

Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Globally Harmonized
System of Classification and Labelling of Chemicals

03 November 2017

Thirty-fourth session

Geneva, 6-8 December 2017

Item 3 (d) of the provisional agenda

Hazard communication: Other issues

10 years of GHS: More effective labelling for hazardous consumer products?

Submitted by the International Association for Soaps, Detergents and Maintenance Products (A.I.S.E.)

1. A.I.S.E. launched in 2016 a project called “*BREs - Better regulation & Safe use project*” on communication to general consumers to ensure a safe use of hazardous products, with a specific focus on detergents and maintenance products.
2. Main aim of this project was to improve effectiveness of safe use communication via labels, to make sure that consumers notice the safety information, understand it, and act upon it to ensure safe use.
3. A first workshop was organized on June 2016 with the participation of EU Commission, EU Member States, Poison control centres and Industry. This allowed gathering different stakeholders’ perspectives on the effectiveness of GHS/CLP labelling requirements to convey hazard and safe use information to consumers and medical personnel on chemicals products, in particular, detergents products.
4. As a follow up, a qualitative market research with consumers was carried out in 2016. Results are available at the following link: https://www.aise.eu/documents/document/20161012132913-resuls_quali_research_.pdf
5. In 2017 a quantitative market research was conducted on ‘Consumer understanding of the safety and pictograms on hazardous household detergent products’. This is probably one of the largest studies on consumer comprehension of GHS/CLP labels and its findings can support further improvements of the system.
6. A scientific publication is under preparation and the Study report will be soon published on A.I.S.E. website: <https://www.aise.eu>

¹ BREs project description and related material are available here: <https://www.aise.eu/our-activities/product-safety-and-innovation/classification-labelling/bres-project.aspx>

10 years of UN GHS: More effective labelling for hazardous consumer products?



Roberto Scazzola, A.I.S.E.

34th Meeting of Sub-Committee of Experts on the GHS –
Geneva 6-8 December 2017

UN GHS in the European Union

- UN GHS criteria introduced in EU via CLP Regulation n.1272/2008 on Classification, Labelling and Packaging
- Replacing previous systems (DPD orange pictograms *less labelling overall*).
- European Union is the only jurisdiction having fully implemented GHS criteria for general consumer chemical products.
- After almost 10 years, relevant findings can be shared on the GHS implementation for general consumer labels.



Same product, two approaches (EU, US)

GHS resulted in a higher amount of information to be placed on a label for consumer chemicals (hazard vs risk)



Qualitative research on consumers understanding (AISE 2016)

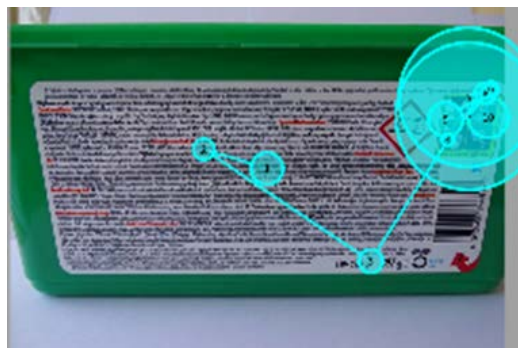
- GHS/CLP labels are rarely checked (detergents products).
- Safe use practice is determined intuitively (e.g. experience, connotation of performance, pack design)
- Some issues with comprehension of labels.



Methodology: 30 face to face interviews (1h45) in 3 EU countries (BE/PL/ES)

Main findings qualitative research

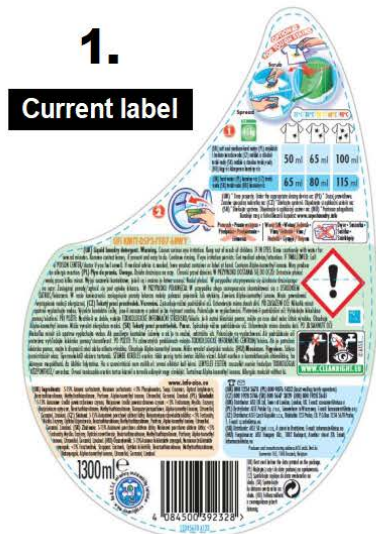
- Eye tracking demonstrated value of pictograms.
- They would not use label in case of accident: *“too much text to quickly find what is needed”*.
- GHS pictos are not well understood (*difficult to distinguish level of risk, i.e. exclamation mark*).
- Confusion by the different pictos and phrases: *“all products seem to be equally dangerous (no ‘gradation’)”*
- A.I.S.E. safe use icons are deemed to work better and are *“good to be reminded of”*



Quantitative Consumer Research on labels (2017)

Scientific publication will follow. Main goals:

- 1) Effectiveness of 3 label options to drive safe use
- 2) Label preference
- 3) CLP Pictogram and A.I.S.E. Safe Use Icons Understanding (GHS methodology)

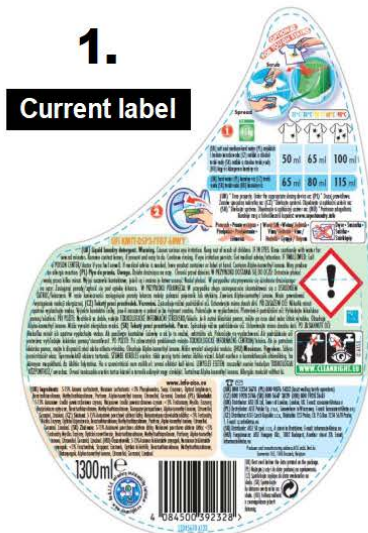


Methodology

4 European countries (Poland, France, Sweden, Spain)
 Online study n=1800 (30% male, 70% female), nationally representative spread for age per country.

GHS pictograms and safe use icon understanding tested with GHS Comprehensibility Testing Methodology (UN, 2015).

Full info soon available www.aise.eu



Current label



Typical EU liquid laundry detergent

- 4 languages;
- Full GHS/CLP compliance
- Classified Serious Eye Irritation (Cat.2) H319 “Causes serious eye irritation.” + EUH208 “Contains <name of sensitising substance>.”
- GHS07 (exclamation mark) with the signal word “Warning”.
- P102 “Keep out of reach of children.”, P305/351/338 “IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.”, P337/313 “If eye irritation persists: Get medical advice/attention.”, P301/312 “IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.” and P101 “If medical advice is needed, have product container or label at hand.”

OPTIONAL FOR TOUGH STAINS

Scrub

Spread

20°C 30°C 40°C 60°C 95°C

1 4.5 kg

(ES) agua blanda y media	50 ml	65 ml	100 ml
(PT) água macia e média			
(FR) eau douce et moyenne			
(IT) acqua dolce e di media durezza			
(ES) agua dura (PT) água dura	65 ml	80 ml	115 ml
(FR) eau dure (IT) acqua dura			

2

UFI KMTT-DSP3-7FD7-6RWY

Prelavage • Prelavaggio • Laine / Sola • Lana / Seta

Sarander • Sarander • Seche-linge • Asciugatrice

(ES) Detergente para ropa líquida. Atención. Provoca irritación ocular grave. Mantener fuera del alcance de los niños. EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando. Si persiste la irritación ocular: Consultar a un médico. EN CASO DE INGESTIÓN: Llamar a un CENTRO DE TOXICOLOGÍA/médico si la persona se encuentra mal. Si se necesita consejo médico, tener a mano el envase o la etiqueta. Contiene Alpha-isomethyl ionone. Puede provocar una reacción alérgica. En caso de accidente, consultar al Servicio Médico de Información Toxicológica. Teléfono: 915620420 (PT) **Detergente para a roupa líquida. Atenção.** Provoca irritação ocular grave. Manter fora do alcance das crianças. SE ENTRAR EM CONTACTO COM OS OLHOS: enxaguar cuidadosamente com água durante vários minutos. Se usar lentes de contacto, retire-as, se tal lhe for possível. Continue a enxaguar. Caso a irritação ocular persista: consulte um médico. EM CASO DE INGESTÃO: caso sinta indisposição, contacte um CENTRO DE INFORMAÇÃO ANTIVENENOS/médico. Se for necessário consultar um médico, mostre-lhe a embalagem ou o rótulo. Contém Alpha-isomethyl ionone. Pode provocar uma reação alérgica. (FR) **Lessive liquide. Attention.** Provoque une sévère irritation des yeux. Tenir hors de portée des enfants. EN CAS DE CONTACT AVEC LES YEUX: rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer. Si l'irritation oculaire persiste: consulter un médecin. EN CAS D'INGESTION: Appeler un CENTRE ANTIPOISON /un médecin en cas de malaise. En cas de consultation d'un médecin, garder à disposition le récipient ou l'étiquette. Contient Alpha-isométhyl ionone. Peut produire une réaction allergique. (IT) **Detersivo liquido. Attenzione.** Provoca grave irritazione oculare. Tenere fuori dalla portata dei bambini. IN CASO DI CONTATTO CON GLI OCCHI: sciacquare accuratamente per parecchi minuti. Tagliare le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare. Se l'irritazione degli occhi persiste, consultare un medico. IN CASO DI INGESTIONE: contattare un CENTRO ANTIVELENI/ un medico in caso di malessere. In caso di consultazione di un medico, tenere a disposizione il contenitore o l'etichetta del prodotto. Contiene Alpha-isomethyl ionone. Può provocare una reazione allergica.

www.info-aise.eu

(ES) Ingredientes: 5-15% tensioactivos aniónicos, tensioactivos no iónicos; <5% fosfonatos, jabón; enzimas, blanqueantes ópticos, Benzisothiazolinone, Methylisothiazolinone, perfumes, Alpha-isomethyl ionone, Citronellol, Geraniol, Linalool. **(PT) Ingredientes:** 5-15% tensoactivos aniónicos, tensoactivos não iónicos; <5% fosfonatos, sabão; enzimas, branqueadores ópticos, Benzisotiazolinone, Metilisotiazolinone, perfumes, Alpha-Ionone Isomethyl, Citronellol Geraniol, Linalool. **(FR) Ingrédients:** 5-15% agents de surface anioniques, agents de surface non ioniques; <5% phosphonates, savon; enzymes, azurants optiques, Benzisothiazolinone, Methylisothiazolinone, parfums Alpha-isométhyl ionone, Citronellol, Geraniol, Linalool. **(IT) Composizione chimica:** 5-15% tensioattivi anionici, tensioattivi non ionici; <5% fosfonati, sapone; enzimi, sbiancanti ottici, Benzisotiazolinone, Metilisotiazolinone, profumo, Alpha-isomethyl ionone, Citronellol, Geraniol, Linalool.

(ES) 800 56473829 (PT) 800 19283645 (FR) 800 1928 3645 (IT) 800 19283746

(ES) Distribuidor: AISE España, Madrid, Plaza de Castilla 3; Email: espana@aise.eu **(PT) Distribuidor:** AISE Portugal, Lisboa, R. Dom Pedro V 723; Email: pt.info@aise.eu **(FR) Distributeur:** AISE France SA, Paris, Av. du Savon 43; Email: info-france@aise.eu **(IT) Distributore:** AISE Italia, Corso Buenos Aires 375; Email: it.info@aise.eu

Producer and manufacturing address AISE aisebl, Blvd du Souverain 165, 1160 Brussels, Belgium

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12345678 A123

Option 1 label

A·I·S·E

Option 1 label all CLP/GHS content but safe-use icons replacing some precautionary statements, whenever possible: “Keep away from children”, “Eye hazard”, “Ingestion hazard”. “Eye exposure hazard” (modified).

OPTIONAL FOR TOUGH STAINS

Scrub

Spread

20°C 30°C 40°C 60°C 95°C

1 4.5 kg

(FR) eau douce et moyenne (IT) acqua dolce e di media durezza (ES) agua blanda y media (PT) água macia e média	50 ml	65 ml	100 ml
(FR) eau dure (IT) acqua dura (ES) agua dura (PT) água dura	65 ml	80 ml	115 ml

(FR) * En application de la convention entre le Ministère de l'Environnement et l'Association des Détergents, afin d'obtenir les meilleurs résultats de lavage sans gaspillage et sans apport superflu à l'environnement, informez-vous sur la dureté de votre eau (°F= degrés français) et suivez attentivement le mode d'emploi. Commandez le bouchon doseur: (IT) * Dose correttamente. Ordinare il tappo dosatore su: (ES) * Dosifique correctamente. Pida el tapón de dosificación: (PT) * Dosei corretamente. Peça a tampa dosadora: www.superlaundry.info

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Prelavaggio • Pre-lavagem • Laine / Soie • Lana / Seta • Lana / Seda • Lã / Seda • Sèche-linge • Asciugatrice • Secadora • Secador

! (Hazard pictogram)

Eye hazard pictogram

Ingestion hazard pictogram

(FR) Lessive liquide. Attention. Provoque une sévère irritation des yeux. En cas de consultation d'un médecin, garder à disposition le récipient ou l'étiquette. (IT) Detersivo liquido. Attenzione. (ES) Detergente para ropa liquido.

Provoca grave irritazione oculare. In caso di consultazione di un medico, tenere a disposizione il contenitore o l'etichetta del prodotto. **Atención.** Provoca irritación ocular grave. Si se necesita consejo médico, tener a mano el envase o la etiqueta. En caso de accidente, consultar al Servicio Médico de Información Toxicológica. Teléfono: 915620420 (PT) Detergente para a roupa liquido. Atenção. Provoca irritação ocular grave. Se for necessário consultar um médico, mostre-lhe a embalagem ou o rótulo.

UFI KMTT-DSP3-7FD7-6RWY (www.info-aise.eu)

(FR) Peut produire une réaction allergique: (IT) Può provocare una reazione allergica: (ES) Puede provocar una reacción alérgica: (PT) Pode provocar uma reação alérgica: **Alpha-Isomethyl Ionone**, Geraniol, Protease, Citronellol, Linalool, Agua, Sodium C10-13 Alkyl Benzenesulfonate, Sodium Citrate C12-14 Parath-7, C14-15 Parath-n, Sodium Palm Kernelate, Propylene Glycol, MEA Dodecylbenzenesulfonate, Co-polymer of PEG / Vinyl Acetate, Alcohol, Parfum, Sulfated Ethoxylated Hexamethylenediamine Quaternized, Sodium C12-15 Parath Sulfate, Sodium Laureth Sulfate, Sodium Cumenesulfonate, Sodium Diethylenetriamine Pentamethylene Phosphonate, Hydrogenated Castor Oil, PEG/PPG-10/2 Propylheptyl Ether, Fluorescent Brightener 9, Sorbitol, Sodium Hydroxide, Tripropylene Glycol, Sodium Formate, Calcium Chloride, Sodium Chloride, Ethanolamine, Amylase, Benzisothiazolinone, Lyase, Colorant, Dimethicone, Methylisothiazolinone, Mannanase, Hydroxyethylcellulose, Dimethiconol, PEG-2 Stearate.

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(FR) Distributeur: AISE France SA, Paris, Ave. du Saven 43; Email: info-france@aise.eu (IT) Distributore: AISE Italia, Corso Buenos Aires 375; Email: it.info@aise.eu (ES) Distribuidor: AISE España, Madrid, Plaza de Castilla 3; Email: espana@aise.eu (PT) Distribuidor: AISE Portugal, Lisboa, R. Dom Pedro V 723; Email: pt.info@aise.eu

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Option 2 label

Very simplified execution not in compliance with GHS (expert judgment):

- Focus on most relevant safe use messages for the consumer.
- Visual cue “ALLERG” as hook to list allergens.
- Poison centre telephone.
- Allergen phrase EUH208
- Larger safe use icons (4x) “Keep away from children” and “Eye hazard”;
- Full info on website.

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Spread

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2

(FR) * En application de la convention entre le Ministère de l'Environnement et l'Association des Détergents, afin d'obtenir les meilleurs résultats de lavage sans gaspillage et sans apport superflu à l'environnement, informez-vous sur la dureté de votre eau (°F= degrés français) et suivez attentivement le mode d'emploi. Commandez le bouchon doseur: (IT) * Dose correttamente. Ordinare il tappo dosatore su: (ES) * Dosifique correctamente. Pida el tapón de dosificación: (PT) * Dosei corretamente. Peça o tampo doseadora: www.superlaundry.info

Prélavage • Prelavaggio • Prelavado • Prê-lavagem

Laine / Seta • Lana / Seta • Lana / Seda • Lã / Seda

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ALLERG

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0800 1234 5678

Alpha-isomethyl ionone, Benzisothiazolinone, Methylisothiazolinone, Citronellol, Geraniol, Linalool. (FR) Peut produire une réaction allergique. (IT) Può provocare una reazione allergica. (ES) Puede provocar una reacción alérgica. (PT) Pode provocar uma reação alérgica.

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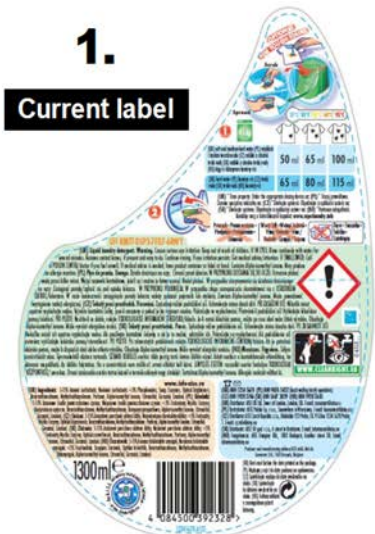
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Best label for consumers

- 500 consumers were shown the three label options and were asked to select their preferred option.
- Consumers mentioned the reasons for their preference
- Respondents clearly did not like crowded labels

And the winner is.....



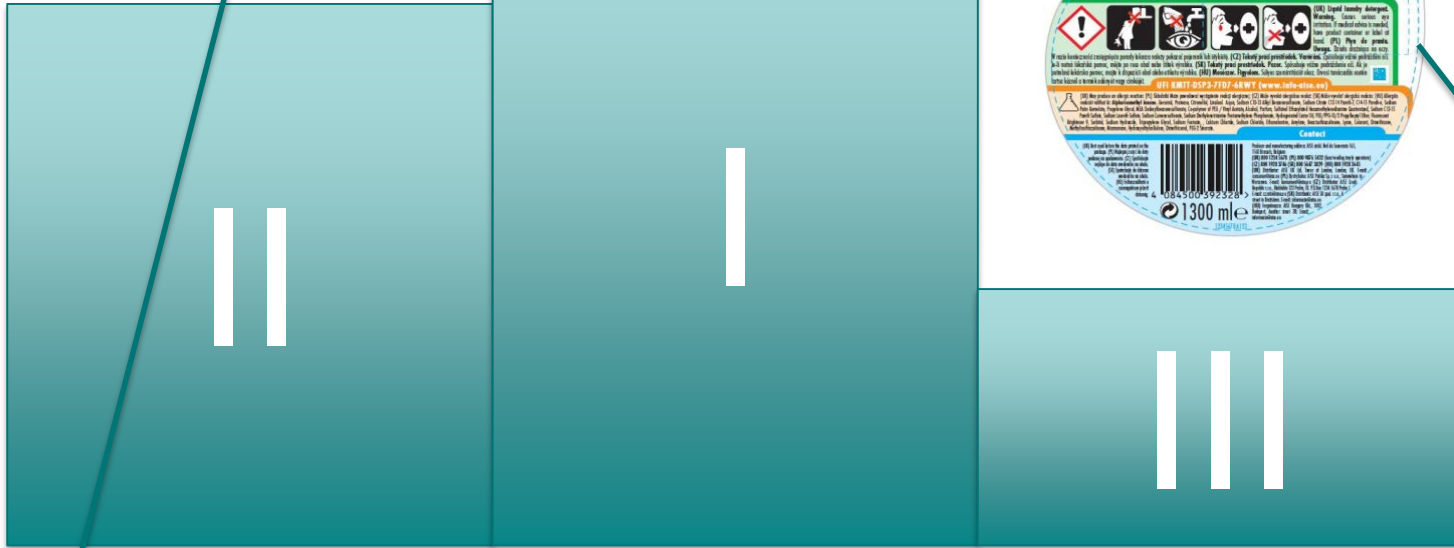
Consumer Preference



Alt. label 1 - 44 % a lot of Information AND easy to understand



Current label - 17% the most information

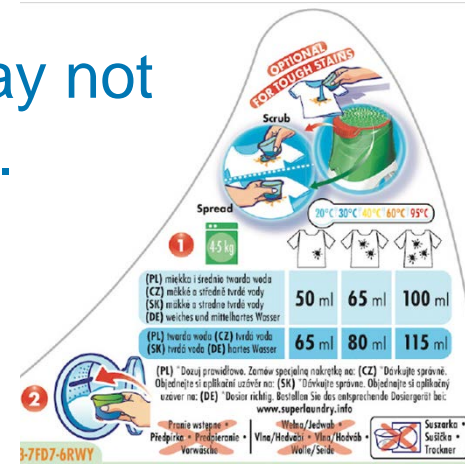


Alt. Label 2 36% easy to understand and the other options are too complicated

Main findings: best label for consumers



- **Consumers prefer the simpler label** (Option 1 and 2 labels best options).
- About 2/3 claimed to always read safety instructions.
- On average **22-23 seconds** were used to read the label (no difference between executions): clearly not enough time to read the content of the labels.
- However, consumers still want to have available sufficient information (via label and media Eurobarometer 2017). Even though they may not actually read or use it very much in practice.



Specific finding: Ingredients list



Reduced ingredients list



- The presence of an ingredient list was noticed only by 6% to 10% (n=1800, specific to EU).
- 83% to 89% had no idea what was on the label regarding the composition or ingredients of the product .
- **None of the ingredient list options had been adequately studied** and been well understood by the panellists.



Specific findings: Good storage practice



Keep away from children

- When asked where to store the product, over half of them (55-61%) reported that they should keep this product out of the reach of children (n=1800).
- However, only 9-19% remembered it from the label.
- **Basic safe use practice is probably driven more by priori knowledge and experience** than based on what they had seen on the label.





In case of an accident (splashed in the eye) - I



- Rinse the eye about 80%, call a doctor about 21%.
- Only 2 to 3% would consult the label in case of an accident.
- **Past experience** and **emotional behaviour take priority over safety instructions provided via the label in an emergency.**
- Consumer attention can be diverted by too much information on a label regarding all potential hazards. (aligned with EU Commission and ECHA findings 2012).





In case of an accident (splashed in the eye) - II



- When asked afterwards, 87% confirmed usefulness of the label information in case of an accident.
- **Respondents welcome the idea** that useful information on first emergency measures is contained on the label; but in a real emergency general experience takes priority (e.g. wash your eyes, consult a doctor etc.) and **do not actually consult the label.**



Key findings on consumer label elements



- Simpler label (less text, key basic safe use information, etc.) are preferred by consumers;
- The principle “the more information the better” does not really work for consumers (short attention);
- Safe use icons/precautionary pictograms are useful and generally better understood than text;
- Respondents welcome the idea that useful information on label is available; but in a real emergency general experience takes priority (e.g. wash your eyes, consult a doctor etc.) and do not actually consult the label.



Comprehension of icons and GHS pictograms



GHS Annex VI Comprehensibility Testing Methodology (n=1800)



- Open question: “what does this pictogram mean ?”
- Coding of the free-text responses:
 - Correct (exact or intended hazard meaning) = acceptable
 - Partly correct: insufficient to drive safe use,
 - Incorrect and Opposite meaning = not acceptable



GHS approach for comprehension studies is much stricter than multiple-choice questions (e.g. Eurobarometer surveys).



Comprehension of icons and pictograms

Benchmark: established CLP/GHS pictograms



Hardly ever linked
to Eye hazard



“Corrosive” was well understood 54% BUT!



Environmental hazard
Overall satisfactory! 62%

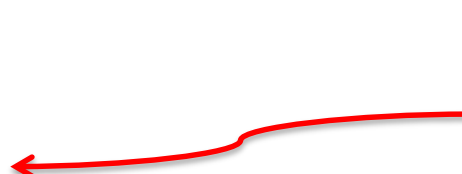


Rarely understood 3%,
not associated with eye hazards.

Benchmark:
ANSI Z535 3 & ISO 9186
successful comprehension > 85%
and critical confusion < 5%.

Comprehension of icons and pictograms

Key AISE icons better understood than GHS benchmarks



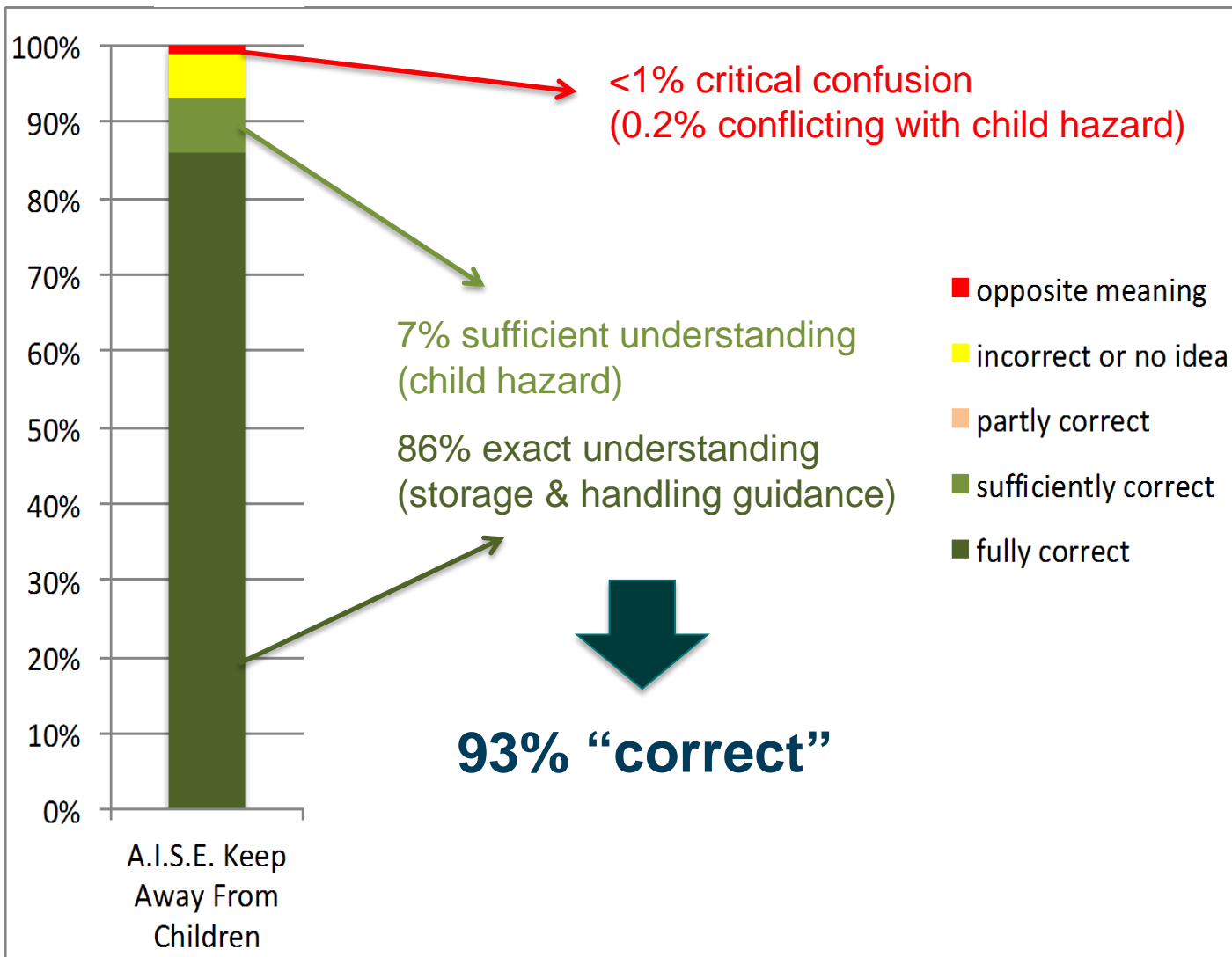
very good understanding



Most consumers understand the hazard message, but do not spontaneously provide the consequent message of the safe-use phrase

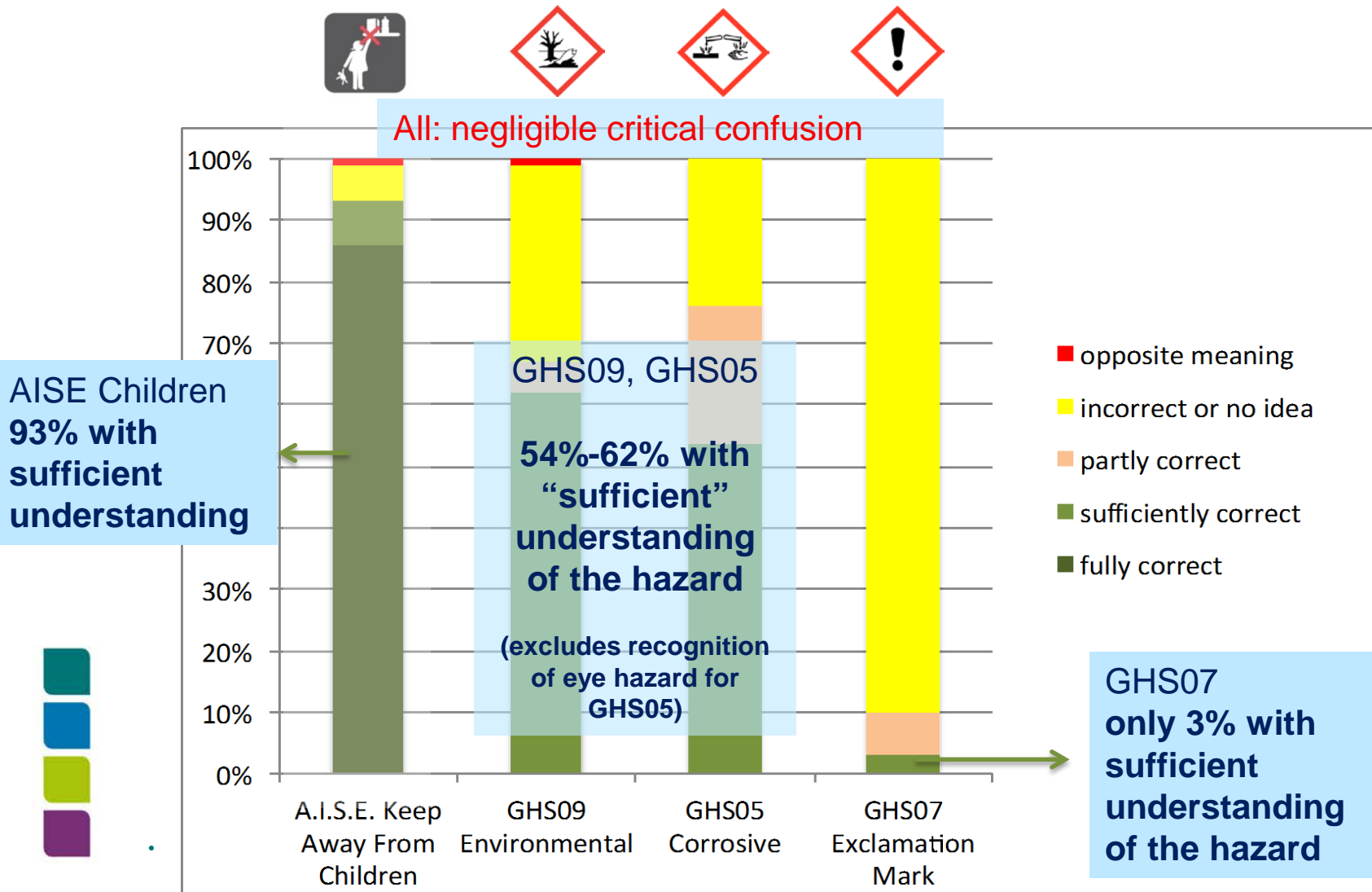


Results



Comprehension of icons and pictograms

AISE Children Icon relative to GHS benchmarks







Benchmark: GHS pictograms



- ✓ A.I.S.E. “Keep Away From Children” pictogram has a very high level of consumer understanding (93%)
- ✓ GHS pictograms from moderately good understanding (environmental 62%, corrosive 54%) to very poor understanding (exclamation 3%). “Corrosive” was nearly never associated with eye hazard !
- ✓ Taking into account the stricter methodology, A.I.S.E. findings are in line with Eurobarometer 2011 and 2017:

	AISE 2017	EB 2011	EB 2017
 Environmental	62%	76%	83%
 Exclamation	3%	11%	17%



A.I.S.E. Consumer Research 2017

Summary of Main Findings



Limited effectiveness of GHS labels

GHS labels are not very effective at informing about safe use and hazards for general public (full phrases are not more effective than icons in this respect).

Consumer preference for information in a simpler form

Consumers want the label to provide information BUT they spend insufficient time to read it (Preference for graphical alternatives over text).

Key safe use icons are well understood

especially the A.I.S. E. “Children” icon, better understood than benchmark GHS pictograms.



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