# CHARTER UPDATE 2010:
# ASP SUBSTANTIATION DOSSIER:
# PROFESSIONAL BUILDING CARE PRODUCTS
# (DILUTABLE INTERIOR, FLOOR, GLASS AND SANITARY CLEANERS)
# - VERSION 1 OCTOBER 2014 -

*A.I.S.E. is the voice of the Soaps, Detergents and Maintenance Products Industry in Europe. Its membership comprises of 29 national associations across Europe and beyond. In total, A.I.S.E. represents more than 900 companies that are involved in the household and/or in the Industrial & Institutional cleaning market, 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 15 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 its 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 2004, 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. In October 2010, A.I.S.E. launched the **"Charter Update 2010"**. A key component of the Charter Update 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 also signals to consumers and end-users that a product is environmentally compatible, 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.

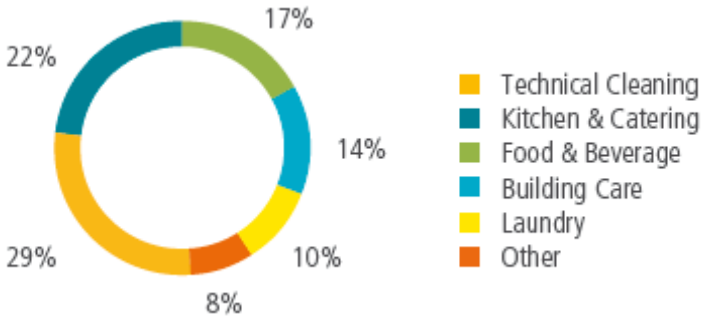
**This document provides details on the processes used to develop the Advanced Sustainability Profile for the product group "Professional building care products", incl.**

- **dilutable interior cleaners**
- **dilutable floor cleaners**
- **dilutable glass cleaners**
- **dilutable sanitary cleaners**

To be used in:

- buckets
- refillable spray bottles
- machines such as scrubber dryers
- special equipment such as foam equipment**.**

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




| | | Total EU 28+CH+NO |
|---|---|---|
| B. I&I | 100% | million euros |
| Technical Cleaning | 29% | 1.913 |
| Kitchen & Catering | 22% | 1.488 |
| Food & Beverage | 17% | 1.139 |
| Building Care | 14% | 886 |
| Laundry | 10% | 658 |
| Other | 8% | 555 |

Source: National Association data benchmarked with experts' data

Source: A.I.S.E. Activity and Sustainability Report 2013-2014

Professional Building Care:

=> 14% of A.I.S.E. total Industrial & Institutional (I&) market value.
=> Market Value: 886 million Euros in 2013

## 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 using readily available technology**. Our vision is that products within the category should be able to achieve the ASP targets within a reasonable timeframe when companies make the deliberate decision to drive sustainable consumption and production patterns.

2. The ASP criteria reflects as completely as possible the key drivers of reduced environmental impact (hot spots), as identified by Life Cycle Analysis (LCA).

3. The Advanced Sustainability Profile, like the Charter, is a living system, with the implicit intention to periodically review the criteria and thresholds in order to move the category in the direction of continuous improvement of sustainability.

4. The setting of ASP criteria must always follow the established evaluation and consultation process detailed in the next section.

## 4) Process for the development of an ASP for professional building care products

1. **Identification of product category and installation of an A.I.S.E. Task Force**
   The A.I.S.E. Sustainability Steering Group (SSG) proposed on 15 January 2013 to develop the ASP for professional building care products. The ASP Task Force, which was set up to develop such an ASP, met for the first time on 14 March 2013. It was composed of experts from three companies, namely Alfred Kärcher GmbH & Co KG, Helichem B.V. and Spectro B.V. Work was coordinated by the A.I.S.E. Secretariat.

2. **Development by the Task Force of ASP criteria and thresholds**
   Based on LCA (see chapter 5) the TF identified relevant parameters. In 2013, a data collection on those parameters was organised by the A.I.S.E. secretariat. All three companies represented in the TF provided data on a representative sample of the EU market[1]. It is on that basis that the calculations below have been made. The data was collected and aggregated under strict confidentiality by the A.I.S.E. secretariat.

3. **Internal A.I.S.E. consultation and endorsement**
   This recommendation on the ASP and thresholds was presented for approval to the SSG on 15 April 2014, the A.I.S.E. I&I Panel in May 2014, the A.I.S.E. Management Committee on 27 May 2014, the A.I.S.E. Legal Panel in May and June 2014 and the A.I.S.E. Board for endorsement in June 2014. In addition, this dossier was developed in order to substantiate in a transparent way the processes and the proposed thresholds.

4. **Industry consultation and activation**
   The ASP and the substantiation dossier were subject to consultation with Charter member companies and the industry from 1 July 2014 to 15 August 2014. Companies were asked to comment/input on the relevance and technical feasibility of the proposed thresholds.

   Based on the received input, this ASP was finalised as part of the Charter and is made available to industry from 1 October 2014.

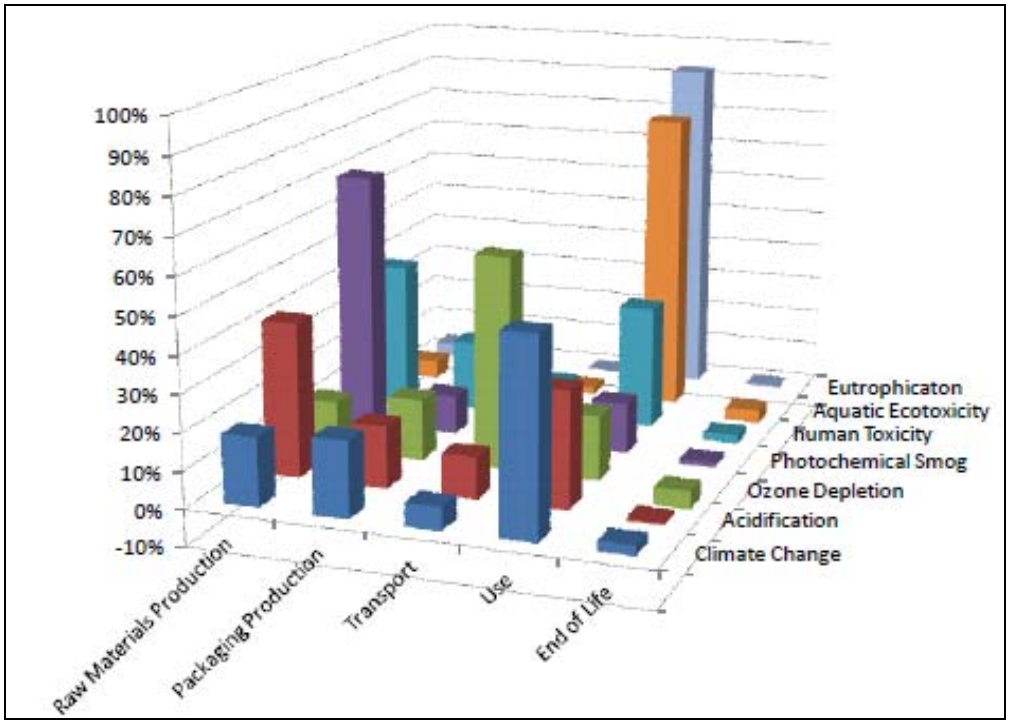
[1] Data available at the A.I.S.E. secretariat.

## 5) ASP criteria and rationale

***Life Cycle Analysis***

The industry experts, represented in the ASP TF, confirmed for the professional building care sector the relevance of a Life Cycle Assessment study which has been carried out for household dilutable liquid formats, in order to get an understanding of the environmental impacts of the various stages of the life cycle:

*Dilutable liquid cleaners*




*The impact of using Liquid Household Cleaner differentiated per life cycle phase. Characterized scores (expressed as %) with CML1992 baseline method.*

The stages of the life cycle process considered were:

- Raw material production
- Packaging production
- Transport
- Use phase
- End of life

and the parameters evaluated were:

- Eutrophication
- Aquatic ecotoxicity
- Human toxicity
- Photochemical smog
- Ozone depletion
- Acidification
- Climate change

1. The analysis confirms that most important factors in Life Cycle Analysis for dilutable liquid cleaners are as follows:
    a. The reduction in resources used to manufacture the product. By concentrating or compacting professional building care products, the use of chemical ingredients is reduced and this delivers significant savings in energy (hence $CO_2$) and waste, as well as delivering substantial savings in freight as more product can be carried per truck.
    b. The reduction in resources used for packaging material. By reducing packaging material or even avoiding via the availability of return or refill system, the environmental footprint of a product can be reduced. However, solidity and stability of packaging material has to be ensured for the sake of a safe product transport and handling.
2. Given that cleaners end up as water-borne waste, it is essential that a more sustainable product poses a significantly reduced (or: minimised) risk for the environment. Therefore, all "down-the-drain" product categories must pass an Environmental Safety Check (ESC).

***ASP criteria***

Using the above LCA as a starting point, the A.I.S.E. Task Force in charge of setting the ASP criteria for professional building care products worked on the following main components:

- activities at product level, under the direct control of manufacturers:
    - by determining a maximum dosage via a minimum dilution ratio
    - by providing accurate and reliable dosing systems and dosage information
    - by determining a maximum level of packaging materials per job
    - by setting a minimum level of recycled content in primary and secondary packaging.
    - by offering training for customer personnel and customer specific advice by qualified staff in order to promote most sustainable and safe use of the products.

- activities at end-user level:
    - providing 'A.I.S.E. Industrial & Institutional Application Pictograms' (see annex)
    - providing Product Information Sheets (PIS)

Implicit in the ASP criteria is that a product must deliver an acceptable level of performance.

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

**ASP Criteria for professional building care products**
The following requirements in each of these domains must be fulfilled in order to reach Advanced Sustainability Profiles (ASP) status.

**NB:** Those Charter ASP criteria for professional building care products cannot be applied to biocidal products, following EU and national legislation. Experience in some countries with an existing authorisation scheme has shown that national authorities have a conservative approach of legislation and exclude environmental voluntary logos (or similar) to be applied on biocidal products.

| | |
|---|---|
| **Product formulation** | Pass successfully Environmental Safety Check (ESC) on all ingredients<br>AND<br>Minimum dilution ratio:<br>1:100 for use in buckets, machines such as scrubber dryers, special equipment such as foam equipment /<br>1:50 for use in refillable spray bottles |
| **Packaging weight** | (Packaging weight in g/ amount of use solution in l) / number of use of primary packaging (i.e. used for same purpose through a return or refill system):<br>≤ 0.7g/l for use in buckets, machines such as scrubber dryers, special equipment such as foam equipment /<br>≤ 1.4g/l for use in refillable spray bottles<br>Packaging = primary + secondary, but excluding tertiary |
| **Board packaging – recycled content** | Minimum requirement: ≥ 60 %<br>OR<br>Where 100% of the board used is certified made from fibre sourced from sustainable forests under an endorsed certification standard such as FSC, SFI or PEFC: no minimum. |
| **Packaging materials other than board – recycled content** | No minimum, but any recycled plastic content may be excluded from the calculation of total packaging weight per job |
| **Dosing systems** | Use of accurate and reliable dosing systems |
| **Training** | Offering training for customer personnel and customer specific advice by qualified staff |
| **End User Information** | A.I.S.E. Industrial & Institutional Application Pictograms (see annex; optional on product, depending on available space on the label)<br>AND<br>Dosage information (optional on product, depending on available space on the label)<br>AND<br>Use of colour codes<br>AND<br>Provision of Product Information Sheets (PIS) |
| **Performance** | 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 end users consistent with dosage information. |

***Clarifications/Definitions:***
Total dosage/job: For normal soil.
Packaging weight: Total (primary + secondary) packaging - based on the volume weighted average for all SKUs of one brand variant with the same formulation per country.

**Calculation example for refillable dosage bottle:**

- Primary packaging weight= 120g;
- Secondary packaging weight = 200g (6 bottles in a box)
- Content = 1 L;
- Dilution ratio normal = 1:100;
- Dilution ratio refillable spray bottles = 1:50
- Number of use of primary packaging = 6

(Packaging weight in g/ amount of use solution in l) / number of use of primary packaging)
Normal: (120g + (200g / 6 bottles) / 100 L = 1,53 g/l / 6 = **0.26 g/l**
Refillable spray bottle: (120g + (200g / 6 bottles) / 50 L = 3.07 g/l / 6 = **0.51 g/l**

**Calculation example for 5 liter jerry can:**

- Primary packaging weight= 150 g;
- Secondary packaging weight = 250g (2 jerry cans in a box)
- Content = 5l;
- Dilution ratio = 1:100;
- Dilution ratio refillable spray bottles = 1:50
- Number of use of primary packaging = 1

(Packaging weight in g/ amount of use solution in L) / number of use of primary packaging)
Normal: (150g + (250 g / 2 Jerry cans) / 500 L = 0,55 g/l / 1 = **0.55 g/l**
Refillable spray bottle: (150g + (250 g / 2 Jerry cans) / 250 L = 1,10 g/l / 1 = **1,10 g/l**

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. Closures and triggers are part of the 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 packaging 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.

Recycled: waste recycled after use
FSC: Forest Stewardship Council
SFI: Sustainable Forestry Initiative
PEFC: Programme for the Endorsement of Forest Certification
Use of colour codes: A colour coding scheme has to be applied. This ensures that professional cleaning materials and equipment are not used in multiple areas, therefore reducing the risk of cross-infection.
Product Information Sheets (PIS): Product Information Sheets (PIS) with detailed application information and dosing instructions, and precautionary warnings relevant to the application have to be provided. Where appropriate, information on cleaning methodology shall be provided, too.

***Product formulation***
Based on the outcome of the Life Cycle Analysis, the industry experts identified the concentration of a product as one of the key factors, in order to reduce the environmental impact. It is industry experts' opinion that a minimum dilution ratio of 1:100 for use in buckets, machines such as scrubber dryers, special equipment such as foam equipment and 1:50 for use in refillable spray bottles, appears to be 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. These thresholds were confirmed in the consultation with industry.

***Packaging***
Based on the outcome of the Life Cycle Analyses, the experts identified the reduction of packaging as a further key factor, in order to reduce the overall environmental impact. The industry was consulted on the thresholds of 0.7 g/l or 0.8 g/l for use in buckets, machines such as scrubber dryers, special equipment such as foam equipment / 1.4g/l or 1.6g/l for use in refillable spray bottles (see ASP criteria section for calculations formula) on the basis that those are achievable using readily available technology. Solidity and stability of packaging material has to be ensured for the sake of a safety product transport and handling. A majority of companies confirmed the thresholds of 0.7 g/l for use in buckets, machines such as scrubber dryers, special equipment such as foam equipment and 1.4g/l for use in refillable spray bottles as one outcome of the industry consultation.

***Packaging recycled content***
The data provided to A.I.S.E. of current recycled board packaging content used within the industry, indicates that the percentage of recycled board packaging material varies. A threshold of 60 % has been identified as achievable by manufacturing companies, using conventional technologies yet leading to environmental benefit. As alternative, the complete amount of packaging virgin board has to come from fibre sourced in a managed way, using certified forest content from an endorsed certification standard such as FSC, SFI or PEFC (FSC: Forest Stewardship Council; SFI: Sustainable Forestry Initiative; PEFC: Programme for the Endorsement of Forest Certification). This was confirmed as an outcome of the consultation.

***Packaging materials other than board – recycled content***
As for existing Charter ASP criteria, any recycled plastic content may be excluded from the total packaging weight per job (see above). This point was also confirmed by companies during the industry consultation.

***Dosing systems***
Over-dosing leads to increased environmental impact, whereas under-dosing leads to unsatisfying results and thus re-cleaning, which also means an increased environmental impact. The use of accurate and reliable dosing systems is therefore required which was confirmed via the consultation.

***Training***
In order to assure the optimal, responsible and safe use of products, it is required to offer training for customer personnel and customer specific advice by qualified staff, to which companies agreed during the consultation.

***End user information***
Considerable savings, both environmentally and economic, can be reached through better sustainable end user behaviour. Thus, in addition to training it is also key to provide the end-users with advice about the use of professional cleaning products. It was agreed to request companies to

- Use the 'A.I.S.E. Industrial & Institutional Application Pictograms' (see annex) (optional on the product, depending on available space on the label)
- Provide dosage information (optional on the product, depending on available space on the label)
- Use colour codes
- Provide Product Information Sheets (PIS)

In addition, evidence has to be provided that the product has been performance tested and fulfils a level acceptable to consumers consistent with claims made (in case of external verification organised by A.I.S.E.).

## 6) Value of industry self-regulation

A.I.S.E. has a long tradition of successful voluntary initiatives initiated for the whole industry (e.g. A.I.S.E. Code of Good Environmental Practice, A.I.S.E. Charter for Sustainable Cleaning, Laundry Sustainability Projects, Product Resource Efficiency Projects), which have all achieved significant savings.[2]

It is A.I.S.E.'s view and experience that in these specific circumstances, industry association-led initiatives are more reliable than "business as usual"/individual company led initiatives for the following reasons:

- Product concentration and packaging: By raising the industry standards to the proposed levels of concentrations, this will help move the whole market to such standards in a self-regulatory way, as successfully as regulation whilst leaving innovation potential for companies.
- Environmental Safety; the ESC tool offers a common set of data that the whole industry can have access to, and against which they can benchmark their formulation; this offers a common level playing field for all market players in a free, public way that is also transparent to all stakeholders.
- Optimal use of products: Common industry communication to drive sustainable consumption, in line with other A.I.S.E activities make a lot of sense, and also have the value of potentially being further relayed to the public by other stakeholders especially if they are industry led. This is because such an approach can build on and benefit from a coordinated scheme addressing consistent messages that can only be possible in such a context.

[2] After the 5 years of the "Code" initiative (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.
From 2006 to 2013, Charter member companies achieved savings on: Energy consumed per tonne of production: -25 %; $CO_2$ emitted per tonne of production: -29 %; Waste: -14 %.

# 7) Expected benefits

Background:
Overall, professional cleaning products are highly concentrated, which means that manufacturers make optimised use of chemicals and water, resulting also in less packaging and less transport, which lower $CO_2$ emissions. Nevertheless, further environmental benefits can be expected in case a product fulfils the Charter ASP criteria for professional building care products.[3]

With the implementation of the Advanced Sustainability Profile for professional building care products, following further benefits are expected EU wide:

- Reassurance that ingredients in the product formulation have an environmental concentration at or below the predicted no-effect level for aquatic toxicity
- Optimal use of ingredients due to product compaction/concentration:
  → **Expected benefits: about 74,000 tonnes of ingredients**[4]
- Optimisation on transport:
  → **Expected benefits: 3700 truck journeys**[5] due to compaction/concentration[6]
- Reassurance of companies' responsibility on sustainability
- Promotion of sustainable behaviour of end users

[3] The downside is that concentrating products unavoidably increases the hazard classification. In professional cleaning, it would however be too short-sighted to put restrictions to hazards without taking into account the actual risk during use. Once the product has been diluted to its recommended in-use concentration, the use-solution does not present any hazard anymore. This has been taken into account for the purpose of the Environmental Safety Check (ESC) of ingredients.
[4] This calculation is based on industry experts' data (see chapter 2), assuming that the ratio of product volume versus the market value is 1 versus 1.5, leading to the assumption that the market volume of professional building care products in Europe amounts to about 590000 tonnes: Prior to the implementation of Charter ASPs for professional building care products, it is estimated that about 50 % of the overall product volume do not fulfil the ASP requirements; for these products, an average dilution ratio of 1:50 is estimated. For our calculation of potential ingredients' savings we assume that 50 % of products will be reformulated in order to fulfil the Charter ASP requirements.
[5] 1 truck loaded with 20 tons.
[6] Due to the variety of existing packaging sizes and formats, savings due to reduction of packaging have not been taken into account for the purpose of the expected benefits calculation.

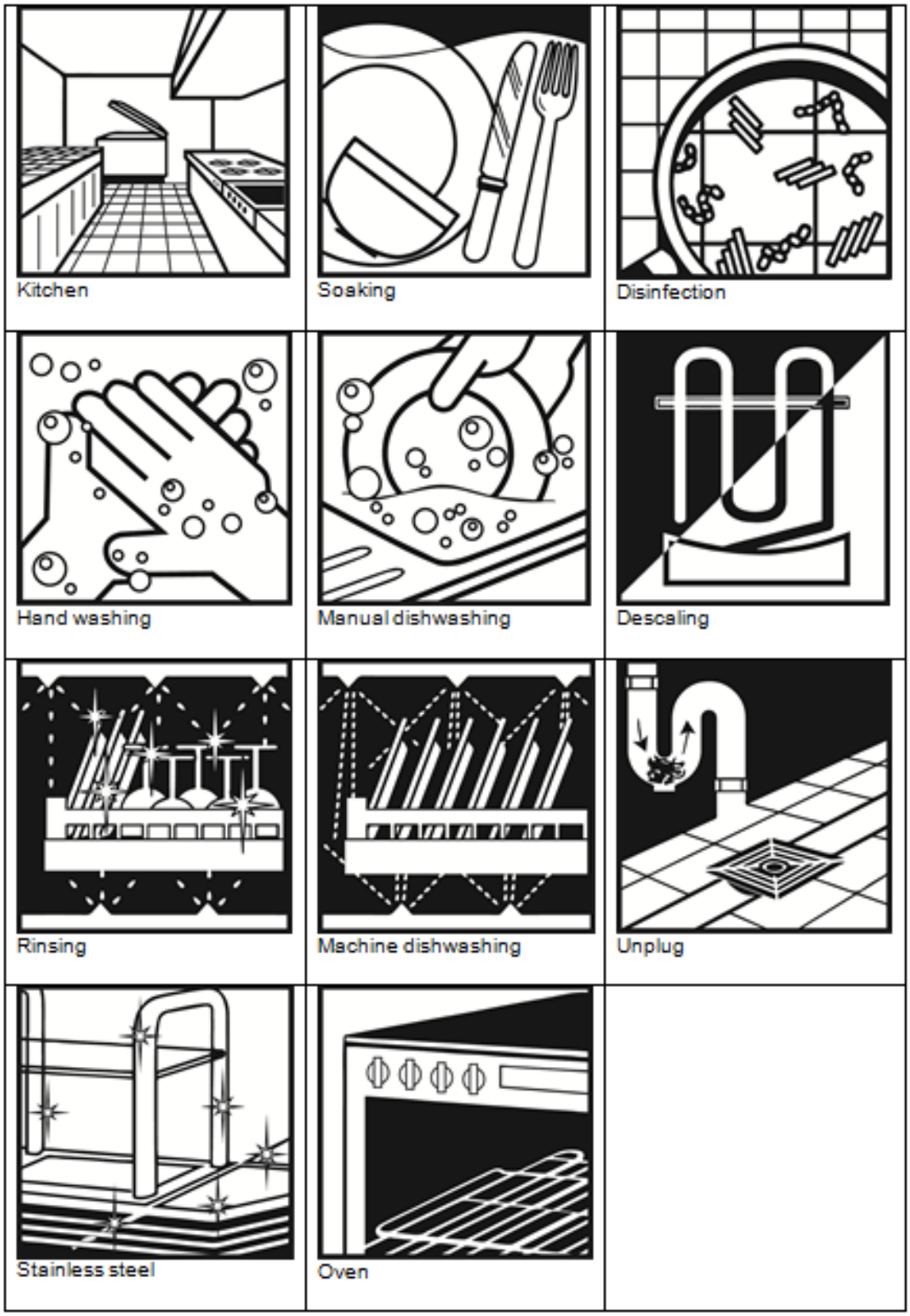
## 8) Timing

- From 1 July till 15 August 2014: Industry consultation on ASPs for professional building care products
- By 30 September 2014: Finalisation of ASP package
- By 1 October 2014: Availability of ASP to the industry
- 1 October 2014 till 30 September 2015: Preparation period for implementation of ASP
- As from 1 October 2015: Activation – products complying with Charter ASP requirements for professional building care products can start to appear on shelves with ASP logo.

# ANNEX: END USER INFORMATION - A.I.S.E. INDUSTRIAL & INSTITUTIONAL APPLICATION PICTOGRAMS

A.I.S.E. developed in 1993 and 1998 a series of application pictograms for the professional cleaning and care industry. These were designed to optimise the correct and efficient use of professional cleaning and care products across Europe. From 1 July 2014, A.I.S.E. provides industry players with an updated set, including 5 new pictograms. Professional graphic files and guidelines are available on www.aise.eu/library/artwork.aspx.


High pressure / low pressure
Spray extraction
Single-disc machine
Scrubber dryer
Floor traditional
Floor care
Floor microfiber
Bucket method
Spray method
Window Cleaning
Foam


Kitchen
Soaking
Disinfection
Hand washing
Manual dishwashing
Descaling
Rinsing
Machine dishwashing
Unplug
Stainless steel
Oven