Industrial & Institutional (I&I) Cleaning Chemicals

US Industry Study with Forecasts for 2014 & 2019

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An improved economy is expected to boost demand across the board, perhaps most vigorously in markets hardest hit by the recent recession (e.g., laundries, car washes, transportation facilities).

**US demand to rise 4% annually through 2014**

Demand for industrial and institutional (I&I) cleaning chemicals is projected to increase 4.0 percent annually in the US to $10.7 billion in 2014. The anticipated economic recovery will boost demand across the board following a weak 2009, perhaps most vigorously in markets hardest hit by the recent recession, such as laundries, car washes and transportation facilities. In contrast, the health care market -- far less affected by the recent economic downturn -- is expected to continue to register industry-leading growth, due to the incessant need to combat viral and bacterial threats.

**Disinfectants, sanitizers to be fastest growing**

Sales of disinfectants and sanitizers will experience the fastest advances of any major product type, as food industry participants seek to satisfy the stringent safety requirements of consumers, regulators, and national and global food retailers and foodservice companies, especially following several recent foodborne illness outbreak, such as the 2008-2009 case of *Salmonella*-contaminated peanut butter, which caused nine deaths and sickened more than 700 Americans. Food and beverage processors will rely on I&I cleaning products to help them avoid nationwide food product recalls, such as the recall of hundreds of food products possibly containing *Salmonella*-contaminated hydrolyzed vegetable protein in 2010. More recently, hundreds of millions of eggs have been recalled in light of thousands being made ill by *Salmonella*. In addition, trends toward the use of more expensive and user-friendly disinfectants and sanitizers in foodservice establishments will boost value gains in that segment.

**Raw material trends favor surfactants, antimicrobials**

A number of trends in raw material usage are influencing the I&I cleaning chemical product mix. Efforts to save water, packaging costs and logistical expenses have boosted demand for better performing surfactants in laundry detergents, which allow them to operate effectively with reduced water content and in high-efficiency equipment. Additionally, end users continue to gravitate to cleaning products with antimicrobial additives such as triclosan, in part because they feel that such products offer additional protection from viruses, bacteria and other microbial threats.

**US I&I Cleaning Chemical Demand ($8.8 billion, 2009)**

```
General Purpose I&I Cleaners 26%
Floor Care Products 16%
Warewashing Detergents 15%
Disinfectants & Sanitizers 13%
Other I&I Cleaners 30%
```
Sample Text, Table & Chart

**RAW MATERIALS**

**Surfactants**

Demand for surfactants in I&I cleaning products is expected to increase from 672 million pounds in 2009 to 780 million pounds in 2014. While modest by many standards, this represents above-average growth for I&I cleaning product raw materials. Gains will be driven by trends toward multifunctional, concentrated formulas and greater use of specialty surfactants, offsetting some traditional raw materials such as caustic soda and hydrocarbon solvents.

Formulators of cleaning products increasingly look to surfactant suppliers for innovative, unique and cost-effective chemicals that will allow them to gain a competitive advantage in emerging product categories, such as no-rinse disposable wipe cleaners and laundry detergent tablets. The best opportunities are expected for surfactants which offer multiple benefits, including low foaming characteristics and improved cleaning action in more concentrated formulations. Further advances will be moderated by environmental and health concerns and related legislation. As a result, much research and development is focused on biodegradability issues and possible health effects.

In an effort to contain costs, cleaning product manufacturers are seeking to reduce supply chain costs by streamlining formulations. Consequently, the trend is toward reducing the total number of surfactants and increasing use of those which provide multiple benefits and allow formulators to differentiate their products. Benefits of multifunctionality include reduced costs, improved efficiency, cleaner labels, and environmental and regulatory issues. In the past, use of common platforms dominated the I&I cleaning industry, with formulators differentiating their product with the use of additives. More recently, a shift toward unique formulations featuring specialty surfactants or surfactant blends has emerged. At the same time, speed to market has become more important as suppliers of finished products strive for an edge.

---

**TABLE III-2**

<table>
<thead>
<tr>
<th>Item</th>
<th>1999</th>
<th>2004</th>
<th>2009</th>
<th>2014</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Building Space (bil sq ft)</td>
<td>19.6</td>
<td>20.7</td>
<td>21.8</td>
<td>22.4</td>
<td>23.5</td>
</tr>
<tr>
<td>$ I&amp;I cleaning chemical/000 sq ft</td>
<td>227</td>
<td>233</td>
<td>259</td>
<td>304</td>
<td>332</td>
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<tr>
<td>Commercial I&amp;I Cleaning Chemicals</td>
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<td>4830</td>
<td>5649</td>
<td>6810</td>
<td>7810</td>
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<tr>
<td>Foodservice</td>
<td>1671</td>
<td>1850</td>
<td>2209</td>
<td>2610</td>
<td>3045</td>
</tr>
<tr>
<td>Retail</td>
<td>614</td>
<td>655</td>
<td>765</td>
<td>909</td>
<td>1040</td>
</tr>
<tr>
<td>Laundry &amp; Dry Cleaning</td>
<td>688</td>
<td>704</td>
<td>747</td>
<td>872</td>
<td>960</td>
</tr>
<tr>
<td>Car Washes</td>
<td>512</td>
<td>542</td>
<td>607</td>
<td>797</td>
<td>892</td>
</tr>
<tr>
<td>Office</td>
<td>478</td>
<td>506</td>
<td>597</td>
<td>699</td>
<td>763</td>
</tr>
<tr>
<td>Hotels &amp; Other Lodging</td>
<td>218</td>
<td>257</td>
<td>336</td>
<td>434</td>
<td>530</td>
</tr>
<tr>
<td>Transportation &amp; Distribution</td>
<td>164</td>
<td>187</td>
<td>218</td>
<td>274</td>
<td>305</td>
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<tr>
<td>Other</td>
<td>106</td>
<td>129</td>
<td>170</td>
<td>215</td>
<td>275</td>
</tr>
<tr>
<td>% commercial</td>
<td>66.2</td>
<td>66.2</td>
<td>64.2</td>
<td>63.5</td>
<td>62.5</td>
</tr>
<tr>
<td>Total I&amp;I Cleaning Chemical Demand (million lbs)</td>
<td>6720</td>
<td>7300</td>
<td>8800</td>
<td>10730</td>
<td>12500</td>
</tr>
</tbody>
</table>

---

**CHART VI-1**

US I&I Cleaning Chemical Market Share, 2009 ($8.8 billion)

- Others 58.3%
- Marketers
- Other players
Sample Profile, Table & Forecast

COMPANY PROFILES

Barr (WM) & Company
2105 Channel Avenue
Memphis, TN  38113
901-775-0100
http://www.wmbarr.com

Annual Sales:  $225 million (estimated)
Employment:  360 (estimated)

Key Products:  paint, graffiti, rust and related removal products; glass and surface cleaners; degreasers; and mold prevention and removal products.

WM Barr is a privately held producer of paint-related chemicals for the automotive and marine markets, as well as cleaners, automotive fluids and chemicals, wood care and refinishing products, and shop maintenance accessories. The Company also offers blending and packaging services.

The Company competes in the US industrial and institutional (I&I) cleaning chemicals market through the manufacture and marketing of a variety of paint, graffiti, rust and related removal products; glass and surface cleaners; degreasers; and mold prevention and removal products. These products are sold under the brand names as KLEAN-STRIP, KWIK, CITRISTRIP, SOLUTIONEX, JASCO, BIX, OXY-MOLD and GOOF OFF. WM Barr maintains a plant and distribution location in Memphis, Tennessee, as well as a distribution center in Ontario, California.

KLEAN-STRIP Products -- WM Barr’s KLEAN-STRIP product line includes a broad range of products for paint cleaning, thinning...

TABLE IV-3

<table>
<thead>
<tr>
<th>Item</th>
<th>1999</th>
<th>2004</th>
<th>2009</th>
<th>2014</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Purpose I&amp;I Cleaner Demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>% alkaline</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alkaline Cleaner Demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food &amp; Beverage Processing</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail</td>
<td></td>
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<td></td>
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<tr>
<td>Office</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foodservice</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Metal Processing</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Electronic Components</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

“Demand for alkaline cleaners in I&I applications is projected to increase 2.6 percent per year to $1.5 billion in 2014. Among larger markets, retail will register the strongest gains, mainly due to an anticipated rebound in retail activity. Among institutional markets, gains are expected to be fastest in the health care market, due to more aggressive infection control procedures in hospitals, acute care centers and other facilities. Demand in the food and beverage processing market, the largest outlet, is expected to ...”

--Section IV, pg. 126
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