NSF International has screened SmartSolve Water Soluble Label Stock, identified below, for restricted substances and other substances of high concern for human and/or environmental health, using the GreenScreen® List Translator tool. The purpose of this tool is to rule out known chemicals of concern by screening ingredients against 36 lists derived from national and international authoritative bodies such as U.S. EPA, Canadian EPA, the European Union and more. These lists identify known substances of very high concern (SVHCs); carcinogens, mutagens, reproductive or developmental toxicants (CMRs); neurotoxicants; endocrine disruptors; and compounds with high persistence in the environment along with potential for bioaccumulation and/or toxicity (PBTs).

In addition to the List Translator tool, publicly available GreenScreen reports were obtained to determine the associated benchmark scores. Benchmark scores are determined by analyzing specific combinations of hazard classifications, and they reflect hazard concerns that have been established by governments nationally and internationally.

The tables below provide the List Translator Scores for the SmartSolve Water Soluble Label Stock. Note that only ingredients present at ≥ 0.1% in the products were included in the evaluation:

### SmartSolve Water Soluble Label Stock (Pressure-Sensitive Labels)

<table>
<thead>
<tr>
<th>Score</th>
<th>Percent in Product</th>
<th>Potential hazards</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark 1</td>
<td>0.14% 0.14% 0.14% 0.14% 0.14% 0.14%</td>
<td>Persistence/aquatic toxicity due to transformation product</td>
<td>GreenScreen</td>
</tr>
<tr>
<td>LT-1</td>
<td>0% 0% 0% 0% 0% 0% 0.12%</td>
<td>Cancer</td>
<td>Pharos</td>
</tr>
<tr>
<td>Benchmark 3</td>
<td>0.22% 0% 0% 0% 0% 0% 0%</td>
<td>Persistence</td>
<td>GreenScreen</td>
</tr>
<tr>
<td>Benchmark 4</td>
<td>11.76% 11.80% 11.75% 11.79% 11.76% 11.74% 11.77%</td>
<td>None</td>
<td>GreenScreen</td>
</tr>
<tr>
<td>LT-UNK</td>
<td>88.15% 88.27% 88.26% 88.25% 88.15% 88.15%</td>
<td>None that will definitively lead to a Benchmark 1</td>
<td>Pharos</td>
</tr>
</tbody>
</table>

**Total % Evaluated**
100.26% 100.21% 100.15% 100.18% 100.04% 100.03% 100.17%

*The percent evaluated exceeds 100% because some ingredients were reported with ranges by suppliers.*

---

Benchmark 1: Avoid — chemical of high concern
Benchmark 3: Use but still opportunity for improvement
Benchmark 4: Prefer — safer chemical
LT-1: The chemical appears on one or more lists that identify it is a Chemical of High Concern and may be considered equivalent to a Benchmark 1 chemical using the full GreenScreen method.
LT-UNK: Not found on any of the 36 screening lists, or otherwise requires a full GreenScreen to discern the Benchmark score.

Reviewer: Janice M. McKee, Research Toxicologist
QC Reviewer: Nancy Linde, Managing Toxicologist
Project Manager: Leslie Dietrich, Project Manager — March 7, 2016
Both products contained one chemical at approximately 0.1% that earned a LT-P1 score (i.e. a possible Benchmark 1). Further examination of the supporting hazard data for this chemical confirmed a full GreenScreen would be necessary to discern the Benchmark score. Therefore, the LT-P1 was changed to LT-UNK.

The aforementioned tables show that the SmartSolve Pressure-Sensitive Labels and Direct Thermal Pressure-Sensitive Labels contain a Benchmark 1 (high concern) chemical at 0.12% and 0.14%, respectively. In addition, the black color SmartSolve Pressure-Sensitive Labels contain a LT-1 chemical (appears on one or more lists that identify it is a Chemical of High Concern and may be considered equivalent to Benchmark 1) at 0.12%. Note that the SmartSolve Direct Thermal Pressure-Sensitive Labels were only evaluated down to approximately 88% of the formulation because one of the suppliers did not submit their formulation.
The Ashkin Group has reviewed the results from accredited independent third-party testing laboratories including Bureau Veritas and IPS Testing on the SmartSolve Water Soluble Label Stock. The testing confirmed the material passed the following tests designed to address specific product performance issues and to identify potential adverse impacts on human health and the environment. Those tests included:

- Slosh Box Disintegration Test method criteria.- FG502 (flushability)
- Consumer Products Safety Improvement Act (CPSIA) - absence of lead & phthalates
- Toxics in Packaging Clearinghouse (formerly CONEG) – heavy metals

In addition, the SmartSolve materials have been and continue to be screened for restricted substances and other substances of high concern for human and/or environmental health against numerous lists derived from national and international authoritative bodies including:

- US Environmental Protection Agency. Consolidated list of chemicals subject to the Emergency Planning and Community Right-To-Know Act (EPCRA), Section 112(4) of the Clean Air Act (CAA), National Center for Environmental Assessment, and the Integrated Risk Information System (IRIS) Database and Toxics Release Inventory (TRI) Program
- US National Institute of Occupational Safety and Health (NIOSH) and US Occupational Safety and Health Administration (OSHA)
- US National Institutes of Health, National Institute of Environmental Health Sciences, National Toxicology Program (NTP)
- EU Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- EU Regulation on the Classification, Labelling and Packaging of Substances and Mixtures
- EU List of Chemicals and their assigned GHS Hazard Statement (GHS)
- California Safe Drinking Water and Toxic Enforcement Act Of 1986 (CA Prop 65)
- International Agency for Research on Cancer (IARC)
- Association of Occupational and Environmental Clinics (AOEC)

Based on the information supplied by NSF, there were no ingredients included in the SmartSolve Water Soluble Label Stock materials that were found to be of concern.

Reviewer: Stephen Ashkin, President — April 5, 2016