

Safety Data Sheet

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

Revision date: 05/08/2013 : Version:

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures

Trade name : PETRA UNIVERSAL COOLING SYSTEM CLEANER 12/12OZ

Product code : 4001

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : FOLLOW LABEL DIRECTIONS

1.3. Details of the supplier of the safety data sheet

Petra Oil Company

6100 West by Northwest Blvd. Ste. 190

77040 Houston, TX

1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Skin Irrit. 2 H315 Eye Irrit. 2A H319

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H315 - Causes skin irritation H319 - Causes serious eye irritation

Precautionary statements (GHS-US) : P264 - Wash ... thoroughly after handling

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P302+P352 - IF ON SKIN: Wash with plenty of soap and water

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 - Specific treatment (see ... on this label)

P332+P313 - If skin irritation occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention

P362 - Take off contaminated clothing

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification (GHS-US)
AQUA	(CAS No) 7732-18-5	1.5523 - 2.1351	Not classified
sodium dihydrogen orthophosphate, monohydrate	(CAS No) 10049-21-5	1 - 5	Not classified
sodium-2(3H)-benzothiazolethione,conc=50%, aqueous solution	(CAS No) 2492-26-4	0.98 - 1.02	Skin Corr. 1A, H314
sodium nitrate	(CAS No) 7631-99-4	< 1	Ox. Sol. 3, H272 Acute Tox. 4 (Oral), H302

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Name	Product identifier	%	Classification (GHS-US)
sodium hydroxide, conc=50%, aqueous solution	(CAS No) 1310-73-2	0.0649 - 0.6077	Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 2, H401
disodium metasilicate, pentahydrate	(CAS No) 10213-79-3	< 1	Skin Corr. 1C, H314 STOT SE 3, H335
disodium tetraborate, decaihydrate	(CAS No) 1303-96-4	< 1	Not classified
PLURONIC L-61 SURFACTANT	(CAS No) 9003-11-6	< 1	Not classified
sodium chloride	(CAS No) 7647-14-5	0 - 0.059	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice

(show the label where possible).

First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation

occurs: Get medical advice/attention. Specific treatment (see ... on this label).

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness

persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact : Causes skin irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

: Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect

spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and

when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures : Wash ... thoroughly after handling.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container

closed when not in use.

Incompatible products : Strong bases. strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sodium hydroxide, conc=50%, aqueous solution (1310-73-2)		
USA ACGIH	ACGIH Ceiling (mg/m³)	2 mg/m³

disodium tetraborate, decaihydrate (1303-96-4)		
USA ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
USA ACGIH	ACGIH STEL (mg/m³)	6 mg/m³

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.
Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear approved mask.

Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid Appearance : Liquid.

Color : Colourless to light yellow. Colorless.

Odor : characteristic.
Odor threshold : No data available
pH : 10.8 - 11.2
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : No data available
Freezing point : No data available

Boiling point : 100 ℃

: No data available

Self ignition temperature : No data available

No data available
No data available

Flammability (solid, gas) : No data available Vapor pressure : No data available Relative vapor density at 20 $^{\circ}$: No data available

Relative density : 1.036

Solubility : Soluble in water. Log Pow : No data available Log Kow : No data available Viscosity, kinematic No data available Viscosity, dynamic No data available Explosive properties No data available Oxidizing properties : No data available Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

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Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. **Conditions to avoid**

Direct sunlight. Extremely high or low temperatures.

Incompatible materials

strong acids. Strong bases.

10.6. **Hazardous decomposition products**

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity : Not classified

sodium chloride (7647-14-5)	
LD50 oral rat	3000 mg/kg (3550 mg/kg bodyweight; Rat; Rat; Experimental value; Experimental value,3550 mg/kg bodyweight; Rat; Rat; Experimental value; Experimental value)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit; Experimental value, Rabbit; Experimental value)

sodium-2(3H)-benzothiazolethione,conc=50%,aqueous solution (2492-26-4)	
LD50 oral rat	> 2000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)

LD50 oral rat 1270 mg/kg (Rat)

disodium tetraborate, decaihydrate (1303-96-4)	
LD50 oral rat	2660 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)

sodium dihydrogen orthophosphate, monohydrate (10049-21-5)	
LD50 oral rat	8290 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)

Skin corrosion/irritation : Causes skin irritation.

pH: 10.8 - 11.2

Serious eye damage/irritation Causes serious eye irritation.

> pH: 10.8 - 11.2 : Not classified

Respiratory or skin sensitization

Germ cell mutagenicity Not classifiedBased on available data, the classification criteria are not met

Carcinogenicity Not classified

: Not classifiedBased on available data, the classification criteria are not met Reproductive toxicity

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated

exposure)

: Not classifiedBased on available data, the classification criteria are not met

Aspiration hazard : Not classifiedBased on available data, the classification criteria are not met

Potential Adverse human health effects and

symptoms

: Based on available data, the classification criteria are not met.

Symptoms/injuries after skin contact : Causes skin irritation.

SECTION 12: Ecological information

12.1. Toxicity

sodium hydroxide, conc=50%, aqueous solution (1310-73-2)	
LC50 fish 1	45.4 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
LC50 other aquatic organisms 1	100 mg/l (48 h; Daphnia magna; PURE SUBSTANCE)
LC50 fish 2	189 mg/l (48 h; Leuciscus idus)
TLM fish 1	125 ppm (96 h; Gambusia affinis; PURE SUBSTANCE)
TLM fish 2	99 mg/l (48 h; Lepomis macrochirus; PURE SUBSTANCE)
Threshold limit other aquatic organisms 1	100 mg/l (48 h; Daphnia magna; PURE SUBSTANCE)

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sodium chloride (7647-14-5)	14400 1100 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1
LC50 fish 1	11100 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	1000 mg/l (48 h; Daphnia magna)
LC50 fish 2	5840 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 2	340.7 mg/l (48 h; Daphnia magna)
Threshold limit algae 1	4967 mg/l (72 h; Algae; INHIBITORY)
sodium-2(3H)-benzothiazolethione,conc=50%	aqueous solution (2492-26-4)
LC50 fish 1	3.8 mg/l (96 h; Lepomis macrochirus; PURE SUBSTANCE)
EC50 Daphnia 1	19 mg/l (48 h; Daphnia magna; PURE SUBSTANCE)
LC50 fish 2	1.8 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); PURE SUBSTANCE)
disodium metasilicate, pentahydrate (10213-7	0.2)
LC50 fish 1	210 mg/l (96 h; Brachydanio rerio; ANHYDROUS FORM)
EC50 Daphnia 1	216 mg/l (96 h; Daphnia magna; ANHYDROUS FORM)
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LC50 fish 2	2320 mg/l (96 h; Gambusia affinis; ANHYDROUS FORM)
EC50 Daphnia 2	632 mg/l (96 h; Lymnaea sp.; ANHYDROUS FORM)
sodium nitrate (7631-99-4)	
LC50 fish 1	12000 mg/l (96 h; Lepomis macrochirus)
LC50 other aquatic organisms 1	> 3000 mg/l (24 h; Daphnia magna)
LC50 fish 2	4650 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
LC50 other aquatic organisms 2	665 mg/l (96 h; Daphnia magna)
TLM fish 1	6650 ppm (96 h; Gambusia affinis; TURBULENT WATER)
TLM fish 2	10000 ppm (96 h; Lepomis macrochirus)
Threshold limit other aquatic organisms 1	> 3000 mg/l (24 h; Daphnia magna)
Threshold limit other aquatic organisms 2	665 mg/l (96 h; Daphnia magna)
disodium tetraborate, decaihydrate (1303-96-	4
LC50 fish 1	100 - 1000 mg/l (96 h; Pisces)
LC50 other aquatic organisms 1	100 - 1000 mg/l (96 h)
EC50 Daphnia 1	141 mg/l (48 h; Daphnia magna)
LC50 fish 2	1900 mg/l (Pimephales promelas)
Threshold limit other aquatic organisms 1	100 - 1000,96 h; Protozoa; ANHYDROUS FORM
Threshold limit other aquatic organisms 2	1 mg/l (72 h; Rana sp.)
Threshold limit algae 1	158 mg/l (96 h; Scenedesmus subspicatus; ANHYDROUS FORM)
sodium dihydrogen orthophosphate, monohy	` '
LC50 fish 1	> 2400 mg/l (48 h; Leuciscus idus; ANHYDROUS FORM)
TLM other aquatic organisms 1	126 ppm (72 h; Daphnia magna; ANHYDROUS FORM)
12.2. Persistence and degradability	
PETRA UNIVERSAL COOLING SYSTEM CLEA	NER 12/12OZ
Persistence and degradability	Not established.
AQUA (7732-18-5)	
Persistence and degradability	Not established.
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PLURONIC L-61 SURFACTANT (9003-11-6)	
Persistence and degradability	Biodegradability in water: no data available.
sodium hydroxide, conc=50%, aqueous solut	ion (1310-73-2)
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the components of the mixture available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
sodium chloride (7647-14-5)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
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sodium-2(3H)-benzothiazolethione,conc=	
Persistence and degradability	No (test)data on mobility of the components of the mixture available.
disodium metasilicate, pentahydrate (102	13-79-3)
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
sodium nitrate (7631-99-4)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
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disodium tetraborate, decaihydrate (1303	•
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
sodium dihydrogen orthophosphate, mor	nohydrate (10049-21-5)
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
42.2 Biogeous ulative netential	
12.3. Bioaccumulative potential	
PETRA UNIVERSAL COOLING SYSTEM (
Bioaccumulative potential	Not established.
AQUA (7732-18-5)	
Bioaccumulative potential	Not established.
PLURONIC L-61 SURFACTANT (9003-11-	SI.
Bioaccumulative potential	No bioaccumulation data available.
Bioaccumulative potential	No bioaccumulation data available.
sodium hydroxide, conc=50%, aqueous s	solution (1310-73-2)
Log Pow	-3.88 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable.
sodium chloride (7647-14-5)	
Log Pow	-3.0 (Calculated)
Bioaccumulative potential	Bioaccumulation: not applicable.
sodium-2(3H)-benzothiazolethione,conc=	
Log Pow	-0.46
Bioaccumulative potential	Bioaccumulation: not applicable.
disodium metasilicate, pentahydrate (102	13-79-3)
Bioaccumulative potential	No bioaccumulation data available.
sodium nitrate (7631-99-4)	
Log Pow	-3.8
Bioaccumulative potential	Bioaccumulation: not applicable.
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disodium tetraborate, decaihydrate (1303	
Bioaccumulative potential Not bioaccumulative.	
sodium dihydrogen orthophosphate, monohydrate (10049-21-5)	
Bioaccumulative potential	No bioaccumulation data available.
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12.4. Mobility in soil	

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disodium tetraborate, decaihydrate (1303-96-4)	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

US DOT (ground): NOT REGULATED, ICAO/IATA (air): NOT REGULATED, IMO/IMDG (water): NOT REGULATED,

14.2. UN proper shipping name

DOT Proper Shipping Name : NOT REGULATED

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

PETRA UNIVERSAL COOLING SYSTEM CLEANER 12/12OZ	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
	Immediate (acute) health hazard

sodium hydroxide, conc=50%, aqueous solution (1310-73-2)		
Listed on SARA Section 302 (Specific toxic chemical listings)		
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard	

sodium-2(3H)-benzothiazolethione,conc=50%,	dium-2(3H)-benzothiazolethione,conc=50%,aqueous solution (2492-26-4)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard	
	Delayed (chronic) health hazard	

15.2. International regulations

CANADA

sodium hydroxide, conc=50%, aqueous solution (1310-73-2)			
Listed on the Canadian DSL (Domestic Substance	on the Canadian DSL (Domestic Substances List) inventory.		
WHMIS Classification	Class E - Corrosive Material		
sodium nitrate (7631-99-4)			
WHMIS Classification	Class C - Oxidizing Material Class D Division 2 Subdivision B - Toxic material causing other toxic effects		
disodium tetraborate, decaihydrate (1303-96-4)			
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects		

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

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Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Indication of changes : Revision - See : *.

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Ox. Sol. 3	Oxidizing solids Category 3
Skin Corr. 1A	skin corrosion/irritation Category 1A
Skin Corr. 1C	skin corrosion/irritation Category 1C
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation

NFPA health hazard : 2 - Intense or continued exposure could cause temporary

incapacitation or possible residual injury unless prompt

medical attention is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions,

and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 1 Slight Hazard Physical : 1 Slight Hazard

SDS US (GHS HazCom 2012) - Technical Chemical

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compilance with the above. The date of manufacture is stamped on the product

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