

# Boiler Complete Treat "S"

## Safety Data Sheet

### SECTION 1: Product and company identification

Product name : Boiler Complete Treat "S"  
Use of the substance/mixture : Water treatment  
Product code : 1960  
Company : Total Solutions  
P.O. Box 240014  
Milwaukee, WI 53224 - USA  
T 800-743-6417  
[athea.com](http://athea.com)  
Contact: Technical Department  
Emergency number : Chemtrec: 1-800-424-9300

### SECTION 2: Hazards identification

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

GHS-US classification  
Skin Corr. 1B H314  
Eye Dam. 1 H318

#### 2.2. Label elements

GHS US labelling  
Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger  
Hazard statements (GHS US) : Causes severe skin burns and eye damage.  
Causes serious eye damage.  
Precautionary statements (GHS US) : Do not breathe mist, spray.  
Wash thoroughly after handling  
Wear eye protection, protective clothing, protective gloves.  
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 doctor, a POISON CENTER.  
Specific treatment (see First aid measures on this label).  
Wash contaminated clothing before reuse.  
Store locked up.  
Dispose of contents/container to comply with local/regional/national/international regulations..

#### 2.3. Other hazards

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
Potassium Hydroxide	(CAS-No.) 1310-58-3	1-5	Acute Tox. 3 (Oral), H301 Skin Corr. 1, H314 Eye Dam. 1, H318
Acrylamide-Acrylic Acid Copolymer	(CAS-No.) Withheld	3-7	Skin Irrit. 2, H315 Eye Irrit. 2B, H320

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Diethyl Ethanolamine	(CAS-No.) 100-37-8	1-5	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1, H314 Eye Dam. 1, H318
Tetrapotassium Pyrophosphate	(CAS-No.) 7320-34-5	1-5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Sodium Metabisulfite	(CAS-No.) 7681-57-4	1-5	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318

All hazardous chemicals, as determined by 29 CFR 1910.1200 have been listed. A specific chemical identity and/or percentage of composition has been withheld as a trade secret. Any concentration shown as a range is to protect confidentiality or is due to batch variation.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a poison center or a doctor if you feel unwell.

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

- Symptoms/effects : Causes severe skin burns and eye damage.  
Symptoms/effects after inhalation : May cause respiratory irritation. Possible laryngeal spasm/oedema.  
Symptoms/effects after skin contact : Caustic burns/corrosion of the skin.  
Symptoms/effects after eye contact : Causes serious eye damage. Corrosion of the eye tissue. Permanent eye damage.  
Symptoms/effects after ingestion : May be harmful if swallowed. Burns to the gastric/intestinal mucosa. Gastrointestinal complaints. Cramps.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : All extinguishing media allowed.

#### 5.2. Special hazards arising from the substance or mixture

- Reactivity : Upon combustion: CO and CO<sub>2</sub> are formed.

#### 5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.  
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

- General measures : Isolate from fire, if possible, without unnecessary risk.

##### 6.1.1. For non-emergency personnel

- Protective equipment : Protective goggles. Gloves. Protective clothing.  
Emergency procedures : Evacuate unnecessary personnel. Avoid contact with skin, eyes and clothing. Ventilate spillage area.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Stop leak if safe to do so. Stop release. Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment. Prevent soil and water pollution.

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

For containment : Contain released product, collect/pump into suitable containers.  
Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing.  
Hygiene measures : Wash thoroughly after handling. Wash contaminated clothing before reuse.

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

Technical measures : Comply with applicable regulations. Always add the product to the water for dilution/mixture. Never add water to this product.  
Storage conditions : Keep container closed when not in use.  
Incompatible products : Acids.  
Information on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) acids.  
Storage area : Meet the legal requirements. Store in a dry area. Store in a cool area.  
Special rules on packaging : meet the legal requirements. Keep only in original container.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Diethyl Ethanolamine (100-37-8)

ACGIH	ACGIH OEL TWA [ppm]	2 ppm
ACGIH	Remark (ACGIH)	URT irr; CNS convul
OSHA	OSHA PEL TWA [1]	50 mg/m <sup>3</sup>
OSHA	OSHA PEL TWA [2]	10 ppm

#### Potassium Hydroxide (1310-58-3)

ACGIH	ACGIH OEL C	2 mg/m <sup>3</sup>
ACGIH	Remark (ACGIH)	URT, eye, & skin irr

#### Sodium Metabisulfite (7681-57-4)

ACGIH	ACGIH OEL TWA	5 mg/m <sup>3</sup>
ACGIH	Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)

#### Tetrapotassium Pyrophosphate (7320-34-5)

Not applicable

#### Acrylamide-Acrylic Acid Copolymer (Withheld)

Not applicable

### 8.2. Exposure controls

Personal protective equipment : Use appropriate personal protective equipment when risk assessment indicates this is necessary. Gloves. Safety glasses. Protective clothing.



## SECTION 9: Physical and chemical properties

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

Physical state : Liquid  
Appearance : clear,brown,Liquid

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Odour	: Mild odour
Odour threshold	: No data available
pH	: 12 – 14
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 200 °F Closed Cup
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Relative vapour density at 20 °C	: No data available
Density	: 1.12 g/ml
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
VOC content	: Not Determined

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Upon combustion: CO and CO<sub>2</sub> are formed.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Acids.

### 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

#### Diethyl Ethanolamine (100-37-8)

LD50 oral rat	1320 mg/kg bodyweight (BASF test, Rat, Male / female, Experimental value, Oral, 7 day(s))
LD50 dermal rabbit	1100 mg/kg bodyweight (Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	4.6 mg/l air (BASF test, 4 h, Rat, Male / female, Calculated value, Inhalation (vapours), 8 day(s))
ATE CLP (oral)	1320 mg/kg bodyweight
ATE CLP (dermal)	885 mg/kg bodyweight
ATE CLP (gases)	700 ppmv/4h
ATE CLP (vapours)	3 mg/l/4h
ATE CLP (dust,mist)	0.5 mg/l/4h

#### Potassium Hydroxide (1310-58-3)

LD50 oral rat	273 mg/kg (Rat, Oral)
ATE CLP (oral)	273 mg/kg bodyweight

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<b>Sodium Metabisulfite (7681-57-4)</b>	
ATE CLP (oral)	500 mg/kg bodyweight

<b>Tetrapotassium Pyrophosphate (7320-34-5)</b>	
LD50 dermal rabbit	> 4640 mg/kg (Rabbit)

Skin corrosion/irritation	:	Causes severe skin burns. pH: 12 – 14
Serious eye damage/irritation	:	Causes serious eye damage. pH: 12 – 14
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified
Symptoms/effects after inhalation	:	May cause respiratory irritation. Possible laryngeal spasm/oedema.
Symptoms/effects after skin contact	:	Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact	:	Causes serious eye damage. Corrosion of the eye tissue. Permanent eye damage.
Symptoms/effects after ingestion	:	May be harmful if swallowed. Burns to the gastric/intestinal mucosa. Gastrointestinal complaints. Cramps.
Likely routes of exposure	:	Skin and eyes contact

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>Diethyl Ethanolamine (100-37-8)</b>	
LC50 - Fish [1]	147 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Experimental value, Not neutralized)
EC50 - Crustacea [1]	165 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Neutralized)
ErC50 algae	62.3 mg/l (DIN 38412-9, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)

<b>Potassium Hydroxide (1310-58-3)</b>	
LC50 - Fish [1]	80 mg/l (96 h, Gambusia affinis, Pure substance)

<b>Tetrapotassium Pyrophosphate (7320-34-5)</b>	
LC50 - Fish [1]	> 750 mg/l (48 h, Leuciscus idus)

### 12.2. Persistence and degradability

<b>Diethyl Ethanolamine (100-37-8)</b>	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.002 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.76 g O <sub>2</sub> /g substance

<b>Potassium Hydroxide (1310-58-3)</b>	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

<b>Tetrapotassium Pyrophosphate (7320-34-5)</b>	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable

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ThOD	Not applicable
BOD (% of ThOD)	Not applicable

### 12.3. Bioaccumulative potential

Diethyl Ethanolamine (100-37-8)	
BCF - Fish [1]	< 6.1 l/kg (Equivalent or similar to OECD 305, 28 day(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	0.21 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Potassium Hydroxide (1310-58-3)	
Bioaccumulative potential	Not bioaccumulative.

Tetrapotassium Pyrophosphate (7320-34-5)	
Bioaccumulative potential	Bioaccumulation: not applicable.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

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

## SECTION 14: Transport information

### Department of Transportation (DOT)

Transport document description (DOT) : UN3266 Corrosive liquid, basic, inorganic, n.o.s. (Potassium Hydroxide), 8, II  
 UN-No.(DOT) : UN3266  
 Proper Shipping Name (DOT) : Corrosive liquid, basic, inorganic, n.o.s.  
 Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136  
 Hazard labels (DOT) : 8 - Corrosive



Packing group (DOT) : II - Medium Danger  
 DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
 DOT Packaging Bulk (49 CFR 173.xxx) : 242  
 DOT Symbols : G - Identifies PSN requiring a technical name  
 DOT Special Provisions (49 CFR 172.102) : B2,IB2,T11,TP2,TP27  
 DOT Packaging Exceptions (49 CFR 173.xxx) : 154  
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L  
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L  
 DOT Vessel Stowage Location : B  
 DOT Vessel Stowage Other : 40 - Stow "clear of living quarters", 52 - Stow "separated from" acids

### Additional information

Other information : When transported by ground, this product may be eligible to be shipped as a Limited Quantity utilizing the exception found at 49 CFR 173.154. If any alteration of packaging, product, or mode of transportation is further intended, different shipping names and labeling may be required.

### ADR

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

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### SECTION 15: Regulatory information

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Acrylamide	79-06-1	< 0.1%
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Potassium Hydroxide	(1310-58-3)	CERCLA RQ1000 lb
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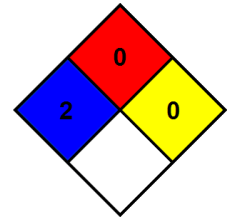
#### WARNING

This product can expose you to Acrylamide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

- NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
- NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Prepared by: Technical Department

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. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of this material.