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

A.I.S.E. CHARTER FOR SUSTAINABLE CLEANING

KPI Detailed Explanation

(Version 1.4, 27 January 2007)

INTRODUCTION

This document compiles the 10 key performance indicators and their specific measuring units and provides the participating companies a detailed reporting guidance.

Companies admitted to the Charter will be asked to fill in – via a protected Charter Extranet – their annual data on all indicators before an indicated deadline. The individual company data will be kept confidential and will be automatically aggregated into the total industry data for the whole Charter area (= EU 27 + Iceland, Norway and Switzerland).

The indicators are valid for all A.I.S.E. sectors (household and I&I) but some of the measuring units are specific to either the household or the I&I sector.

Aggregated results and benchmarking possibilities
As from the second reporting year onwards, it will be possible to measure the overall industry trend towards continual improvement. Individual companies will be able to benchmark their data with the average aggregated industry data.

As companies are also asked to indicate in which sectors they are active (Household, I&I or both) and if they can be considered as a multinational or a national (large, medium or small) company, the reporting system will offer interesting benchmarking opportunities per sector and size of company.

GENERAL REPORTING PRINCIPLES

Companies are asked to report a total annual company figure per indicator:

- Multinational companies should report via their European Headquarters or any other designated reporting centre.
- Although the reporting country / countries should be indicated, national sustainability results cannot be provided as companies are supposed to report a single (Charter Area) figure per indicator.
- The reporting year starts at 1st of January and ends at 31st of December. Company reports should at least cover 50% (6 months) of this period.
- The impact of mergers or other changes affecting the size of the company should only be taken into account as from the next, full reporting year.

Increasing production coverage:

- As it can be assumed that, at the beginning of the Charter, some of the participating companies will not yet be able to report for their whole business, some indicators ask to report per production site(s).
- Companies are strongly recommended to include the remaining business in the subsequent annual individual company reports, with the requirement to cover 50% of the production output

by the end of the first reporting year, 75% by the end of the third reporting year and with the final objective to cover 100% of the production output (see also KPI no. 1).

No import / export data required:

- Time-consuming calculations for import and export are not necessary as it is reasonable to assume that the amount of imported products from outside the EU is comparable to the exported one.

Some key economic data required for general information purposes:

- Participating companies are asked to indicate in the introduction part of their annual report their total annual turnover in the A.I.S.E. product areas as well as the countries in which they are operating (*NB: these data will not be considered as indicators but will give an indication of the geographical coverage of the Charter within our industry*).
- Companies are also asked to indicate in which sectors they are active (household, I&I or both) and if they can be considered as a multinational or a national (large, medium or small) company.

INDICATORS

Indicator 1) PARTICIPATING COMPANIES (All Sectors)

Introduction

The most critical success factor for a voluntary industry initiative such as the Charter is the number of participating companies – large, medium and small, active in the household and / or in the I&I sector. Not only the number of manufacturing sites covered has to be measured but also the total production volumes covered. Baseline-production data are needed for measuring continual improvement on all other indicators.

Measuring units

All Companies should report:

a) their total number of manufacturing sites (in the Charter area);
b) the number of manufacturing sites covered by the Charter report;
c) their total production, in tonnes (in the Charter area);
d) the production covered by the Charter report, in tonnes, with
  a. a minimum of 50% by the end of the first reporting year;
  b. a minimum of 75% by the end of the third reporting year and
  c. **a final objective of a 100% coverage.**

Only household companies should report:

e) the total number of consumer units sold (in million units)
  a. covered by the entrance check
  b. in the Charter Area

Reporting Guidelines

- The data to be reported here are necessary for the calculation of the other indicators. The Extranet reporting system automatically calculates the performance ratios on the other KPI's by linking the production data to the data to be reported on the other KPI's;
- Only the part of business 'in control of' should be reported, not the manufacturing sites run by third parties;
- Only the part of the business in the Charter Area (EU 27 + Iceland, Norway and Switzerland) should be reported;
- If the Charter report covers all sites and the whole production in the Charter area the same numbers have to be filled in under a-b) and c-d);
- For the purpose of the Charter any site is assumed to produce at least 50% A.I.S.E. category products (see **annex I**);
- The production data should be reported with the water content as the finished product might also contain water.

Indicator 2) CHEMICALS SAFETY EVALUATION (Household and I&I Sector)

Introduction (household sector only)
Chemical substances are the main ingredients of detergents and cleaning products. The safety of these chemicals is crucial for consumer / customer confidence and the overall, societal reputation of the industry. Through participation in initiatives such as HERA, chemical substances in use by the industry are being risk assessed and the detergent / cleaning products volume covered by risk assessment can be measured as well.

Safety of I&I products is currently ensured by risk management measures taken on the basis of the comprehensive set of specific regulations addressing occupational exposure and workers protection, as well as ingredients safety data sheets; the I&I sector of A.I.S.E. is reviewing HERA risk assessments for potential extension to I&I exposure conditions.

Measuring units
Companies should report
a) the total amount of chemical raw materials used, in tonnes;
b) the total amount of chemical raw materials covered by HERA risk assessments, in tonnes.

Reporting guidelines
- Companies will not be asked to sum up individual chemicals covered. The updated list of chemicals (CAS numbers) covered by the HERA Risk Assessments can be found on the HERA website: www.heraproject.com (click on ''risk assessments''); In the future, the risk assessment will have to be consistent with the REACH Regulation and the REACH-related manuals.
- Water is here not considered as a raw material. As a consequence only the 100% active basis of the chemical ingredients – thus without the water content – should be reported.

Introduction (I&I sector only)
The experience shows that manual product dosage frequently leads to reduced product use efficiency, either by overdosing (spoiling) or under-dosing (repeating cleaning operation to get the job done). Therefore, producers promote and offer increasingly dosing devices to deliver appropriate product dosage. Furthermore, in terms of handling safety, manual dosing might cause more risk of direct exposure to products (skin, eyes, inhalation) than using dosing devices.

This indicator aims at reflecting the evolution of use of dosing devices or systems by the customers to optimise (usually minimise) the products use and further increase safety at work.

Measuring Unit
Companies should report:
The total amount of products in weight (tonnes) delivered per company and per year for use under controlled dosing.

Reporting Guidelines
- Depending on the application, dosing control ranges from using devices as simple as dosing caps or elementary mechanical dosing pumps to programming of completely automated ingredients injection at the different phases of a cleaning process (e.g. big laundries). These products (in liquid or solid form) are used either as such or diluted in the dosing control system.
- The compiled quantities are those that are delivered to the customers, not their equivalent after possible dilution.

Indicator 3) OCCUPATIONAL HEALTH AND SAFETY (All Sectors)

Introduction
Occupational injuries can have outcomes with varying degrees of severity. Injuries, which are considered as 'serious enough to require time off work for treatment and/or to recover' are called 'Lost Time Accidents'.

Benchmarking studies amongst A.I.S.E members in the past have revealed that this measure is already widely used. Indeed, lost time accidents, which require more than three days off work, are formally reportable to national health & safety regulators in many EU States.

Measuring unit
Companies should report
a) Accident Frequency Rate: number of accidents / 100.000 working hours

Reporting guidelines
- Companies should report the number of employee lost time accidents recorded during the year, where the time off work is equal to or greater than one days absence (excluding the day on which the accident occurred), expressed per 100,000 man-hours worked by all employees;
- Calculation:

$$\text{Accident Frequency Rate} = \frac{\text{Number of lost time accidents}}{\text{Total Employees' Hours Worked}} \times 100{,}000$$

Indicator 4) CONSUMER AND CUSTOMER SAFETY (Household and I&I sector)

Introduction
Companies have made over the years significant progress in offering consumers / customers easier access to their Client Services. Phone lines (toll-free) and more recently e-mails are typical channels used for this purpose.

Consumers have responded positively and incoming calls are increasing as a proof of the interest of consumers for more information. The possibility to have direct access to manufacturers is a signal for consumers of the openness of companies and of their willingness to respond to consumers' inquiries. Calls span over a very wide range of topics, from products to promotions, from complaints to testimonials, from search for advice to job applications.

This channel also provides the opportunity to cover safety related topics and this allows manufacturers to monitor the real and perceived safety profile of their products in the market, the subject of this indicator.

Industrial & Institutional products deliveries are already accompanied by information and usage & safety instructions, at the minimum through a Product Safety Data Sheet and labelling on pack. This information is given for all new products delivery and often even for all deliveries. Therefore there is no real margin for a significant increase or improvement to be achieved.

As a service to their customers, I&I suppliers also provide training for safe use of products and for systems / machines set-up optimisation. The complexity of these trainings depends on the type of application and their frequency varies from supplier to supplier and from customer to customer, the rotation of personnel being often important at customer level.

This indicator will also show the commitment of the I&I sector to maintain and further improve the level of safety awareness of users at customers level.

Measuring units (Household sector only)
Companies should report:
a) Names of all countries where a care line service is offered;
b)* Names *of all countries where products are on the market;
c) Total number of consumer contacts per million consumer units sold (CUs, Charter area);

d) The percentage of safety-related contacts within the total number of consumer contacts, classifying these contacts into two groups:
   a. Calls related to real or perceived health problems, reported as being linked to the use of the product (e.g. exposure to skin or eyes or oral exposure);
   b. Inquiries (e.g. general or more specific questions related to the safety of the product, such as the presence of a certain ingredient, to which the consumer is allergic).

Reporting Guidelines

- Companies commit to gradually set up care lines via a free phone number and/or e-mail. A care line service includes any of the following:
  - a company phone number;
  - a free-phone service;
  - an e-mail address;
  - an address for letters.
- Companies commit to record the total number of consumer contacts
- Companies commit to record the total number of "safety-related" consumer contacts according to the following classification:
  - Calls related to real or perceived health problems, reported as being linked to the use of the product (e.g. exposure to skin or eyes or oral exposure);
  - Inquiries (e.g. general or more specific questions related to the safety of the product, such as the presence of a certain ingredient, to which the consumer is allergic).

Measuring unit (Industrial & Institutional Sector only)

Companies should report

e) The recorded number of equivalent customer-persons trained in sessions (partly or totally) devoted to safe handling and use of products and systems (equipment) delivered annually by company, whatever the application (the evolution of this number will be explained taking into consideration market evolution and societal factors).

Indicator 5) CONSUMER AND USER INFORMATION (Household and I&I sector)

I. Safe / sensible / best use information for consumer products (household only)

Introduction

The provision of appropriate information on how to use products can have positive impacts on the performance of a product, and hence the end results, whilst minimising the environmental impact and ensuring safety for consumers.

The advent of the Charter provides the opportunity to introduce small, but important improvements to the information provided that could have significant benefits in the everyday usage of A.I.S.E. products by consumers.

The A.I.S.E. objectives are to:

- Improve and/or develop clear messages for consumers on how to use A.I.S.E. consumer products safely/sensibly to minimise potential negative impacts on human health and the environment and on how best to use them to maximise their performance benefits. Those messages are meant to be communicated via on-pack labelling and other communication tools;
- Promote these messages and their comprehension among the public via A.I.S.E., its member national associations and their member companies with the support of GO's and NGO's. The experience gained through the "Wash-right" campaigns will be a good starting point for developing additional communication.

Voluntary safety information

The large majority of A.I.S.E. products are not classified as "dangerous" according to the EC Dangerous Preparations Directive and are not to be considered as representing a high level of hazard. However, even non-classified products should be kept away from children and should be used sensibly by adults (e.g. they are not meant to be put in the eyes, to be ingested, etc.).

In order to minimise the potential risk of products being misused, A.I.S.E. wants to remind consumers about some basic common sense rules, defined in a set of ''safety / sensible advice" phrases and pictograms.

Currently some on-pack safety information or sensible advice already exists but is conveyed in different ways across companies and sometimes across brands within the same company. To improve this situation, A.I.S.E. has developed a common set of "safety/sensible advice phrases" which will also be coupled with a set of standard pictograms (see **annex II**). These phrases are:

1. Keep away from children.
2. Keep away from eyes. If product gets into eyes rinse thoroughly with water.
3. Rinse and dry hands after use.
4. People with sensitive or damaged skin should avoid prolonged contact with the product.
5. Do not ingest. If product is ingested then seek medical advice.
6 Do not change container to store contents.
7 Transfer refill content in the original container only.[1]
8. Do not mix with other products.
9. Ventilate the room after use.

Whilst A.I.S.E. encourages each Company to use the maximum number of relevant messages for each product category, the following set of rules applies:

- Statements 1 and 2 and respective pictograms should be applicable to all product categories.
- Statements 3 and 4 and respective pictograms should be used on products that are likely to come into prolonged contact with skin, for example hand dish wash and hand wash laundry products. These two statements should be used at companies' discretion, based on knowledge of their own specific products.
- Statements 5 to 8 and respective pictograms should be used as appropriate at the discretion of the company. For items 6.a and 6.b, the most appropriate message should be used recognising that they are designed for a normal or a refill pack respectively.

This information should be grouped in a "sensible advice box" to draw consumers' attention.

A.I.S.E. expects companies to apply a stepwise approach: initially both pictograms and sentences will be shown with the objective to move to pictograms only when A.I.S.E. has evidence of consumer comprehension. The commitment to show these sensible advice phrases applies to all products either non-classified or classified by the Dangerous Preparations Directive. A.I.S.E. will provide appropriate guidance to avoid duplication and/or confusion for classified products.

Best use information

The "A.I.S.E. Washright panel" developed in the context of the "A.I.S.E. Code of Good Environmental Practice" will continue to be used on all washing machine laundry detergents (see **annex II**).

Companies committing to this project will have to implement the following actions:

a. Whenever[2] specific safe/sensible/best use advice is being provided for a certain product, it must use the centrally developed pictograms / sentences.
b. On household washing machine laundry brands, it must use, whenever feasible[2], the A.I.S.E. wash right panel developed in the context of the A.I.S.E. "Code of Good Environmental Practice".

Specific commitments:

- Companies commit to start by placing two message-icon combinations on their packs;
- Companies commit to select the most relevant additional message-icon combinations for their product categories to be placed on packs;
- Companies commit to keep the wash right panel on washing machine laundry detergents.

[1] This message is only available as text.
[2] Bearing in mind label sizes.

Measuring Units
Companies should report:
a) Safety advice:

- Number of consumer product units sold in the Charter Area, using two icons/sentences (normally # 1 and 2), expressed as millions of units (m.u.);
- Number of consumer product units sold in the Charter Area carrying more than two icons/sentences, expressed as millions of units (m.u.).

b) Best use advice:

- Total number of household washing machine laundry detergents units sold in the Charter geographic area expressed as millions of units (m.u.).
- Number of household washing machine laundry detergents units expressed as m.u. sold in the Charter Area carrying the Washright panel expressed as millions of units (m.u.).

Reporting guidelines

- The total number of units sold will include small sizes that might never carry any of these sentences/pictograms. There might be a need for re-evaluating this aspect at a certain stage.

II. Proper and safe use of I&I products (I&I sector only)

In order to facilitate the communication with the users in the I&I sector, A.I.S.E. developed pictograms for two important activity sub-sectors: Building care and Kitchen & catering hygiene. This indicator aims at demonstrating the wide use of these pictograms.

Measuring Units
Companies should report:
a) the total number of consumer units (CUs) for products used in the two sub-sectors
b) the number of CUs showing one or more A.I.S.E. pictograms.

Indicator 6) POORLY BIODEGRADABLE ORGANICS (PBO's) USED (All Sectors)

Introduction
Poorly biodegradable organic compounds (PBO's) have been in the public attention over the past decades as a potential long-term environmental issue. The Charter PBO Indicator is intended to call companies' attention on the reduction of these substances whenever the reduction would bring environmental benefit and would be technically feasible.

Measuring Unit
Companies should report:
a) the purchased quantities of chemicals (according to the Charter PBO-list) in weight (tonnes)

Reporting guidelines

- Definition of the Poorly Biodegradable Organics:
  Substances/materials that are neither readily nor inherently biodegradable[3] have been included in to the Charter PBO List (see **annex III**) and the Charter reporting should be based on this List. A few of the chemical groups listed may include biodegradable representatives which can be exempted from PBO assignment provided it is justified by appropriate data. It is likely that the List will not contain all chemicals[4] used by companies participating to the Charter. If a known PBO not covered by the Charter PBO List is used by a company this substance/material should also be reported against the PBO key performance indicator.
- All products produced and sold to the consumer and/or I&I cleaning applications should be considered when the PBO's are reported.

[3] Organic substances are considered PBO if their biodegradability is below 70% in an inherent biodegradability test system (SCAS or Zahn-Wellens test). This threshold is *a priori* exceeded by readily biodegradable substances.

[4] Substances not appearing on the PBO list, but for which there are test data or a structural indication that they are likely not to be inherently biodegradable should be considered as PBOs.

Indicators 7, 8 and 9: CONSUMED ENERGY AND CO-2 EMITTED, CONSUMED WATER, WASTE (TOTAL AND HAZARDOUS) (All Sectors)

Introduction

Environmental emissions to air, water and land are measured in variety of ways within industry. Of all these measures it is recognised that waste (both hazardous and non hazardous) which is sent off-site for disposal by landfill, incineration etc., and which is not recycled, has a significant environmental aspect for most of the companies within the A.I.S.E. It is further recognised that the consumption of energy e.g. gas, oil, electricity and water by the companies that comprise the A.I.S.E also has a significant environmental impact.

Benchmarking studies amongst A.I.S.E members in the past have revealed that these measures are already widely used and are often included in external reports on company environmental performance and sustainability.
The Measuring Units for the Indicators defined in the Environmental Pillar are:

Indicator 7) CONSUMED ENERGY AND CO-2 EMITTED

Companies should report

a) the amount of energy consumed per annum expressed in GJ of energy per tonne of the total site(s) production.

Reporting guidelines

- Include all fuels used on the site e.g. gas, oil, electricity etc.;
- Do not include electricity that is generated on site – enter instead the energy value of the fuel that is used for its generation.
- Where steam or electricity is produced on site, but some of it is sold to an adjacent site or third party facility or operation, subtract the amount sold from the total energy reported;
- The energy content (also known as calorific value) of each fuel should be known locally but default values are provided below.

Typical Energy Contents of Fuels		
Fuel	**Units**	**Energy Content (GJ per tonne or m^3)**
Coal	Tonnes	29.30
Heavy fuel oil	Tonnes	41.35
Light fuel oil	Tonnes	43.00
Gas	M^3	0.0366
Liquid Petroleum Gas	Tonnes	46.00
Steam / Hot Water purchased externally	Tonnes	2.75
Wood	Tonnes	15.30

Note: Energy contents of fuels from (ESU-ETHZ, 1994; supplemented by APME, 1993; Baehr, 1989; SAEFL-132, 1991)

b) The amount of CO_2 emitted per annum expressed in kilograms of CO_2 per tonne of total site(s) production.

Reporting guidelines

- This calculation should be done with reference to the amount of energy consumed and the composition of the energy mix.
- In particular for smaller companies: contact your fuel/energy provider(s) for details of the composition of the fuel/energy consumed i.e. kilograms of CO_2 per GJ.
- The conversion calculation method can also be derived from the GHG Protocol Calculation Tools of the World Business Council for Sustainable Development (www.ghgprotocol.org)

Indicator 8) CONSUMED WATER

Measuring unit

Companies should report:

a) the amount of water (potable and non potable) consumed per annum expressed in m3 of water per tonne of the total site(s) production.

Reporting guidelines:

- This information is generally available on the quarterly invoice from the water supplier or in the case of on site water sources e.g. wells, can be measured using a meter.

Indicator 9) WASTE – Off Site, For Disposal (Total Waste - Hazardous plus Non Hazardous)

Measuring unit

Companies should report

a) the total amount of waste (hazardous and non hazardous) per annum expressed in kilograms of waste per tonne of the total site(s) production

b) the amount of hazardous waste sent off-site in kilograms of waste per tonne of the total site(s) production.

Reporting guidelines:

- Waste that is reused or recycled on site should not be included as it has not left the site;
- Waste that is stored on site should not be reported, as it has not been disposed of;
- The classification of waste as either hazardous or non-hazardous should be based on the local legislation for the reported country / countries.

Indicator 10) PACKAGING USED (All Sectors – Industrial and Institutional Sector)

Introduction

The consumption of packaging, in particular for consumer goods is regarded by society as an important environmental performance indicator for the industry. Therefore the A.I.S.E. will report the packaging ratio, expressed as the total amount of packaging (tonnes) related to total amount of products (tonnes) put on the market.

The A.I.S.E. Industrial & Institutional sector delivers a significant amount of their products in refillable "big" containers (drums, IBCs, tank truck loads). Consequently, the amount of products delivered in refillable bulk containers per year will be reported exclusively by the A.I.S.E. Industrial & Institutional sector.

Measuring unit (All Sectors)

Companies should report

a) the total amount of packaging material in weight (tonnes) purchased[5] per year

Reporting Guidelines

- Companies are requested to report to A.I.S.E. the total packaging material purchased at Charter Area level; this should be one number; i.e. not split by material (plastic, paper, etc.) or by industry sector (Household, I&I).
- Only packaging that is actually filled by the companies themselves should be considered;
- The submission will include tonnage coming from primary, secondary and tertiary packaging up to a nominal quantity of 25 kg/l of the primary pack **but no pallets** and **no refillable bulk containers**;
- Included are regular packs and promotional packs, e.g. boxes, bags, bottle, aerosol cans etc.;
- Special items such as trigger sprays and measuring devices are only included if they are an integral part of the pack (for example a closure that functions as a dosing device).
- Refillable containers will be included only if sold filled (i.e. newly purchased);
- No data will be generated on display material in general and on separate dosing devices.

[5] The choice of data sources is left at the discretion of the reporting companies providing the reported data cover the packaging materials quantity as defined in the guidelines.

Analysis of the reported data

The evolution of the aggregated (Charter Area) data might need to be explained. In case of substantial external influences beyond our control, the explanation will include references to explanation factors[5] reflecting the respective external elements influencing the market. The explanation will highlight the efforts our industry makes to optimise packaging material use and - to the degree possible - to counterbalance the potential growth caused by external factors.

Measuring Unit (Industrial & Institutional Sector only)

Companies should report

b) the use of refillable containers: total amount in weight (tonnes) of products delivered in refillable containers per year.

Reporting Guidelines

- The reported amounts should be grouped at Charter Area level and should include all products delivered in refillable containers of more than 25 kilo or litre. This includes also tank-truck loads.

Analysis of the reported data

The evolution of the aggregated European data might need to be explained. In the case of substantial external influences beyond our control the explanation will include references to explanation factors reflecting the respective external elements influencing the market. The explanation will highlight the efforts our industry makes to minimize negative impacts on sustainability and - to the degree possible - to counterbalance the potential increase of negative impacts caused by external factors. The appropriate A.I.S.E. Task Force will monitor the explanation factors.

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[5] An appropriate A.I.S.E. Task Force will monitor the Explanation Factors. They could be for example the evolution of demographic indicators (influencing the total market), the trend towards smaller and more numerous households (leading to smaller pack sizes), the general trend to more convenience in life (more convenient package executions and product forms, dispensing features or pre-dosed products), the progress in recovery systems achievements, currencies fluctuations, and feedstock materials' market evolution. These would be applied retrospectively on a yearly basis as appropriate.

ANNEX I

A.I.S.E. Category Products

- Soaps
  - Toilet soap, hard soap

- Household Laundry Products
  - Fabric washing (powders and liquids), fabric softeners, auxiliary products

- Household Dishwash Products
  - Hand wash, machine wash, auxiliary products

- Hard Surface Household Cleaners
  - All purpose cleaners, scouring cleaners, window cleaners, toilet bowl cleaners, speciality products

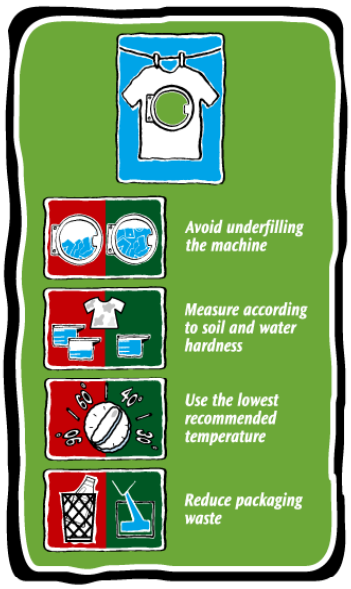
- Domestic Bleach Products
  - Hypochlorite-based products, other bleach products

- Domestic Maintenance Products
  - Wood, leather, household metals, maintenance, insecticides, disinfectants, room deodorisers, specialist application products, other specialities

- Industrial & Institutional Products
  - Industrial hygiene (e.g. food & beverage industry)
  - Professional laundry
  - Kitchen & Catering
  - General Surfaces (hospital hygiene, offices, public places, etc.)
  - Others (industrial metal cleaning, car & truck wash, process water treatment)

ANNEX II

Safe Behaviour Pictograms **Best Use Information ("Washright")**



ANNEX III

Poorly Biodegradable Organics (PBO) in products subject to the A.I.S.E. Charter

Below is a list of major chemical groups or chemicals representing product ingredients that are considered to fulfil the criteria for PBO, i.e. being neither readily nor inherently biodegradable* . A few of these chemical groups may also include biodegradable representatives which can be exempted from PBO assignment provided it is justified by concrete data. It is inevitable this list will not contain all chemicals used by A.I.S.E. member companies or associations. If a known PBO not covered by the list below is in use this should also be reported against the PBO key performance indicator within the A.I.S.E. Charter for Sustainable Development.

Organic substances* are considered PBO if their biodegradability is below 70% in an inherent biodegradability test system (SCAS or Zahn-Wellens test). This threshold is *a priori* exceeded by readily biodegradable substances.
Substances not appearing on the PBO list, but for which there is a structural indication that they are likely not inherently biodegradable, or for which data are available showing lack of inherent biodegradability, should be considered as PBOs.

PBO Chemicals/Chemical Classes	Examples include
Polymers:	
Polycarboxylates	sodium polyacrylate acrylic acid homopolymer acrylic acid/laurylmethacrylate copolymer maleic acid/acrylic acid copolymer
Carboxmethyl cellulose and other cellulose derivatives	carboxymethylcellulose (CMC) hydroxymethyl cellulose sodium carboxymethylcellulose cellulose, carboxymethylether, sodium salt
Polystyrene latex	polymerised styrene monomer (= polystyrene) polystyrene latex
Polysiloxane polymers (silicones)	polydimethylsiloxanes polydimethyl cyclosiloxanes silicone derivatives
High Molecular Weight Polyethylene Glycols (MW > 4 000)	
Polyvinyl pyrrolidone (PVP) and related polymers	2-pyrrolidinone, 1-ethenyl-, homopolymer polyvinylpyrrolidone (PVP) poly (N-vinyl-2-pyrrolidone)-poly (N-vinyl-imidazol) poly 4-vinylpyridine-N-oxide
Nonionic terephthalate polymers (soil release polymers)	polyesters (soil release polymers) bis-(poly-ethoxylated) poly-(1,2 polypropylene terephthalate) diethoxylated poly (1,2 propylene terephthalate)
EO/PO block polymers **	
Other homo- and co-polymers **	
Paraffins	paraffin waxes paraffin derivatives
Substance groups and individual substances:	
Fluorescent whitening agents (Optical brighteners)	dimorpholino type optical brighteners disulphostyryl biphenyl type optical brighteners disodium 4,4'-bis ((4-anilino-6-morpholino-1,3,5-triazin-2-yl)amino)stilbene-2,2'-disulphonate disodium 2,2'-((1,1'-biphenyl)-4,4'-diyldivinylene)bis(benzenesulphonate)
Dyes and pigments	al-phthalocyanine compound zinc phtalocyanine sulphonate
Phosphonates (acid and salts)	amino-tris(methylene phosphonic acid) tetrasodium (1-hydroxyethylene bisphosphonate) diethylenetriamine penta (methylenephosphonic acid)
Perfumes	
Preservatives **	
Imidazolinium dervatives	
Benzotriazole and derivatives	
EDTA (acid and salts)	
Butyl hydroxytoluene (BHT)	
Organic chlorine bleaches	Sodium dichloroisocyanurate, trichloroisocyanuric acid
Fluorosurfactants	Perfluro-octanes (PFOS/PFOA), fluorotelemetric chemistry .

** Except representatives shown to be outside PBO definition