



The Cleaning Edge™

Betco Celebrates Earth Week

Wednesday April 23



Did You Know?

Did you know Betco's Genie™ uses AGM maintenance free batteries - that means no exposure to harmful battery acid?

If every American household turned off the lights for one hour, they would prevent more than 16,610 tons of carbon dioxide from

The Science Behind Green Cleaning

Green Cleaning is defined as the use of products and services that reduce the health and environmental impact compared to similar products and services used for the same purpose. The question we continually receive is how can I take a product, remove certain ingredients and still have it be effective?

We start with a database of green ingredients, choose materials that optimize our desired cleaning properties and continually refine the formula to insure cleaning results equal or better than traditional products. We combine the formulation with green cleaning practices that optimize the cleaning result, for example using microfibers versus traditional cotton mops to entrap the most soil. Then we test this process and chemical repeatedly to insure we produce consistent results. Ultimately, use of this green product, with this piece of equipment in the same manner every time will produce consistent cleaning quality. Below is a list of traditional chemistry and the green alternatives. When you adopt Betco's green program, you are not only improving the health and environment of your facility but also are using cleaning systems that have proven cleaning results.

Conventional Ingredients	"Green Earth" Ingredients
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being release. That's enough to fill every hot-air balloon at the annual Albuquerque International Balloon Fiesta seven times.

<p>Nonylphenol Ethoxylates, (NPE,APE)</p> <ul style="list-style-type: none"> - Used as a basic surfactant to provide detergency. - Contains trace amounts of ethylene oxide - a suspected carcinogen. - Endocrine (Metabolism) disruptor in aquatic species, suspected in humans. 	<p>Alcohol Ethoxylates</p> <ul style="list-style-type: none"> - DFE suggested surfactant - completely biodegradable - no health related effects
<p>Ethylene Glycol Butyl Ethers (EB, butyl)</p> <ul style="list-style-type: none"> - used as a degreaser for oil and grease removal - irritating to the respiratory tract and eyes, maximum daily exposure of 25 PPM (OSHA) 	<p>Propylene Glycol Ethers (PNB)</p> <ul style="list-style-type: none"> - excellent grease and oil removal - favorable health profile - Greater maximum exposure limit - Positive Environmental profile according to DFE
<p>Phosphates</p> <ul style="list-style-type: none"> - used to soften water and as an alkaline builder - environmental hazard when discharged into water, - can cause excessive algae growth and lake - eutrophication - which can lead to animal extinction 	<p>Citric Acid</p> <ul style="list-style-type: none"> - used to soften water, remove soap scum. - naturally derived. - good environmental profile.
<p>Ethylenediaminetetraacetate (EDTA)</p> <ul style="list-style-type: none"> - used as a chelating agent to prevent hard water attack. - may contain trace amounts of carcinogen. - mobilizes heavy metal in waste stream, makes treatment extremely difficult. 	<p>Citric Acid</p> <ul style="list-style-type: none"> - used to soften water, remove soap scum. - naturally derived. - good environmental profile

<p>Solvents (Mineral Spirits, Ketones, Aromatic Hydrocarbons)</p> <ul style="list-style-type: none"> - used for heavy duty grease removal - must be disposed as hazardous waste - not readily biodegradable - high VOC content 	<p>Water Base Degreasers</p> <ul style="list-style-type: none"> - low VOCs - emulsion technology performs like a solvent - readily biodegradable
<p>Potassium/Sodium Hydroxide (Caustic Soda, Potash)</p> <ul style="list-style-type: none"> - source of alkalinity to saponify soils (Floor Strippers) - extremely corrosive to eyes, skin and nose 	<p>Monoethanolamine (MEA)</p> <ul style="list-style-type: none"> - less irritating to the respiratory tract and eyes than either Potassium/Sodium Hydroxide
<p>Ammonium Hydroxide (Ammonia)</p> <ul style="list-style-type: none"> - basic cleaning compound in economy strippers. - extremely irritating to respiratory tract and eyes. 	<p>Monoethanolamine (MEA)</p> <ul style="list-style-type: none"> - less irritating to the respiratory tract and eyes than ammonia.
<p>Formaldehyde</p> <ul style="list-style-type: none"> - commonly used as a preservative in coatings - suspected carcinogen 	<p>1,2-benzisothiazoline-3-one</p> <ul style="list-style-type: none"> - preservative in coatings - not a carcinogen - used as a preservative in most cosmetic products.
<p>Zinc cross-linked finishes</p> <ul style="list-style-type: none"> - non-biodegradable, causes problems with sewage effluent, waste needs treatment. 	<p>Calcium cross-linked finishes</p> <ul style="list-style-type: none"> - extremely effective, easier stripability. - biodegradable and no waste treatment needed.
<p>Hydrochloric Acid/Phosphoric Acid (HCl, H₃PO₄)</p> <ul style="list-style-type: none"> - excellent at removing mineral deposits. - highly corrosive to metals and irritating to eyes, skin, and nose. 	<p>Urea Hydrochloride</p> <ul style="list-style-type: none"> - as effective at mineral deposit as phosphoric acid. - non-corrosive, less irritation to eyes, skin and nose.

<p>Solvents (For Carpets, Butyl Ethers)</p> <ul style="list-style-type: none"> - used for carpet spotting - irritating to nose, skin, and eyes - high VOC content 	<p>Hydrogen Peroxide</p> <ul style="list-style-type: none"> - excellent destainer and carpet brightener. - less irritating to nose, skin, and eyes - DFE positive environmental profile for bleaching agents.
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Have additional questions about green cleaning? Email greencleaning@betco.com. You'll receive a prompt response with the information you need.

Another green resource that Betco offers is our Green Cleaning Workbook. This valuable guide is available as a free download by simply clicking [here](#). For a complete listing of Betco's green chemicals, equipment, training, and programs please visit www.betco.com today or contact your local Betco distributor.

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