



Case Study: Custom Compounds, Inc. *Safer Choice Recognition Helps a Degreaser Clean Up*

Founded in 1980 in Arnold, Missouri, Custom Compounds Inc. provides cleaning compounds to the laundry, car wash, janitorial and maritime industries. Its L-44 ECD product finds primary use in engine cleaning and degreasing applications. L-44 ECD is freeze-thaw stable and combines low use costs with high performance.

Unlike traditional degreasers, L-44 ECD is formulated with ingredients specifically selected for their compatibility with the environment. It uses organic, non-volatile and biodegradable chemistries that do not cause skin or eye complications and do not degrade air or water quality. Custom Compounds sought substantiation for the safety of L-44 ECD through the U.S. EPA's Safer Choice Product Labeling Program, which includes an independent ingredient review by NSF International.



The Challenge

Traditional degreasers generally contain strong alkalis and solvents to enhance cleaning efficiency, but they can be the cause of serious skin and eye complications. Some typical degreaser ingredients have even been identified as potential carcinogens. Some of these products biodegrade slowly or break down into more toxic and persistent chemicals that threaten aquatic life. They can also harm air quality as they evaporate.

Custom Compounds wanted to create more environmentally-friendly, non-harmful cleaners that were just as effective as traditional products. Robert Jaudon, owner of Custom Compounds, saw substantial needs in the maritime industry, where users of traditional products complained of stinging or burning of the skin, respiratory issues and eye complications.

As a small business without a team of staff chemists, Custom Compounds needed a method to determine which chemicals were harmful, whether they could be substituted with safer alternatives, and whether the resulting product would still perform effectively at a competitive price. The

company also wanted substantiation from a respected independent organization that its products are safer for the environment and workers, as well as verification of its performance efficiency.

The Solution

Custom Compounds turned to the EPA's Safer Choice program, which offers recognition to cleaning products that use safer chemicals for human health and the environment. Safer Choice-labeled products do not contain problematic chemicals, such as known carcinogens or reproductive and developmental toxicants. Even minor product components, like dyes and fragrances, are screened for safety.

As a Safer Choice partner, NSF International performs a third-party, ingredient-by-ingredient review of product formulations to screen for chemicals that may present serious health or environmental effects. The review uncovers potentially dangerous chemicals that may be masked by harmless ingredients, spots negative synergies between components and recommends safer substitutes for problematic chemicals.

After two years of research, the technical cooperation of industry experts and six months of field trials, Custom Compounds finalized a formulation for L-44 ECD with EPA-approved ingredients. The formulation was then evaluated for performance against a nationally recognized name-brand product in a certified laboratory protocol as required by Safer Choice criteria as part of the Safer Choice recognition process. L-44 ECD received very high performance ratings by ASTM 4488-A5 and CSPA DCC-17 test methods, and was further substantiated to be non-corrosive through additional alkali reserve studies and laboratory verifications.

The final formulation and results from the cleaning efficiency studies were then submitted for review to, and approved by, Safer Choice. The Safer Choice label substantiates L-44 ECD as a safer and effective formulation.

The Results

Since obtaining Safer Choice recognition, L-44 ECD has gained market share with a series of new customers and distributive outlets. "Safer Choice recognition has changed the direction of our company," says Robert Jaudon, owner of Custom Compounds. "It differentiates our products, diversifies our revenue and helps ensure long-term financial stability. We fully expect a 10-12 percent increase in revenue strictly associated with our Safer Choice-recognized products in the coming year." In addition, companies that remove hazardous chemicals from their cleaning products through self regulation are ahead of the curve if these chemicals eventually become banned by the government or trade organizations.

Safer Choice recognition raises awareness of, and builds demand for, environmental products in industries increasingly interested in best environmental practices. It also provides credibility and a competitive edge for a smaller company entering a marketplace of well-known and established competitors. Jaudon says, "Safer Choice recognition opened multiple doors with new customers and new distributors for our product. Substantiation is a value-added advantage our current competition does not offer. We have experienced significant interest and requests for information from businesses because people are looking for products that are verified as safer for the environment and safer for workers."

Jaudon also values the educational aspect of the Safer Choice recognition process. He says, "We've learned and greatly benefitted from the Safer Choice program, associated organizations and accessible screening tools, resulting in research and development times being considerably less than before. For future planning and formulation design, this is a remarkable benefit for our small company. Ultimately, we feel it positions us to more clearly understand the advantages and mission for 'greener chemistries' in the markets we serve. We are uniquely indebted for the many instances of extended cooperation from the EPA, the Safer Choice team, NSF and, most recently, the Sustainable Packaging Coalition guidelines, which, when combined, help to define Custom Compounds Inc. with a new environmental identity. We can use this gained knowledgebase to help others realize the values in environmentally designed products." In fact, Custom Compounds is planning and developing training programs about environmental issue advantages for the customers they serve.



Custom Compounds plans to formulate new products for Safer Choice recognition in the other markets it supplies. These plans include the reformulation of existing products with greener ingredient alternatives. The company recently received Safer Choice recognition for an additional degreaser, L-44 ECDB, and has submitted L-44 SSC, a hard surface cleaner, for Safer Choice "direct release review" qualification. Safer Choice requires products used outdoors that may be discharged directly to land or water to meet a higher "direct release" standard.

Jenny Oorbeck, General Manager of NSF International's Sustainability Program, says, "I applaud Robert Jaudon and Custom Compounds for meeting the EPA's Safer Choice standards for safer products and expanding their participation in the program with additional products. Mr. Jaudon's experience represents the full power of the Safer Choice program to transform products and make them competitive, even against larger competitors, based on their verified greener attributes."

For more information on the U.S. EPA Safer Choice program, call 1.734.769.5192 or e-mail your questions and contact information to greenchemistry@nsf.org

