

# PURTABABS™

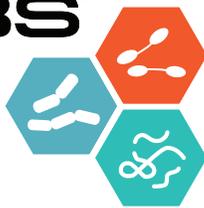
EFFERVESCENT SANITIZING / DISINFECTION TABLETS



## TECHNICAL AND EFFICACY DATA SHEET

Hospitals  
Schools  
Nursing Homes  
Daycares  
Restaurants  
Kitchens  
Gyms  
Health Clubs  
Restrooms  
Dental Facilities  
Veterinary Clinics  
Beverage & Food Processing Plants





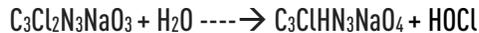
## How NaDCC Works – How it differs from Bleach

The active agent in PURTABS is sodium dichloroisocyanurate (C<sub>3</sub>Cl<sub>2</sub>N<sub>3</sub>NaO<sub>3</sub>) shortened to NaDCC, the active ingredient in bleach is Sodium Hypochlorite (NaOCl).

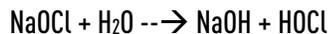
When dissolved in water both NaDCC and bleach produce the highly effective disinfecting agent hypochlorous acid (HOCl). The difference in the two chemistries is what comes with the HOCl, in the case of NaDCC we have an organic molecule, in the case of bleach we get Sodium Hydroxide (NaOH) more commonly known as caustic.

NaDCC is an organic chlorine donor that forms a use-solution with a mildly acidic to neutral pH of 6 – 7, when mixed with water. Bleach, and other hypochlorites, form highly alkaline use-solutions, with a pH in the range of 11 to 12 when diluted with water (note pH is a logarithmic scale so if you start with a pH of 13 and dilute 10:1 with water that reduces the pH by approximately 1 depending on water quality). If drawing the chemical reactions it would look like this:

NaDCC



Bleach

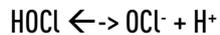


Caustic is highly corrosive and presents a significant health risk through both direct contact (especially eyes and mucus membranes) and through inhalation of the dried dust from bleach. There have been numerous studies showing a link between use of bleach and occupational asthma in medical staff, NaDCC on the other hand produces no caustic and is approved by both the Environmental Protection Agency (EPA) and the World Health Organization (WHO) as a disinfectant for potable water with no observable health effect over a life time of consumption. OSHA describes the health effect of caustic as ulceration of nasal passages, eye, skin, and respiratory irritation with a PEL of only 2 mg/m<sup>3</sup> in air. It is important to note the stoichiometric ratio (one to one) of caustic to HOCl. For every molecule of hypochlorous acid produced, one molecule of caustic is produced. Therefore, if you want to make a stronger disinfecting solution with bleach you inevitably get more caustic.

NaDCC contains no caustic and the in use diluted product causes only temporary mild eye irritation if directly impacting the eye. In this way, the product has an HMIS rating of 1/0/0 compared to 3/0/0 for bleach. Because there is no caustic produced, there is a significantly lower health risk.

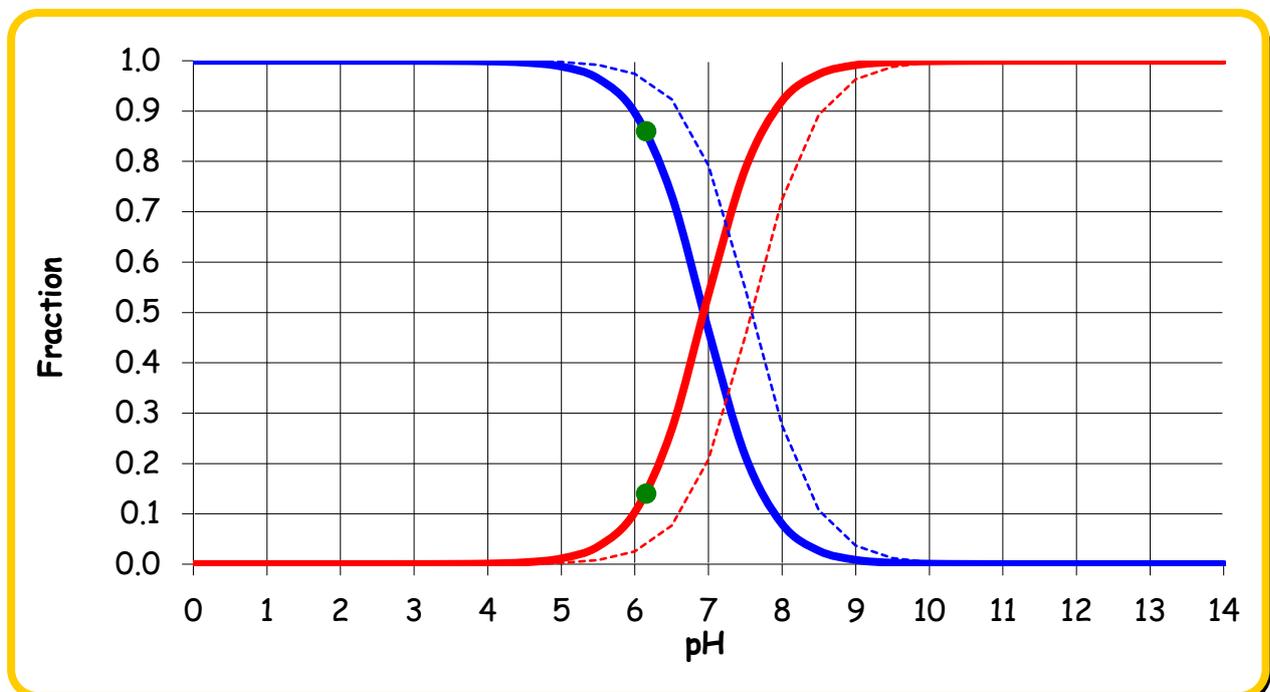
### Why pH is Important

The biologically active ingredient in both bleach and NaDCC is HOCl, when HOCl is in a solution it dissociates as follows:



note this is a reversible reaction

Studies show that undissociated (HOCl) has four times the anti-microbial killing power compared to the dissociated hypochlorite ion (OCl<sup>-</sup>). It is believed that this is due to the fact that HOCl is very similar to the structure of H<sub>2</sub>O (water), of similar molecular size, and is electrically neutral – thus allowing it to penetrate cell membranes as easily as water. The ratio of HOCl to OCl<sup>-</sup> in a solution is dictated by the solution pH. The more acidic a solution the more HOCl is present the more alkaline a solution the more OCl<sup>-</sup> is present. The graph below demonstrates the dissociation constant:



As can be seen from the graph, a solution of NaDCC with a pH of 6 to 7 has 80 to 90 percent of the active disinfectant in the form of HOCl, a solution of bleach with a pH of 11 to 12 has less than 10 percent of the active disinfectant in the more effective HOCl form. Essentially this means that NaDCC is far more effective as a disinfectant than bleach at much lower concentrations.

## Stability in Solution

When NaDCC is mixed with water, it yields hypochlorous acid (HOCL) and sodium monochloroisocyanurate in a slightly acidic use-solution. These two ingredients remain in a constant 50 – 50 ratio in the use-solution, so that as part of the free chlorine is used up (due to reaction with bacteria, organic material, etc), part of the combined chlorine in the NaOCl is freed to restore the 50 – 50 ratio and continue the disinfecting process. THIS IS AN IMPORTANT CHARACTERISTIC of NaDCC to note, because unlike bleach and all other hypochlorites, this product possesses a reserve killing power that continues to be made available even after contact with organic soils. *Bleach immediately releases all of the HOCL and has no residual to address organic soil rapidly becoming deactivated on contact with organic soils.*

Sodium hypochlorite solutions are inherently unstable. When open to the air, HOCL evaporates at a high rate from the solution, rapidly reducing the concentration of free chlorine. NaDCC in solution has a far lower loss rate. This breakdown of HOCL also happens when bleach comes in contact with acids, sunlight, certain metals and gasses. Because it is unstable, when used for disinfection, diluted bleach should be prepared fresh daily. Because NaDCC is inherently more stable than bleach solutions, NaDCC solutions in a sealed container have a 3-day shelf life. To improve the stability of bleach solutions, a number of manufacturers who produce ready to use wipes and dilute bleach liquids have increased the pH through addition of additional caustic. Increasing the pH may make their product more stable but it reduces the ratio of HOCL further reducing biocidal efficacy while increasing the corrosive nature of the product.

Because of NaDCC's inherent stability and greater proportions of HOCL, lower concentrations are required for effective kill times. This minimizes worker and patient exposures. The longer shelf life reduces waste and further reduces costs. Testing on metal substrates demonstrates that NaDCC is about 50% less corrosive than bleach, and does not produce any damage on vinyl and plastics.

## EPA Regulations

The US EPA has registered a number of bleach based products as sporicidal disinfectants for use on hard surfaces and one NaDCC based product. The list of registered products can be found at: [http://www.epa.gov/oppad001/list\\_k\\_clostridium.pdf](http://www.epa.gov/oppad001/list_k_clostridium.pdf). Review of the list shows the following registered claims for product efficacy against Clostridium difficile in the presence of soil load:

Product	Concentration	Required Contact time
NaDCC	1076 ppm	10 min
Bleach	5500 ppm	10 min
NaDCC	4306 ppm	4 min
Bleach	9000 ppm	5 min

As can be seen from the EPA registration documents NaDCC, PURTABS, is more effective than bleach at lower concentrations. Lower concentrations of disinfectant significantly reduce potential health hazards for personnel and collateral damage to equipment, in addition to making products more cost effective.

### Third Party Air Sampling of PURTABS Applied with the Protexus PX200ES

On March 17, 2017, an Industrial Hygienist from American Environmental Consultants, Inc. (AEC) collected personal (and area) air samples. These samples were analyzed for Chlorine, at the request of EarthSafe Chemical Alternatives, LLC, as part of a worker exposure assessment during application of PURTABS using an electrostatic spraying application (Protexus Electrostatic Sprayer) in a variety of client settings (hospitals, kitchens, etc.). Samples of the Chlorine were collected according to National Institute of Occupational Safety and Health (NIOSH) Analytical Modified Method 6011. The collected samples were submitted to an experienced and accredited laboratory (SGS/Galson Laboratories).

#### Results

The following table presents the results of the personal sampling in mg/m<sup>3</sup> and ppm compared to OSHA PEL ceiling values and the ACGIH TLV's for STEL's and 8-hour TWA's.

Sample Number	Volume (liters)	Sample Type	Sample Result (ppm)	OSHA PEL Ceiling (ppm)	ACGIH TLV (ppm)
17-0068320	15	STEL	<0.1	1	1
17-0068321	90	Personal	<0.2	1	0.5
17-0068319	15	STEL	<0.1	1	1
17-0068316	90	Personal	<0.02	1	0.5
17-0068317	30	Area/STEL	<0.06	1	1
17-0068318	15	STEL	<0.1	1	1
17-0068322	90	Personal	<0.02	1	0.5
17-0068314	0	Blank	NA	NA	NA
17-0068315	0	Blank	NA	NA	NA

Based on laboratory results, all Chlorine concentrations were below the OSHA Permissible Exposure Limits (PEL) and Threshold Limit Values (TLV), established by the American Conference of Governmental Industrial Hygienists (ACGIH).

#### Protexus Electrostatic Sprayers & Nozzles

For healthcare use, the Protexus Electrostatic Sprayers have been equipped with standard nozzles having one output of 60 microns. Usage guides and standard operating procedures (SOPs) developed for healthcare processes have been to disinfect with a 60-micron size nozzle to ensure simplified training, proper usage in any application -sanitizing or disinfecting – therefore providing repeatable results.

Users will continue to have the option for additional nozzle setting configuration with the availability of a tri-nozzle set at 60, 80, and 100 microns.

#### Recommended Personal Protective Equipment (PPE)

It is recommended to wear chemical-resistant gloves, safety glasses, and dust mask when diluting tablets.



## PUR TABS Biological Efficacy Data

Pathogen	Minimum Dose required (ppm)	Minimum Contact time required (minutes)
<b>FOOD CONTACT SANITIZER CLAIMS</b>		
<i>Staphylococcus aureus</i>	<b>100 ppm</b>	1 minute
<i>Salmonella enterica</i>	<b>100 ppm</b>	1 minute
<b>DISINFECTION CLAIMS-BACTERIA</b>		
<i>Staphylococcus aureus</i>	<b>a) 538 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 2 minutes
<i>Staphylococcus aureus</i> – methicillin resistant (MRSA) & glycopeptide-resistant (GRSA)	<b>a) 538 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 2 minutes
<i>Staphylococcus epidermidis</i>	<b>1076 ppm</b>	10 minutes
<i>Salmonella enterica</i>	<b>a) 538 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 2 minutes
<i>Pseudomonas aeruginosa</i>	<b>a) 538 ppm</b>	a) 10 minutes
	<b>b) 2153 ppm</b>	b) 2 minutes
	<b>c) 4306 ppm</b>	c) 4 minutes
<i>Streptococcus pneumoniae</i>	<b>4306 ppm</b>	4 minutes
<i>Escherichia coli</i> O157:H7	<b>1076 ppm</b>	10 minutes
<i>Acinetobacter baumannii</i>	<b>4306 ppm</b>	4 minutes
Vancomycin resistant <i>Enterococcus faecalis</i>	<b>a) 1076 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 2 minutes
Carbapenem resistant <i>Klebsiella pneumoniae</i>	<b>4306 ppm</b>	2 minutes
<i>Klebsiella pneumoniae</i>	<b>1076 ppm</b>	10 minutes





<b>VIRUCIDAL CLAIMS</b>		
Respiratory syncytial virus	<b>538 ppm</b>	10 minutes
Rhinovirus Type 14	<b>1076 ppm</b>	10 minutes
Influenza Virus H1N1	<b>a) 538 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 1 minute
Human Immunodeficiency Virus Type 1 (HIV-1)	<b>a) 1076 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 1 minute
Hepatitis A virus	<b>a) 1076 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 1 minute
Hepatitis B virus	<b>a) 1076 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 1 minute
Hepatitis C virus	<b>4306 ppm</b>	1 minute
Avian influenza A (H5N1)	<b>a) 1076 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 1 minute
Norovirus	<b>2153 ppm</b>	a) 1 minute
Poliovirus Type 1	<b>1076 ppm</b>	10 minutes
Coxsackievirus [B3]	<b>4306 ppm</b>	1 minute
Herpes simplex virus type 1	<b>1076 ppm</b>	10 minutes
<b>FUNGICIDAL/YEASTICIDAL CLAIMS</b>		
<i>Aspergillus fumigatus</i>	<b>4306 ppm</b>	1 minute
<i>Candida albicans</i>	<b>4306 ppm</b>	1 minute
<i>Trichophyton interdigitale</i>	<b>a) 1076 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 2 minutes
Herpes simplex virus type 1	<b>1076 ppm</b>	10 minutes
<b>CLOSTRIDIUM DIFFICILE CLAIMS</b>		
<i>Clostridium difficile</i> spores	<b>a) 2153 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 4 minutes
<b>MYCOBACTERICIDAL CLAIMS</b>		
<i>Mycobacterium bovis</i> (TB)	<b>5382 ppm</b>	4 minutes





<b>ANIMAL PATHOGENS</b>		
Canine Parvovirus [†]	<b>1076 ppm</b>	10 minutes
Newcastle Disease Virus [†]	<b>1076 ppm</b>	10 minutes
Pseudorabies [†]	<b>1076 ppm</b>	10 minutes
Feline Calicivirus [†]	<b>1076 ppm</b>	a) 10 minutes b) 1 minute
Canine Distemper virus [†]	<b>1076 ppm</b>	10 minutes
Infectious Canine hepatitis [†]	<b>1076 ppm</b>	10 minutes
Teschen/Talfan disease [†]	<b>1076 ppm</b>	10 minutes
Avian influenza virus [†]	<b>a) 1076 ppm</b>	a) 10 minutes
	<b>b) 4306 ppm</b>	b) 1 minute
Porcine parvovirus [†]	<b>1076 ppm</b>	10 minutes
Runting & Stunting virus [†] (tenosynovitis)	<b>1076 ppm</b>	10 minutes
Actinobacillus pleuropneumoniae [†]	<b>1076 ppm</b>	10 minutes
Bordetella bronchiseptica (rhinitis) [†]	<b>1076 ppm</b>	10 minutes
Brachyspira (Treponema/Serpulina) [†]	<b>1076 ppm</b>	10 minutes
Hydysenteriae (swine dysentery) [†]	<b>1076 ppm</b>	10 minutes
Gumboro disease [†]	<b>1076 ppm</b>	10 minutes
<i>Streptococcus uberis</i> [†]	<b>1076 ppm</b>	10 minutes
Transmissible gastroenteritis (TGE) [†]	<b>1076 ppm</b>	30 minutes
Swine Vesicular disease [†]	<b>1076 ppm</b>	30 minutes
African swine fever [†]	<b>1076 ppm</b>	30 minutes
Hog cholera/Classical swine fever [†]	<b>1076 ppm</b>	30 minutes
Avipox (fowl pox) [†]	<b>1076 ppm</b>	30 minutes
Porcine epidemic diarrhea virus [†]	<b>1076 ppm</b>	10 minutes

[[†]Only approved for use against Canine Parvovirus, Newcastle Disease Virus, Pseudorabies, Canine Distemper Virus, & Feline Calicivirus in the state of California]



Emerging Pathogen Claims – This product meets the criteria for use against emerging enveloped viral pathogens; large, non-enveloped viral pathogens; and small, non-enveloped viral pathogens when used in accordance with the use directions for Norovirus and Coxsackievirus B3, and Hepatitis A virus at a rate of 4306 ppm and a 1 minute contact time. Per the Guidance to Registrants, these statements will only be permitted as non-label claims when emerging viral pathogen conditions are met.

## PUR TABS Dilution Chart:

SOLUTION CONCENTRATION	PUR TABS 3.3G TABLET	PUR TABS 334MG TABLET	PUR TABS 13.1G TABLET
100 ppm	1 tablet / 2.5 gal water	1 tablet / 32 oz water	1 tablet / 10 gal water
538 ppm	1 tablet / 64 oz water	6 tablets / 32 oz water	1 tablet / 2 gal water
1076 ppm	1 tablet / 32 oz water	N/A	1 tablet / 1 gal water
2153 ppm	2 tablets / 32 oz water	N/A	2 tablets / 1 gal water
4306 ppm	4 tablets / 32 oz water	N/A	4 tablets / 1 gal water
5382 ppm	5 tablets / 32 oz water	N/A	5 tablets / 1 gal water





## ANIMAL PATHOGENS

When used at 1076 ppm solution, applied as outlined under Disinfection/Virucidal Directions, PUR TABS is effective against the following animal pathogens:

*Actinobacillus pleuropneumoniae*

*African swine fever virus* \*

*Avian influenza virus*

*Avipox-virus (Fowl pox virus\*)* \*

*Bordetella bronchiseptica (Rhinitis)*

*Brachyspira hyodysenteriae*  
(Swine Dysentery)

*Infectious canine hepatitis*

*Clostridium perfringes*

*Feline calicivirus*

*Gumboro disease virus*

*Classical swine fever virus*  
(Hog cholera) \*

*Porcine parvovirus*

*Runting and stunting syndrome virus*  
(tenosynovitis)

*Streptococcus dysgalactiae*

*Streptococcus uberis*

*Swine vesicular disease virus* \*

*Teschen/Talfan disease*

*Transmissible gastroenteritis (TGE)* \*

\* Requires 30 minute contact time

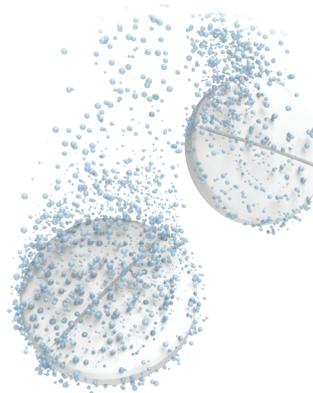
## STABILITY DATA

PUR TABS solutions can be used for up to 3 days if stored in a closed container such as a spray bottle or buddy bottle at room temperature out of direct sunlight. Prepare a fresh solution twice weekly when using closed containers.



# PHYSICAL AND CHEMICAL SPECIFICATIONS

Active ingredient: Sodium dichloro-s-triazinetriene	48.21%
Working pH	6.5 +/- 0.5
Color	Clear
Odor	Slight Chlorine
HMIS Health Rating Tablet	1
HMIS Health Rating In-Use	1



## MATERIAL SUBSTRATE COMPATIBILITY

Sodium dichloro-s-triazinetriene tablets dissolved in water produce a solution of active chlorine. The following chart shows the compatibility of a variety of materials with solutions up to 2,000 mg/L of active chlorine.

Plastics	Compatibility
ABS	A
CPVC	A
Hytrel®	A
HDPE	A
LDPE	A
Noryl®	A
Polycarbonate	A
Polypropylene	A
PPS	A
PTFE	A
PVC	A
PVDF	A

Elastomers	Compatibility
Nitrile (Buna N)	A
EPDM	A
Hypalon®	A
Kel-F®	A
Santoprene	A
Silicone	B
Tygon®	A
Viton®	A

Metals	Compatibility
SS 304	B
SS 316	A
Aluminum	A
Brass	B
Bronze	B
Carbon Steel	C
Cast Iron	C
Hasteloy C®	A
Titanium	A
Nonmetals	Compatibility
Carbon graphite	A
Ceramic A 1203	A
Ceramic magnet	A

### Explanation of Ratings – Chemical Effect

A = Excellent.

B = Good – Minor effect, slight corrosion or discoloration.

C = Fair – Moderate effect, OK for short-term use.

Not recommended for continuous use. Some pitting may occur.

D = Severe effect, not recommended for any use.





# PUR TABS (Dilution 0.5 ppm - 5550 ppm)

## Safety Data Sheet - Rev: 0

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

Date of issue: 29<sup>th</sup> August 2018

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Trade name : PUR TABS (Dilution 0.5 - 5550 ppm)

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

Use of the substance/mixture : Effervescent NaDCC Tablets are used for drinking water disinfection & surface disinfection

#### 1.3. Supplier

##### Manufactured for:

EarthSafe Chemical Alternatives, LLC  
145 Wood Road  
Braintree, MA 02184  
T 866-666-2305  
info@earthsafeca.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

USA:  
IN THE EVENT OF A MEDICAL EMERGENCY CALL YOUR POISON CONTROL CENTER  
AT 1-800-222-1222

Have the product container or label with you when calling a poison control center or doctor  
or going for treatment.

### SECTION 2: Hazard(s) identification

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

##### GHS-US classification

Not classified

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

##### GHS-US labelling

No labelling applicable

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

No additional information available

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

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Troclosene Sodium / 1,3,5 -Triazine - 2,4,6 (1H, 3H,5H) - trione, 1, 3 - dichloro-,sodium salt	(CAS-No.) 2893-78-9	0.00003 - 0.28	Ox. Liq. 3, H272 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Adipic Acid	(CAS-No.) 124-04-9	0.00001 - 0.13	Eye Irrit. 2A, H319
Sodium bicarbonate	(CAS-No.) 144-55-8	0.00001 - 0.12	Not classified
sodium carbonate	(CAS-No.) 497-19-8	0.000002 - 0.02	Eye Irrit. 2, H319

# PUR TABS (Dilution 0.5 ppm - 5550 ppm)

## Safety Data Sheet - Rev: 0



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

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 after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Wash skin with plenty of water.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

No additional information available

#### 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 : Water spray. Dry powder. Foam.

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

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

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

Protective equipment for firefighters : 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.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

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

Methods for cleaning up : Mechanically recover the product.  
Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Storage conditions : Store in a well-ventilated place. Keep cool.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

**Troclosene Sodium / 1,3,5 -Triazine - 2,4,6 (1H, 3H,5H) - trione, 1, 3 - dichloro-,sodium salt (2893-78-9)**

Not applicable

**Adipic Acid (124-04-9)**

Not applicable

# PIUR TABS (Dilution 0.5 ppm - 5550 ppm)

## Safety Data Sheet - Rev: 0



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

### Sodium bicarbonate (144-55-8)

Not applicable

### sodium carbonate (497-19-8)

Not applicable

## 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:

In case of repeated or prolonged contact (industrial environment), wear personal protective equipment.

### Hand protection:

In case of repeated or prolonged contact (industrial environment), wear gloves; Chemical resistant gloves in accordance with OSHA requirements (29 CFR 1910.138)

### Eye protection:

In industrial environment, use safety glasses for eye protection tested and approved in accordance with OSHA requirements (29 CFR 1910.133).

### Respiratory protection:

Inhalation is unlikely route of exposure in this type of products

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Tablets.
Colour	: white Off white
Odour	: slight chlorine
Odour threshold	: No data available
pH	: No data available
pH solution	: 5.5 - 6.5 For neat form (as supplied)
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Not applicable
Solubility	: completely soluble. (100%) in water.
Log Pow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 225 - 250 °C
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive limits	: Not applicable
Explosive properties	: No data available
Oxidising properties	: No data available

### 9.2. Other information

No additional information available

# PUR TABS (Dilution 0.5 ppm - 5550 ppm)

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

##### Troclosene Sodium / 1,3,5 -Triazine - 2,4,6 (1H, 3H,5H) - trione, 1, 3 - dichloro-,sodium salt (2893-78-9)

LD50 oral rat	735 mg/kg bodyweight
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##### Sodium bicarbonate (144-55-8)

LD50 oral rat	4220 mg/kg bodyweight
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##### sodium carbonate (497-19-8)

LD50 dermal rat	2210 mg/kg
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Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : 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

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

#### 12.2. Persistence and degradability

##### PUR TABS (Dilution 0.5 - 5550 ppm)

Persistence and degradability	This material is believed not to persist in the environment. Free available chlorine is rapidly consumed by reaction with organic and inorganic materials to produce chloride ion. The stable degradation products are chloride ion and cyanuric acid. This material is subject to hydrolysis. Cyanuric acid produced by hydrolysis is biodegradable.
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# PUR TABS (Dilution 0.5 ppm - 5550 ppm)

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### 12.3. Bioaccumulative potential

#### PUR TABS (Dilution 0.5 - 5550 ppm)

Bioaccumulative potential

This material hydrolyses in water liberating free available chlorine and cyanuric acid. These products are not bioaccumulative. Bioaccumulation not expected to occur.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### USA:

All the ingredients in this preparation are listed in the EPA TSCA Inventory.

This product is registered under FIFRA - PUR TABS EPA registration number: 71847-6-91524

PLEASE REFER TO EPA MASTER LABEL FOR ADDITIONAL SAFETY AND OTHER INFORMATION ON THE MIXTURE

CERCLA/SARA – 302 ext. haz. substances – This material contains hazardous substance (Adipic Acid) as defined by CERCLA/SARA and the Reportable Quantity is 5000lbs.

SARA (311,312) – This product is categorized as an immediate health hazard, and fire and reactivity physical hazard (Sodium Dichloroisocyanurate)

Massachusetts Right-to-Know Hazardous Substances list – Listed (Adipic Acid, Sodium Dichloroisocyanurate)

New Jersey Right-to-Know Hazardous Substances list – Listed (Adipic Acid, Sodium Dichloroisocyanurate)

Pennsylvania Right-to-Know Hazardous Substances list – Listed (Adipic Acid, Sodium Dichloroisocyanurate)

Rhode Island Right-to-Know Hazardous Substances list – Listed (Adipic Acid, Sodium Dichloroisocyanurate)

Workplace Classification – This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200)

### 15.2. International regulations

#### Canada:

Canadian Chemical Inventory (DSL) – Listed

WHMIS hazard class –

D2B toxic materials

For Sodium dichloroisocyanurate:

C oxidizing materials

D1B toxic materials

# PUR TABS (Dilution 0.5 ppm - 5550 ppm)

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For Sodium Carbonate:  
E corrosive materials

The active substance is also listed in the following chemical inventories:

- Australian Chemical Inventory (AICS) – Listed
- China Chemical Inventory (IECSC) – Listed
- European Union Inventory (EINECS) – Reported
- Japan Chemical Inventory (ENCS) – Listed
- Korean Chemical Inventory (KECI) – Listed
- New Zealand Chemical Inventory (NZIOC) – Listed
- Philippines Priority Chemical List (PICCS) – Listed

The mixture is generally classified and registered as a disinfectant, biocide, or pesticide.

**EU Regulation:** If required for sale in Ireland (country of origin), the mixture is notified to the Pesticide Control Service, Department of Agriculture, Food and the Marine as a biocide under its appropriate trade name. The product is generally classified as a biocide in the EU, and as such is subject to regulation under EU Regulation No. 528/2012 (Biocidal Products Regulation).

### SECTION 16: Other information

Full text of H-statements:

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

SDS US (GHS HazCom 2012) Prop 65 Correction

*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*

#### REVISION HISTORY:

*Revision No. 0 – New SDS prepared to cover all in-use dilutions of PUR TABS product*