

Material Safety Data Sheet

BW-5041

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|-----------------------------|---------------------------------------------------------------------------|
| Product name | BW-5041 |
| Product use | Boiler Internal Treatment |
| Manufacturer | Athlon Solutions, LLC. PO Box 27727 Houston, TX 77227-7727 USA |
| Telephone | 1-713-457-2400 |
| In case of emergency | 1-800-424-9300 (CHEMTREC) 1-703-527-3887 (Outside U.S. - Call Collect) |

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

| | |
|--------------------------------|------------------------------------------|
| Signal Word | Warning |
| Hazard Summary | May cause sensitization by skin contact. |
| Physical state | liquid |
| Color | clear Colorless to light yellow. |
| Odor | not significant |
| Primary Routes of Entry | Inhalation. Skin. |

Potential Health Effects

| | |
|-------------------------------------------------------|---------------------------------------------------|
| Inhalation | No known significant effects or critical hazards. |
| Skin | May cause allergic skin reaction. |
| Eyes | May cause mild eye irritation. |
| Ingestion | No known significant effects or critical hazards. |
| Chronic Exposure | No known significant effects or critical hazards. |
| Medical conditions aggravated by over-exposure | Skin disorders |

Environmental hazards

| | |
|------------------------------|---------------------------------------------------|
| Environmental effects | No known significant effects or critical hazards. |
|------------------------------|---------------------------------------------------|

See toxicological information (section 11)

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

| <u>Name</u> | <u>CAS no.</u> | <u>Weight %</u> |
|-------------|----------------|-----------------|
| Maleic acid | 110-16-7 | 0.1 - 1 |

SECTION 4. FIRST AID MEASURES

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| General advice | If you feel unwell, seek medical advice (show the label when possible). No action |
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shall be taken involving any personal risk or without suitable training.

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| Inhalation | Move exposed person to fresh air. |
| Skin contact | Take off contaminated clothing and shoes immediately. Flush contaminated skin with plenty of water. If symptoms persist, call a physician. |
| Eye contact | Remove contact lenses. Flush eyes with water as a precaution. Keep eye wide open while rinsing. |
| Ingestion | Rinse mouth with water. Drink plenty of water. Never give anything by mouth to an unconscious person. |
| Notes to physician | No information available. |

SECTION 5. FIRE-FIGHTING MEASURES

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|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fire Hazard | No specific fire or explosion hazard. |
| Flash point | > 200 °F (93.3 °C) |
| Autoignition temperature | Not available. |
| Flammable limits | Lower: Not available. Upper: Not available. |
| <u>Extinguishing media</u> | |
| Suitable | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Hazardous combustion products | Carbon oxides. nitrogen oxides (NOx). phosphorus oxides. |
| Special protective equipment for fire-fighters | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| Further information | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Explosion hazard | Risk of explosion of the product in the presence of mechanical impact: Not available. Risk of explosion of the product in the presence of static discharge: Not available. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions | Ensure adequate ventilation. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see section 8). |
| Environmental precautions | Avoid contact of spilled material with soil and prevent runoff entering surface waterways. |
| Methods for cleaning up | For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal. |

SECTION 7. HANDLING AND STORAGE

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| Handling | Use only with adequate ventilation. Put on appropriate personal protective equipment (see section 8). Do not get in eyes or on skin or clothing. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not enter storage areas and confined spaces unless adequately ventilated. Workers should wash hands and face before eating, drinking and |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

smoking.

Storage Keep container closed when not in use. Keep container in a well-ventilated area.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protection

Hand protection Impervious butyl rubber gloves. Nitrile rubber. Neoprene gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection Safety glasses.

Skin and body protection Wear as appropriate: Chemical-resistant apron. Long sleeved clothing. Footwear protecting against chemicals.

Respiratory protection No personal respiratory protective equipment normally required.

Occupational Exposure Limits

Not established

Engineering measures If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation. Avoid contact with skin, eyes and clothing. Remove contaminated clothing and protective equipment before entering eating areas. Wash hands before breaks and immediately after handling the product.

Protective measures Emergency baths, showers, or other equipment appropriate for the potential level of exposure should be located close to the workstation location. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid

Color clear Colorless to light yellow.

Odor not significant

Odor Threshold Not available.

Melting/freezing point Not available.

Pour point Not available.

Boiling/condensation point Not available.

Flash point > 200 °F (93.3 °C)

pH 3.0 - 5.0

Solubility Water

Relative density 1.1 - 1.2 at 68 °F (20.0 °C)

Vapor pressure 60.6739 hPa at 100 °F (37.8 °C)

Evaporation rate Not available.

Viscosity 15.3 mPa.s at 24 °C (75 °F)

Partition coefficient: n-octanol/water Not available.

Note: Typical values only - not to be interpreted as sales specifications

SECTION 10. STABILITY AND REACTIVITY

| | |
|-----------------------------------------|-------------------------------------------------------------|
| Chemical stability | Stable under normal conditions. |
| Conditions to avoid | No specific data. |
| Materials to avoid | Strong acids. Strong oxidizing agents. |
| Hazardous decomposition products | No hazardous decomposition products are known. |
| Hazardous reactions | No dangerous reaction known under conditions of normal use. |

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

| <u>Substance</u> | <u>Test</u> | <u>Species</u> | <u>Dose</u> | <u>Classification</u> |
|------------------|-------------|----------------|-------------|-----------------------|
| Maleic acid | LD50 Oral | rat | 708 mg/kg | not applicable |
| | LD50 Oral | mouse | 2,400 mg/kg | not applicable |

Irritation/Corrosion

No data is available on the product itself.

Sensitization

No data is available on the product itself.

Chronic toxicity

No data is available on the product itself.

Target organ effects

No data is available on the product itself.

Carcinogenicity

No data is available on the product itself.
None of the components are listed.

Mutagenicity

No data is available on the product itself.

Teratogenicity

No data is available on the product itself.

Reproductive toxicity

No data is available on the product itself.

SECTION 12. ECOLOGICAL INFORMATION

Environmental effects No known significant effects or critical hazards.

Aquatic ecotoxicity

| <u>Substance</u> | <u>Species</u> | <u>Exposure</u> | <u>Value type</u> | <u>Value</u> | <u>Endpoints</u> | <u>Classification</u> |
|------------------|--------------------------------------|-----------------|-------------------|--------------|------------------|---------------------------------------------|
| Product | Pimephales promelas (fathead minnow) | 96 h | LC50 | 1,613 mg/l | - | Practically non-toxic to aquatic organisms. |
| Product | Daphnia pulex (Water flea) | 48 h | EC50 | 1,346 mg/l | - | Practically non-toxic to aquatic organisms. |

Biodegradation

No data is available on the product itself.

Bioaccumulation

No data is available on the product itself.

Octanol/water partition coefficient (LogPow) Not available.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal Dispose of wastes in an approved waste disposal facility. Empty containers or liners may retain some product residues. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging Dispose of as unused product.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

SECTION 14. TRANSPORT INFORMATION

DOT

Not dangerous goods

TDG

Not dangerous goods

IATA

Not dangerous goods

IMDG

Not dangerous goods

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

U.S. Federal regulations

CERCLA: Hazardous substances - Reportable quantity:

| <u>Substance</u> | <u>Reportable quantity</u> |
|------------------|----------------------------|
| Maleic acid | 5000 lbs |

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

No SARA Hazards

SARA 313 - Supplier notification

None of the components are listed.

Clean Water Act (CWA) 307: None of the components are listed.

Clean Water Act (CWA) 311: The following components are listed: Maleic acid

Clean Air Act (CAA) 112 accidental release prevention: None of the components are listed.

State regulations

Massachusetts Substances: The following components are listed: Maleic acid

Pennsylvania RTK Hazardous Substances: The following components are listed: Maleic acid

New Jersey Hazardous Substances: The following components are listed: Maleic acid

California Prop. 65:

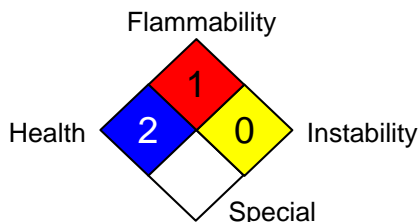
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

International regulations

- United States inventory (TSCA 8b):** On TSCA Inventory
- Canada inventory (DSL):** This product contains one or more components listed on the Canadian NDSL. All other components are on the Canadian DSL.
- Australia inventory (AICS)** Not determined.

SECTION 16. OTHER INFORMATION

National Fire Protection Association (U.S.A.):



- Prepared by** Product Stewardship (1-713-457-2400)
- Date of issue** 07/30/2013
- Date of previous issue** 00/00/0000
- Version** 1.0

Disclaimer

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