



Association Internationale de la Savonnerie, de la Détergence et des Produits d'Entretien  
International Association for Soaps, Detergents and Maintenance Products

## Charter 2010 – ASP Substantiation Dossier: “Liquid Laundry Detergents (household)”

Ver 1 October 2010

*A.I.S.E. is the voice of the Soaps, Detergents and Maintenance Products Industry in Europe. Its membership comprises of 37 National Association in 42 countries and 10 companies that are direct members. In total, A.I.S.E. represents more than 900 companies that are involved in the household market and/or in the Industrial & Institutional cleaning domain, thus representing the vast majority of the companies in this domain.*

### 1) Introduction

A.I.S.E. strongly believes that it has a key role to play in driving mainstream changes for more sustainable consumption and production patterns. In this spirit, it has developed and implemented over the last 12 years a number of voluntary initiatives aimed at the whole sector. The objective of these various initiatives is to help drive sustainability/environmental improvements for the majority of products in our sector, by steering all players towards more sustainable practices in the industry and helping to deliver substantial savings of resources to society.

Its main horizontal project is the **A.I.S.E. Charter for Sustainable Cleaning**. Launched in 2005, this voluntary initiative is a comprehensive life-cycle-based framework for promoting a common industry approach to sustainability improvement and reporting.

From the outset, the Charter has been seen as a living scheme, with a broad commitment to update it regularly. On 2 December 2009, A.I.S.E. announced the upcoming launch of “**Charter 2010**”. A key component of Charter 2010 is the addition of a ‘Product Dimension’. The inclusion of a Product Dimension further strengthens the scheme by enabling it to more completely cover the whole life of a product in terms of sustainability, from manufacturing to end-use. This will also signal to consumers that a product is environmentally friendly, allowing them to make a more informed choice of products. This is achieved by creating “**Advanced Sustainability Profiles**” (ASPs) for each major product group. The ASPs are designed to determine a set of minimum criteria that a product must meet, in order to be considered as an example of a product with a good sustainability profile.

Bearing in mind the success of several voluntary initiatives initiated by the whole industry (e.g. of A.I.S.E. Code of Good Environmental Practice<sup>1</sup>, A.I.S.E. Charter for Sustainable Cleaning 2005<sup>2</sup>), it is A.I.S.E.’s view and experience that only Industry Association-led initiatives could make consumers’ habits switch to more sustainable patterns. This is because such an approach can build on and benefit from a coordinated communication campaign that can only be possible in such a context. Moreover the potential of such initiatives has been increasingly recognized by the European

<sup>1</sup> After the 5 years of the code operation (ending 2001), the industry achieved: energy consumption – 6.4% reduction per wash; laundry detergent use – 7.9% reduction per capita, 16.0% reduction per wash; packaging use – 6.7% reduction per capita, 14.9% reduction per wash; poorly biodegradable ingredients – 23.7% reduction per capita, 30.4% reduction per wash.

<sup>2</sup> From 2006 to 2008, Charter member companies achieved: Chemicals covered by HERA: +10%; Use of poorly biodegradable organics: -13%; Energy consumed per tonne of production: -4%; CO<sub>2</sub> emitted per tonne of production: -4%; Packaging per tonne of production: -9%; Products with at least two safe use icons: +22%.

Commission to the point that it has been explicitly addressed in the SCP/SIP Action Plan/Review of Ecodesign Directive<sup>3</sup>.

This document provides details on the processes used to develop the Advanced Sustainability Profile for the product group “Liquid Laundry Detergents for Household Use”.

## 2) The market (EU, plus Norway and Switzerland)



Fabric washing:

=> 49% of A.I.S.E. total household market value  
=> Market Value: 14.24 billion Euros in 2008

Estimated proportion for the value of Liquid Detergents: about 28% i.e. about 4 billion Euros

Source: A.I.S.E. 2008 Annual review

## 3) ASP principles

The principles applied to the setting of the ASP criteria are as follows:

1. The ASP criteria should represent a target that is **aspirational, but reasonably achievable by all**. Our vision is that the product within the category should be able to achieve the ASP targets within a reasonable timeframe without the need for significant new product innovation or process intervention.
2. The ASP criteria will reflect as completely as possible the key drivers of reduced environmental impact, as determined by Life Cycle Analysis.
3. The Advanced Sustainability Profile, like the Charter, is a living system, with the implicit intention to periodically increase the targets in order to move the category in the direction of continuous sustainable improvement.
4. The setting of ASP criteria must always follow the established evaluation and consultation process detailed in the next section.

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<sup>3</sup> - “Policy makers have shown an increasing interest in environmental agreements in recent years. The potential of such agreements between stakeholders – often representative associations of business – to contribute to environmental policy objectives is widely recognised.”, COM(2002) 412 final: COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS, Environmental Agreements at Community Level. Within the Framework of the Action Plan on the Simplification and Improvement of the Regulatory Environment, Brussels, 17 July 2002.

- “Self-regulation, including voluntary agreements offered as unilateral commitments by industry, can provide for quick progress due to rapid and cost-effective implementation, and allows for flexible and appropriate adaptation to technological options and market sensitivities”, Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a framework for the setting of ecodesign requirements for energy related products COM (2008) 399

## 4) Process for the development of ASPs for liquid laundry detergents

### 1. Identification of product category and installation of A.I.S.E. Task Force

The A.I.S.E. Charter Steering Group (now A.I.S.E. Sustainability Steering Group (SSG)) proposed on 22 February 2008 to develop ASPs for liquid laundry detergents (together with solid laundry detergents and fabric conditioners). An LCA Task Force was set up to develop such ASPs; this TF met for the first time on 26 February 2008. It was composed of experts from 6 companies, namely Henkel, Colgate Palmolive, Unilever, SC Johnson, ReckittBenckiser and P&G. Work was coordinated by the A.I.S.E. Secretariat.

### 2. Development by the Task Force of ASP criteria and thresholds

Based on an existing Life cycle analysis (see chapter 5) the TF identified relevant LCA parameters. In 2008 and 2009 a data collection on those parameters was organised by the A.I.S.E. secretariat. Four companies provided data on a representative sample of the EU market<sup>3</sup>. The data was collected and aggregated under strict confidentiality by the A.I.S.E. secretariat. This exercise eventually led to the decision to design a system based on thresholds.

### 3. Internal A.I.S.E. consultation and endorsement

This recommendation on a threshold system was presented for approval to the SSG on 7 September 2009 and the A.I.S.E. Board on 6 October 2009. In addition this dossier was developed in order to substantiate in a transparent way the processes and the proposed thresholds.

### 4. Internal (industry) and External consultation and activation

The ASPs and the substantiation dossier were subject to consultation with Charter member companies and other interested parties (industry/external stakeholders) from 18 December 2009 till 27 January 2010. Companies were asked to comment/input on:

- the relevance and technical feasibility of the proposed thresholds
- the appropriate timing for preparation of ASPs for product categories. 38% of those companies that provided feedback voted for an activation period of 6 months, 38% for 1 year and 25% for more than one year. On this basis, the A.I.S.E. Board agreed on 4 February 2010 on a preparation period of one year from 1 July 2010 until 30 June 2011.

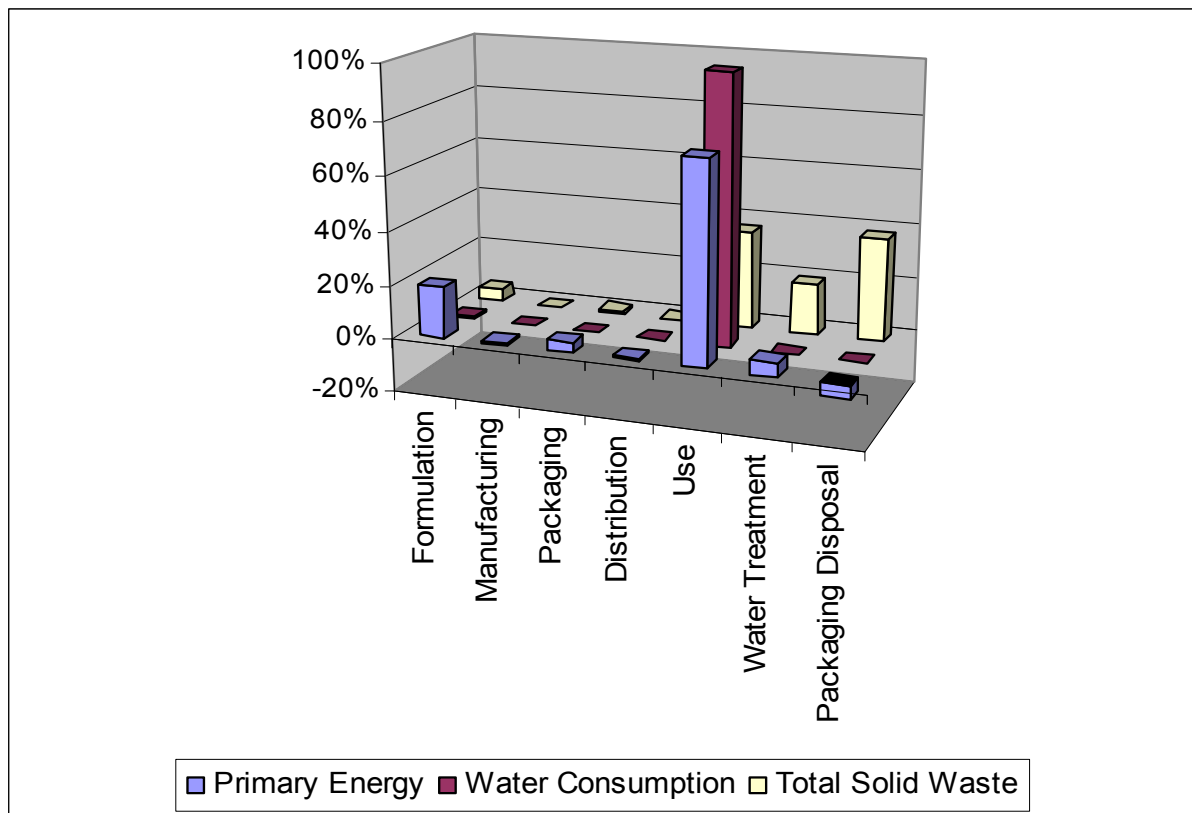
Based on the received input, these ASPs were finalised as part of Charter 2010 and are made available to industry from 1 July 2010.

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<sup>3</sup> Data available at A.I.S.E. secretariat.

## 5) ASP criteria and rationale

A generic Life Cycle Analysis (LCA) on liquid laundry detergents was carried out before the Charter ASP targets were set, to get an understanding of the environmental impacts of the various stages of a liquid detergent's life cycle.



The stages of the process considered were:

- Formulation
- Manufacturing
- Packaging
- Distribution
- Use
- Water Treatment
- Packaging Disposal

and the parameters evaluated were:

- Primary Energy
- Water Consumption
- Total Solid Waste.

The analysis confirms that the three most important factors in Life Cycle Analysis for Laundry Detergent Liquids are as follows:

1. The most significant impact on the environment is in the use and disposal phases of the product's life, due to the significant amounts of energy and water consumed by the washing machine. Therefore any LCA based criteria must take usage into account.
2. The second most important factor to reduce environmental impact is through the reduction in resources used to manufacture the product. By concentrating Laundry Detergent Liquids, product dosage and packaging is reduced and this delivers savings in energy consumption (hence CO<sub>2</sub> emissions) and potential waste production, as well as delivering substantial savings in transportation as more product (doses) can be carried on one truck.

3. Given that Laundry Detergents end up as water-borne waste, it is essential that a sustainable product poses no risk for the environment. Therefore, all “down-the-drain” product categories must pass the Environmental Safety Check (ESC).

Using the above life-cycle analysis as a starting point, the A.I.S.E. Task Force in charge of setting the ASP criteria for Liquid Laundry Detergents worked on the following main components:

- activities at product level, under the direct control of manufacturers:
  - by determining a maximum dosage of ingredients per standard wash
  - by determining a maximum dosage of packaging materials per standard wash
  - by setting a minimum level of recycled content in secondary packaging.
- activities at consumer level given that this represents the highest environmental impact:
  - providing on-pack guidance for the most sustainable product use (e.g. low temperature washing)

Implicit in the ASP criteria is that a product must deliver an acceptable level of performance at low washing temperatures ( $\leq 30^{\circ}\text{C}$ ).

In order for a product to meet the Advanced Sustainability Criteria, it must meet the conditions in each and every domain as detailed below:

### **ASP Criteria for Laundry Detergent Liquids and Liquidtabs**

<b>Product formulation</b>	Pass successfully Environmental Safety Check (ESC) on all ingredients  AND  Dosage ml/job: $\leq 75\text{ml}$
<b>Packaging weight per job</b>	Total (primary + secondary but excluding tertiary) packaging g/job; only non-recycled content in bottles to be taken into account: $\leq 7.0\text{g}$
<b>Packaging re-cycled content</b>	Secondary packaging: Board: $\geq 60\%$
<b>End User Information</b>	<i>End-user info on-pack:</i> Washright panel or alternative (see Annex of Advanced sustainability profiles) <b>AND</b> Ability to wash at $\leq 30^{\circ}\text{C}$ indicated on pack
<i>Performance</i>	<i>Evidence has to be provided (in case of external verification organised by A.I.S.E.) that the product has been performance tested and reached a level acceptable to consumers consistent with claims made.</i>

**Clarifications/Definitions:**

Job: following the Detergent Regulation EC 648/2004 the “standard washing machine loads are 4,5 kg dry fabric for heavy-duty detergents and 2,5 kg dry fabric for low-duty detergents”.

Ingredients per job/ heavy-duty detergents: based on medium water hardness and normally soiled fabric

Ingredients per job/ low-duty detergents: based on medium water hardness and lightly soiled fabric

Packaging weight per job: Total (primary + secondary) packaging (g/job) - based on the volume weighted average for all SKUs of one brand variant with the same formulation per country. Variants of the brand which do not pass all other ASP category tests and/or are not intended to carry the ASP logo must be excluded from the calculation. Dosage devices – apart from closures – are not to be considered as packaging.

Primary/secondary/tertiary packaging: following definitions from the European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste:

- primary packaging, i. e. packaging conceived so as to constitute a sales unit to the final user or consumer at the point of purchase;
- secondary packaging, i. e. packaging conceived so as to constitute at the point of purchase a grouping of a certain number of sales units whether the latter is sold as such to the final user or consumer or whether it serves only as a means to replenish the shelves at the point of sale; it can be removed from the product without affecting its characteristics; SRB (shelf ready box) and AB (American box) are to be considered as secondary packaging;
- tertiary packaging, i. e. packaging conceived so as to facilitate handling and transport of a number of sales units or grouped packagings in order to prevent physical handling and transport damage.

Note: Packaging which functions both as secondary (case) and tertiary (transportation unit) packaging, intended to function as an in-store free-standing floor display unit, is regarded as tertiary packaging for the purpose of this definition.

Packaging re-cycled content: in countries where re-cycled board is not available and a use of it would be a disadvantage for sustainable reasons, the use of re-cycled board is not required.

### **Product formulation**

Based on the outcome of the life-cycle analysis, the LCA experts identified the concentration of a product as one of the key factors, in order to reduce the environmental impact. Within the geographical scope of the Charter, it can be observed from products on shelves that the standard dose of liquid laundry detergents varies from 35 ml to over 120 ml (as at end 2009).

In the framework of A.I.S.E.'s sustainability initiatives<sup>4</sup>, an LCA Expert Working Group has developed a preliminary evaluation based on the hypothesis of concentrating the current "dilute" liquid detergents to a level that would allow obtaining a performance equivalent to today's products with a maximum dosage of 75 ml. These calculations show that this threshold has the potential to lead to an ingredients savings of around 400,000 tons in the EU 27. An industry consultation took place in 2008 through the A.I.S.E. National Associations network which confirms that 75 ml is achievable by SMEs through conventional technology. Therefore it appears as setting a right balance between the aim to reach environmental savings and the possibility to achieve it through conventional technology available to all companies, including SMEs. "Conventional technology" should be understood as technology that is already widely used or readily accessible to all companies.

Based on the market situation in Europe 2009 (source Nielsen), 42,9% of laundry detergent liquids fulfil the 75 ml per wash threshold. The proposed threshold therefore appears as an ambitious proposal for substantial environmental savings. This threshold was confirmed as one outcome of the consultation.

### **Packaging**

Based on the outcome of the life-cycle analysis, the LCA experts identified the reduction of packaging as a further key factor, in order to reduce environmental impact. The criteria of 7g per job has been proposed on the basis that it is achievable using readily available technology but currently only met by around half the market, on the basis of data provided to A.I.S.E. The consultation sought to gain further insight into this aspect to assess the feasibility of this threshold or a lower threshold. A threshold of 7g per job was confirmed as one outcome of the consultation. In addition the consultation sought views on whether only non-recycled content in bottles should be taken into account when weighing packaging against the proposed threshold. This provision aims to encourage the use of recycled packaging.

*e.g. : for a given total packaging (primary + secondary) of 9g per job and containing 2.2 g per job of recycled material, only 6.8 g per job will need to be taken into account.*

This was confirmed in the consultation. In order to meet the target, the liquid laundry detergent will need to be packed/bottled in a way that is not wasteful, i.e. without excessive empty space in the pack/bottle, and with efficient usage of secondary packaging.

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<sup>4</sup> Reference can be requested from the A.I.S.E. Secretariat.

### ***Secondary packaging (e.g. cartons/cases) re-cycled content***

The data provided to A.I.S.E. of current re-cycled secondary packaging content used by several major manufacturers, representing the majority of the laundry detergents market, indicates that the percentage of re-cycled secondary packaging material varies from 50% to 90%. The consultation sought to establish a reasonable threshold for liquid laundry detergents meeting the re-cycled content criteria. This threshold should be both achievable by manufacturing companies, using conventional technologies yet leading to environmental benefit. A threshold of 60% was confirmed. As one result of the consultation outcome, following exception will be made: In countries where re-cycled board is not available and a use of it would be a disadvantage for sustainable reasons, the use of re-cycled board is not required.

### ***End-User Information***

As figured out in the life-cycle analysis, the most significant impact on the environment is in the use phase of the product's life, due to the significant amounts of energy and water consumed by the washing machine.

At the end of 2008, A.I.S.E. ran a consumer survey across more than 500 consumers in 23 different countries about their current washing habits. This survey showed that there is still significant progress to be achieved in the way consumers wash. For instance:

- Only 49% of washing machine loads are full
- The average wash temperature is 42.6°C
- Only 76% of consumers indicate that they are aware of the dosing instructions.

Considerable savings, both environmentally (water, energy, CO<sub>2</sub>, chemicals), and economic (financial savings for consumers due to correct dosing and efficient use of the appliance), could be reached through better sustainable consumer behaviour. In addition to formulating products that are concentrated, it is also key to continue providing the consumers advice about wash parameters and correct dosage. Companies will be requested to use the Washright Panel, which had been introduced by A.I.S.E. in 1998 and revised in 2008, or an alternative (see Annex 2 of advanced sustainability profiles), and to indicate the ability to wash at  $\leq 30^{\circ}$  C on pack. Evidence has to be provided that the product has been performance tested and reached a level acceptable to consumers consistent with claims made. This was confirmed as one outcome of the consultation.

## **6) Expected benefits**

With the implementation of the Advanced Sustainability Profiles for laundry liquid detergents, following benefits are expected:

- Reassurance that ingredients in the product formulation give environmental concentration at or below the predicted no-effect level for aquatic toxicity
- Optimal use of ingredients due to product compaction/concentration
- Optimal use of packaging due to product compaction/concentration
- Optimisation on transport due to reduction of product volume, thus savings on energy
- Savings on energy due to reduction of washing temperature
- Savings on water due to optimisation of fill level of washing machines
- Reassurance of companies' responsibility on sustainability
- Promotion of sustainable behavior of end users

## **7) Timing**

- From 18 Dec. 2009 till 27 Jan 2010: Internal and external consultations on ASPs for laundry detergent powders and liquids and fabric conditioners
- By 1 July 2010: Finalisation of ASP packages
- By 1 July 2010: Availability of ASPs to the industry
- 1 July 2010 till 30 June 2011: Preparation period for implementation of ASPs
- As from 1 July 2011: Activation – products complying with Charter 2010/ASP requirements for liquid laundry detergents can start to appear on shelves with ASP logo