

Sugar & Ethanol Technologies

ASIA-PACIFIC
PRODUCTS

ADVANCED TECHNOLOGIES THAT HELP YOU EXTRACT MORE VALUE FROM YOUR ENTIRE OPERATION

Buckman offers a wide range of solutions for sugarcane, beet, and wheat processors around the world, solutions that can improve processes, keep water systems cleaner, improve product quality and enhance mill performance dramatically. Look to us for leading chemistries, including next generation enzymatic technologies, to help you optimize:

-
- Washing
 - Extraction
 - Purification
 - Evaporation
 - Crystallization
 - Ethanol fermentation and refining
 - Distillation
 - Microbiological control
 - Cooling tower and boiler performance
 - Reverse osmosis
 - Cleaning
-

We can help you reduce your environmental footprint, too, even as we improve your return on investment. If you want to know more about any of these products and how they can make a difference in your mill, contact your Buckman representative or visit buckman.com.

PRODUCT	DESCRIPTION
Microbicides & Sanitation Aids	
Busan® 1035	This broad-spectrum microbicide, based on a blend of carbamates, can be applied directly into the juice in the sugar mill grinding, crusher and diffuser system at up to a total of 12.5 ppm (FDA guidelines). It is effective against contamination by dextran-forming bacteria, <i>Leuconostoc mesenteroides</i> and <i>Bacillus stearothermophilus</i> . FDA allowed: 21 CFR § 173.320 (b)(3). Halal and Kosher certified.
Busan® 1038SG	This broad-spectrum microbicide, based on a single carbamate, is applied directly into the juice or raw sugar melter in the sugar refinery. It is effective against contamination by dextran-forming bacteria, <i>Leuconostoc mesenteroides</i> and <i>Bacillus stearothermophilus</i> . FDA allowed: 21 CFR 173.320 (b)(3). Halal and Kosher certified.
Busan® 1001	This microbicide, based on quaternary ammonium compounds, is an effective spray sanitizer when applied as a 5% aqueous dilution on equipment and system, followed by adequate draining before it comes into contact with sugar juice. It is effective against <i>Leuconostoc mesenteroides</i> . FDA allowed: 21 CFR § 178.1010. Halal and Kosher certified.
Oxamine® Technologies	Oxamine, Buckman's newest technology and a greener oxidizing biocide, is generated on site. Oxamine is an alternative that can replace chlorine-based biocides or antibiotics in the fermentation process in the ethanol industry. It is active against a broad range of microbes and is especially effective against filamentous microorganisms. It also gives better penetration and removal of biofouling. Oxamine can work at a pH of up to 10 and is less corrosive than chlorine. Oxamine can also be used to control algal, bacterial and fungal deposits in industrial cooling towers, recirculating cooling water systems, evaporative condensers, influent water systems, municipal water, brewery and food industries, pasteurizers, industrial fresh water systems, air washers, seawater desalination and reverse osmosis systems. The product is Halal certified.
Busan® 1162	Busan 1162 compliments Busan 1001 and is a cationic non-oxidizing biocide that can be used alone or in combination with oxidizing biocides. It is very effective against most bacteria and algae and is an excellent hard surface sanitizer. This makes it a good choice for general microbial control. If it is used for hard surface sanitizing, the surface should be well rinsed afterwards. Halal and Kosher certified. FDA allowed: 21 CFR § 178.1010 for disinfectant.
Busan® 1355	This dithio carbamate-based biocide provides excellent cost-effective control of most bacteria found in process and cooling systems. While the chemistry is similar to Busan 1035, it offers benefits when added into the juice in the sugar mill grinding, crusher and diffuser system, subject to the FDA allowance limit. It is effective across a broad pH range and is effective at controlling bacteria found in these systems. It has a proven record of controlling bacteria in a variety of process waters. Halal and Kosher certified. FDA allowed: 21 CFR § 173.320.
Clarification Aids	
Bufloc® 5811	This high molecular weight, high charge density cationic powder flocculant is used to improve the lime mud separation process. It is also very efficient at a low dosage range. Bufloc 5811 readily dissolves in water to form easy to pump solutions. The product is Halal and Kosher certified.
Bulab® 5196	This potable grade cationic flocculant polymer is used in the clarification process for influent water clarification. The product is Halal and Kosher certified.
Bufloc® 5631	This anionic flocculant is extremely effective in phosphatation applications as well as sugar juice and syrup clarification in sugar mills or in sugar refineries. Bufloc 5631 combines low molecular weight and charge density to provide a high level of efficacy at low dosages. This product is Halal and Kosher certified. FDA allowed: 21 CFR § 173.5 for sugar.
Bulab® 5290	Bulab 5290 is a high molecular weight anionic flocculant with a charge density in the medium to high range. It is readily soluble in water and can be made into solution using any good quality water. As for Bufloc 5631, it can be used in a variety of applications in sugar mills or refineries. Halal and Kosher certified. FDA allowed: 21 CFR § 173.5 for sugar.
Colour Removal	
Bulab® 5819	This highly cationic, liquid coagulant is effective at the removal of visual colour and turbidity in the sugar refinery process. A high charge density and low molecular weight makes this product very efficient at dosages of up to 300 mg/l in colour removal applications, depending on the raw sugar quality. FDA allowed: 21 CFR § 173.60 for sugar. This product is Halal and Kosher certified.
Bufloc® 5031	Bufloc 5031 is a highly cationic, liquid coagulant that is effective in the removal of visual colour, turbidity and polysaccharides in sugar mixed juice and the raw sugar refineries process. The combination of high charge density and low molecular weight makes this product very efficient at dosages of 50 to 125 mg/l in mixed juice colour removal applications. FDA allowed: 21 CFR § 173.60 for sugar. This product is NSF and Kosher certified.
Boilout Additive	
Bulab® 8152A	This concentrated blend of surfactants improves the efficacy of boil-out solutions for the removal of organic deposits and biofilm. It increases penetration, dispersion and dissolution of these types of deposits when added to caustic or acid boil-out solutions. The normal concentrations are 0.1–0.8%. Bulab 8152A reduces the amount of caustic or acid required while minimizing the need for a corrosive acid cleaning cycle. It can also reduce or eliminate the need for manual cleaning with brushes. Halal and Kosher certified.

PRODUCT	DESCRIPTION
Evaporator Scale Control	
Bulab® 8301	Bulab 8301 is the product of choice for high stress applications where scale control is critical. This product is a proprietary blend of anionic polymers that provides strong scale inhibition as well as dispersion properties. It ensures scale and deposit control in multiple effect evaporators and juice heaters. It is very effective in controlling calcium based scales in addition to those containing magnesium and barium. Typical dosage levels are 6 to 22 mg/l. This product contains no phosphates. FDA allowed: 21 CFR § 173.73 for sugar. This product is Halal and Kosher certified.
Busperse® 39	This polyacrylate based dispersant and scale inhibitor is a cost-effective choice for use in multiple effect evaporators and juice heaters that do not operate under stressed conditions. It is effective for preventing calcium scales at dosages of 10 mg/l. FDA allowed: 21 CFR § 173.73 for sugar. This product is Halal and Kosher certified.
Bulab® 7029	This concentrated, all polymer scale inhibitor blend is effective on most calcium scales but it is the product of choice for calcium oxalate. Analysis of the scale type can be used to guide the selection of the specific antiscalant as well as the dosage rate. FDA allowed: 21 CFR § 173.73 for sugar. Halal and Kosher certified.
Bulab® 7126	Bulab 7126, is related chemistry to Busperse 39 and can be used for the same general purposes. This polyacrylate can be used for cost-effective scale control in sugar mills. It is recommended at 5 - 10 ppm as product and the specific dosage can be recommended by the Buckman representative. FDA allowed: 21 CFR § 173.73 for sugar.
Bulab® 7097	Using the recent advances in phosphinocarboxylate chemistry, Bulab 7097 is designed to be highly effective at controlling sulphate and phosphate containing scales. Under high stress conditions it will prevent deposition through a combination of dispersion and scale inhibition. FDA allowed: 21 CFR § 173.310 for boiler water.
Defoamer/Anti Foam	
Bubreak® 4019	This product is a high activity blend of oil, wax and glycol for foam control in alcohol fermentation, refinery melt liquor, sugar syrup and sugar recovery systems. Since it is 100% active, it means that the dosage to control foam is lower than many other defoamers. Kosher and Halal certified.
Bubreak® 4243	This product is blend of fatty alcohol compounds for foam control in effluent wastewater systems of sugar mills or sugar refineries. The product is very effective at low dosages in controlling foam in activated sludge, contamination in open cooling water systems and other non-food contact systems. Halal and Kosher certified.
Bubreak® 4511	Since this is a water based defoamer, it can be dosed as received or diluted prior to feeding. This combined with a high activity provides excellent flexibility in terms of application strategy. Bubreak 4511 offers good persistence and will maintain foam control although it is recommended that it be fed continuously. This product is Halal certified.
Bubreak® 4240	Bubreak 4240 is a concentrated defoamer designed specifically for ethanol fermentation. This glycol/wax/oil blend provides a good balance between rapid foam knockdown and foam suppression, that results in low usage rates. While designed for ethanol fermentation, it has other applications including wastewater streams where foaming is an issue. This product is Halal and Kosher certified.
Viscosity Depressant	
Bupan®	This product is a surfactant blend formulated to help lower the viscosity of massecuite and syrup in vacuum pans and centrifuges. The product is very effective at improving process efficiency and increasing the sugar yield. FDA allowed: 21 CFR § 172.810. This product is Halal and Kosher certified.
Condensate & Oxygen Scavenger in Boiler System	
Bulab® 9708	This blend of neutralizing amines is suitable for a wide variety of vapor phase and/or condensate corrosion applications. It is approved for steam contact with food products when fed in conformance with total amine limitations. FDA allowed: 21 CFR § 173.310 up to 28 ppm as product in the steam, excluding use of such steam in contact with milk and milk products. This product is Halal and Kosher certified.
Bulab® 9601NC	This powder sulphite product is a rapid oxygen scavenger that can be used in medium to lower pressure boilers. It is easy to test for, since a residual in the boiler water serves as confirmation that all oxygen has been removed and no corrosion will take place. The product is Halal and Kosher certified and FDA allowed: 21 CFR § 173.310. The product is allowed with food contact processing.
Bulab® 9602	Bulab 9602 is a catalysed liquid sulphite designed to protect boiler and feedwater systems by rapidly reacting with and removing oxygen. The product is not volatile and is easy to test for in boilers. The same application guidelines apply to this product as for Bulab 9601NC. This product is low odour and can be fed directly or diluted prior to feeding. The product is Halal and Kosher certified and FDA allowed: 21 CFR § 173.310. The product is allowed with food contact processing.
Bulab® 9622	Bulab 9622 is an easy to feed liquid carbonylhydrazide based product that does not contaminate the workplace with hydrazine vapours. Bulab 9622 is designed to only produce hydrazine in the boiler system. Hydrazine will protect the boiler and feedwater systems from oxygen as well as being a strong passivating agent. This product is Halal and Kosher certified.

PRODUCT	DESCRIPTION
Coal Combustion Catalyst	
Bulab® 9672	Bulab 9672 is proven to help improve boiler efficiency, improve coal combustion and reduce SO _x /NO _x emissions. Bulab 9672 offers a way to improve reliability and conserve natural resources. It can also provide savings in labour and energy. This unique blend of fuel additives increases coal combustion efficiency and reduces SO _x emissions effectively by up to 80%. By lowering the activation energy required to complete the combustion process, more energy is extracted from the solid fuel. An added benefit is that by using Bulab 9672, plants are able to use low calorific value coal quality with little to no slagging issues and see a 4–10% reduction in solid fuel consumption. The product is Halal and Kosher certified. Not allowed for food contact.
Internal Boiler Treatment Program	
Bulab® 9564	Bulab 9564 is a powder phosphate product for use in either coordinated phosphate treatment programs or general boiler water applications. The product can be used in combination with other boiler treatment products. Bulab 9564 acts to control the pH in the internal boiler system to minimize corrosion. In addition, it will react with any trace levels of hardness to prevent scale formation on heat exchange surfaces. The product can be used alone or in combination with other boiler treatment chemicals. If a liquid version of Bulab 9564 is desired it can also be provided. The product is Halal certified and allowed under FDA 21 CFR § 173.310 for use where steam can contact food.
Enzymatic Technologies	
Buzyme® 2583 (Alpha Amylase)	This stabilized enzyme is used to facilitate degradation of starch in sugar juice, syrup and melter that originates from cane and raw sugar. Starch is responsible for poor crystal formation and poor filterability. Buzyme 2583 improves performance in the mill and sugar refinery through viscosity control, reduction of organic deposits, and it enhances the clarity of the sugar crystal. The product is Halal and Kosher certified. Generally Recognized As Safe (GRAS).



Buckman locations in Asia-Pacific:

Buckman Laboratories (Asia) Pte Ltd
33 Tuas South Street 1
Singapore 638038

Buckman Laboratories (India) Pvt Ltd
Block A & B, 11th Floor, EGA Trade Centre
No. 809, Poonamallee High Road, Kilpauk
Chennai, Tamil Nadu- 600010 India

PT Buckman Indonesia
DBS Bank Tower, 28/F Suite 2888
Ciputra World One.
Jl. Prof. Dr. Satrio Kav 3-5
Jakarta 12940

Buckman Laboratories Korea Corporation
#205 SA Tower, 175 LS-Ro Gunpo-Si
Gyeonggi-Do, 15808 Korea

Buckman Laboratories (Australia) Pty Ltd
Buckman Laboratories New Zealand Ltd
Office Building 2, 280 Byrnes Road,
PO Box 1396
Wagga Wagga, NSW, 2650, Australia

This is not an offer for sale. The product shown in this literature may not be available for sale and/or available in all geographies where Buckman is represented. The claims made may not have been approved for use in all countries. Buckman assumes no obligation or liability for the information. Please contact your Buckman sales representative for more information.

Seller warrants that this product conforms to its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes the risk of any use contrary to such directions. Seller makes no other warranty or representation of any kind, express or implied, concerning the product, including **NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE**. No such warranties shall be implied by law and no agent of seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty. W995H (06/18)

Argentina +54 11 4701-6415; Australia +61 (2) 6923 5888; Belgium +32 9 257 92 11; Brasil +55 (19) 3864-5000; Chile +56-2) 2946-1000; China +86-21) 6921-0188; India +91) 44-2648 0220
Indonesia +62) 21-2988 8288; Japan +81) 3 6202 1515; Korea +82) 31-416 8991; Mexico +52 (777) 329 3740; Singapore +65) 6891 9200; South Africa +27 (31) 736 8800; United States +1 (901) 278-0330

Global Headquarters at 1256 N. McLean Blvd., Memphis, TN 38108, USA