrs

Test substance: Product

EC50 *Daphnia magna* (Water flea): 2.5 mg/l

Exposure time: 48 hrs

Test substance: Product

NOEC *Daphnia magna* (Water flea): 3.6 mg/l

Exposure time: 48 hrs

Test substance: Product

NOEC *Ceriodaphnia dubia*: 5.0 mg/l

Exposure time: 48 hrs

Test substance: Product

Toxicity to algae : LC50 Marine Algae (*Skeletonema costatum*): 1.5 mg/l



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Exposure time: 72 hrs  
Test substance: Product

Toxicity to bacteria : LC50 Pseudomonas putida: > 2.0 mg/l  
Test substance: Product

### Persistence and degradability

The organic portion of this preparation is expected to be readily biodegradable.

Total Organic Carbon (TOC) : 280,000 mg/l

Chemical Oxygen Demand (COD): 1,110,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
5 d	1,100 mg/l	Product

### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	: <5%
Water	: 10 - 30%
Soil	: 70 - 90%

The portion in water is expected to be soluble or dispersible.

### Bioaccumulative potential

This substance has a low potential to bioconcentrate.

### Other information

no data available

## Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: : D002

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

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Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

#### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

##### Land transport (DOT)

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
Technical name(s) : 2,2-DIBROMO-3-NITRILOPROPIONAMIDE  
UN/ID No. : UN 3265  
Transport hazard class(es) : 8  
Packing group : III

##### Air transport (IATA)

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
Technical name(s) : 2,2-DIBROMO-3-NITRILOPROPIONAMIDE  
UN/ID No. : UN 3265  
Transport hazard class(es) : 8  
Packing group : III

##### Sea transport (IMDG/IMO)

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
Technical name(s) : 2,2-DIBROMO-3-NITRILOPROPIONAMIDE  
UN/ID No. : UN 3265  
Transport hazard class(es) : 8  
Packing group : III

\*Marine pollutant : 2,2-Dibromo-3-nitrilopropionamide

\*Note: This product is regulated as a Marine Pollutant when shipped by Rail, Highway (in bulk quantities), or Air (if no other hazard class applies), and when shipped by water in all quantities.

#### Section: 15. REGULATORY INFORMATION

EPA Reg. No. : 1706-138

##### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

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**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

2,2-Dibromo-3-nitrilopropionamide	10222-01-2	10 - 30 %
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### California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### INTERNATIONAL CHEMICAL CONTROL LAWS :

#### TOXIC SUBSTANCES CONTROL ACT (TSCA)

This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

#### CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)

Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

#### AUSTRALIA

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

#### CHINA

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

#### JAPAN

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

#### KOREA

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

#### NEW ZEALAND

All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

#### PHILIPPINES

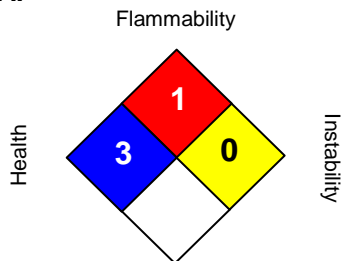
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

## Section: 16. OTHER INFORMATION

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## NFPA:



Special hazard.

## HMIS III:

<b>HEALTH</b>	<b>3*</b>
<b>FLAMMABILITY</b>	<b>1</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 06/06/2016  
Version Number : 1.4  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.