



European
Commission



CASP2021

Coordinated Activities
on the Safety of Products

Personal
protective
equipment



Final
Report

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List of abbreviations

ABBREVIATION	DESCRIPTION
CASP	Coordinated Activities on the Safety of Products
EEA	European Economic Area
EISMEA	European Innovation Council and SMEs Executive Agency
EN	European Standard
EO	Economic operator
EU	European Union
DG JUST	Directorate-General for Justice and Consumers
GPSD	General Product Safety Directive (2001/95/EC)
LED	Light-emitting diode
MSA	Market surveillance authority
PPE	Personal protective equipment
PPE Regulation	Regulation (EU) 2016/425 on personal protective equipment
PSA	Product-specific activity
RAG	Risk Assessment Guidelines
RAPEX Guidelines	Decision (EU) 2019/417

Executive summary

Objectives of the activity

The Coordinated Activities on the Safety of Products (CASP) projects enable all the market surveillance authorities (MSAs) of European Union (EU)/European Economic Area (EEA) countries to cooperate in reinforcing the safety of products placed on the European Single Market. This activity focused on four categories of personal protective equipment (PPE). The products were sampled and tested following commonly agreed criteria in a single European laboratory selected by the participating MSAs.

Product scope

1. helmets for pedal cyclists and for users of skateboards or roller skates (for both adults and children);
2. children's helmets for recreational activities in environments which have proven risks of head injuries in combination with risk of strangulation;
3. visibility accessories for non-professional use with and without light-emitting diode (LED) lights;
4. visibility clothing for non-professional use.

Main testing criteria

- European Standard (EN) 1078:2012+A1:2021 – Helmets for pedal cyclists and for users of skateboards or roller skates;
- EN 1080:2013 – Children's helmets for recreational activities in environments which have proven risks of head injuries in combination with risk of strangulation;
- EN 13356:2001 – Visibility accessories for non-professional use;
- EN 1150:1999 – Visibility clothing for non-professional use.

Results

- Number of products tested – 131:
 - 70 helmets for cycling, skateboarding and roller skating;
 - 2 children's helmets for recreational activities;
 - 41 visibility accessories with and without LED lights;
 - 18 items of visibility clothing;
- A total of 91 (69%) samples met the testing requirements;
- A total of 40 (31%) samples did not meet at least one of the testing requirements;
- The visibility clothing product category had a considerably higher failure rate (61%) than the other product categories;
- A total of 85% of the samples did not meet the requirements on warnings, markings and instructions.

Key recommendations

For consumers

Only buy products that have a CE marking and are accompanied with instructions in your language.

Be careful, PPE only offers limited protection. It does not protect against accidents, it only reduces the probability of injuries occurring, or the severity of any injury sustained.

Follow the manufacturer's recommendations concerning how to fit and wear the product.

Report any safety problem identified when using a product and keep yourself informed about recall actions.

For economic operators (EOs)

Check if the PPE placed on the market complies with the requirements of Regulation (EU) 2016/425 (PPE Regulation). You can ask for further guidance from the Commission and your MSA.

A declaration of conformity should accompany each item of PPE, or a link to the web page containing this declaration should be included in the instructions for users.



Conclusions

The category for which most samples did not meet the relevant requirements was visibility clothing. Users of PPE might be given a false sense of security when the products do not comply with the requirements of the applicable standards.

Risk assessments performed by the MSAs showed that 9 samples presented a serious risk, 11 presented a high risk and 6 presented a medium risk.

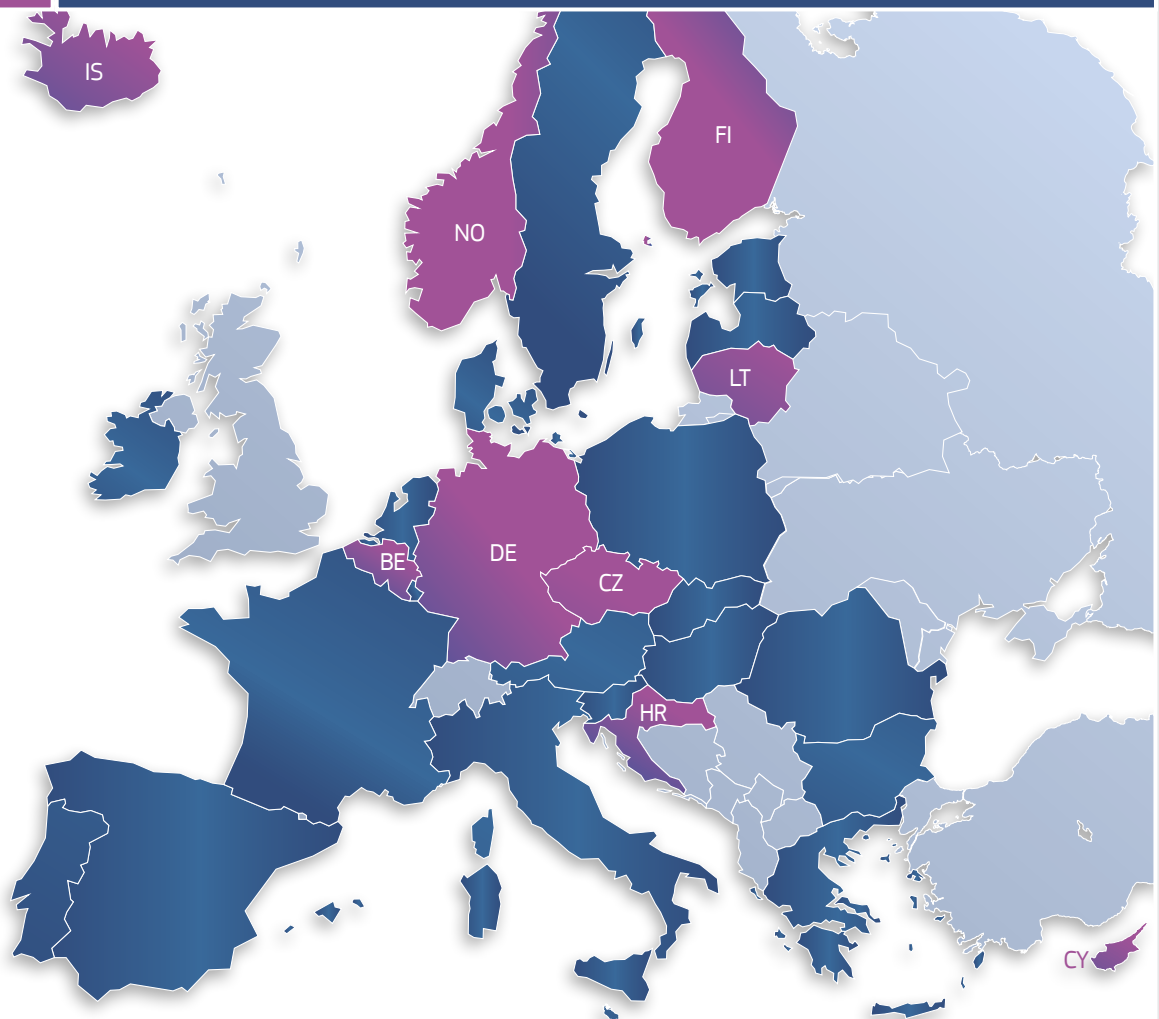
Among the main measures taken regarding products that did not meet the requirements, 5 products were recalled from the market and 13 were withdrawn.

1. Overview of the activity

1.1 Participating MSAs

A total of 10 MSAs from 7 EU Member States and 2 EEA countries participated in the PPE product-specific activity (PSA), as illustrated in the image below.

COUNTRY	MSA
Belgium	Federal Public Service Economy - Directorate General Quality and Safety
Croatia	State Inspectorate
Cyprus	Department of Labour Inspection
Czechia	Czech Trade Inspection Authority
Finland	Finnish Safety and Chemicals Agency
Germany	District Government of Düsseldorf Government of Upper Bavaria - Trade Inspectorate
Iceland	The Housing and Construction Authority
Lithuania	State Consumer Rights Protection Authority
Norway	Norwegian Directorate for civil protection



1.2 Product scope and testing criteria

1.2.1 Product scope



HELMETS FOR PEDAL CYCLISTS AND FOR USERS OF SKATEBOARDS OR ROLLER SKATES (FOR BOTH ADULTS AND CHILDREN)

Helmets for pedal cyclists and users of skateboards or roller skates are designed to offer protection to the user's head during impact with the ground after a fall. These helmets feature a shell, liners (softer pads on the inside), and a retention strap fitted along the lower jaw area.



CHILDREN'S HELMETS FOR RECREATIONAL ACTIVITIES IN ENVIRONMENTS WHICH HAVE PROVEN RISKS OF HEAD INJURIES IN COMBINATION WITH RISK OF STRANGULATION

Children's helmets for recreational activities in environments that have proven risks of head injuries in combination with the risk of strangulation have a weaker retention system (always green) that releases on its own when a force greater than 90 Newtons is applied.



VISIBILITY ACCESSORIES WITH AND WITHOUT LED LIGHTS

Visibility accessories increase the visibility of the users in settings with very low ambient lighting. Typical non-professional users of visibility accessories are cyclists, motorcyclists, pedestrians, runners, school-children, horse riders, etc.



VISIBILITY CLOTHING FOR NON-PROFESSIONAL USE

Visibility vests are intended to signal the user's presence visually in any daylight condition and, when illuminated by vehicle headlights, search lights or street-lamps, in the dark. Visibility vests in the scope of this activity were warning vests for adults and children not intended for professional use, in the fluorescent colours specified by the standard (green, yellow-green, yellow, yellow-orange, orange, orange-red, red and pink).

1.2.2 Testing criteria

The final testing plan, commented and approved by the MSAs, is summarised below.

- **EN 1078:2012+A1:2021** – Helmets for pedal cyclists and for users of skateboards or roller skates: shock absorbing capacity, strength, effectiveness, lateral/rotational tests.
- **EN 1080:2013** – Impact protection helmets for young children: shock absorbing capacity, release force affecting the retention system, colour, lateral/rotational tests.
- **EN 13356:2001** – Visibility accessories for non-professional use: general requirements (minimum area of retroreflective material), photometric requirements for new samples for observation and entrance angles, and LED tests (luminance and colour of LED light).
- **EN 1150:1999** – Visibility clothing for non-professional use: minimum area of background and retroreflective materials, chromaticity coordinates and luminance factors for new background materials and materials exposed to ultraviolet radiation.

In addition to the laboratory testing, the MSAs also checked the accompanying warnings, markings and instructions in their own languages.



2. Sampling and testing

2.1 Sampling distribution and channels

The sampling was carried out on the basis of a pre-selection by each of the MSAs, in line with the peculiarities of each market.

The MSAs decided how to distribute the total number of samples available between the four product categories and whether to sample products from all product categories or not. The samples were collected both online and in physical shops.

The MSAs collected 131 samples and sent them to the laboratory for testing:

- 70 helmets (adult and children's) for pedal cyclists and users of skateboards or roller skates;
- 2 children's helmets for recreational activities with risk of strangulation;
- 41 visibility accessories;
- 18 items of visibility clothing.

Table 1 - Sampling distribution

COUNTRY	MSA	Helmets (adult and children's) for pedal cyclists and users of skateboards or roller skates	Children's helmets for recreational activities with risk of strangulation	Visibility accessories	Visibility clothing	Total
Belgium	Federal Public Service Economy – Directorate General Quality and Safety	11	0	3	1	15
Croatia	State Inspectorate	7	0	0	0	7
Cyprus	Department of Labour Inspection	6	0	0	0	6
Czechia	Czech Trade Inspection Authority	10	0	0	0	10
Finland	Finnish Safety and Chemicals Agency	0	0	12	0	12
Germany	District Government of Düsseldorf	10	0	7	4	21
	Government of Upper Bavaria – Trade Inspectorate	7	0	5	1	13
Iceland	Housing and Construction Authority	7	0	5	4	16
Lithuania	State Consumer Rights Protection Authority	8	0	6	5	19
Norway	Norwegian Directorate for Civil Protection	4	2	3	3	12
Total		70	2	41	18	131

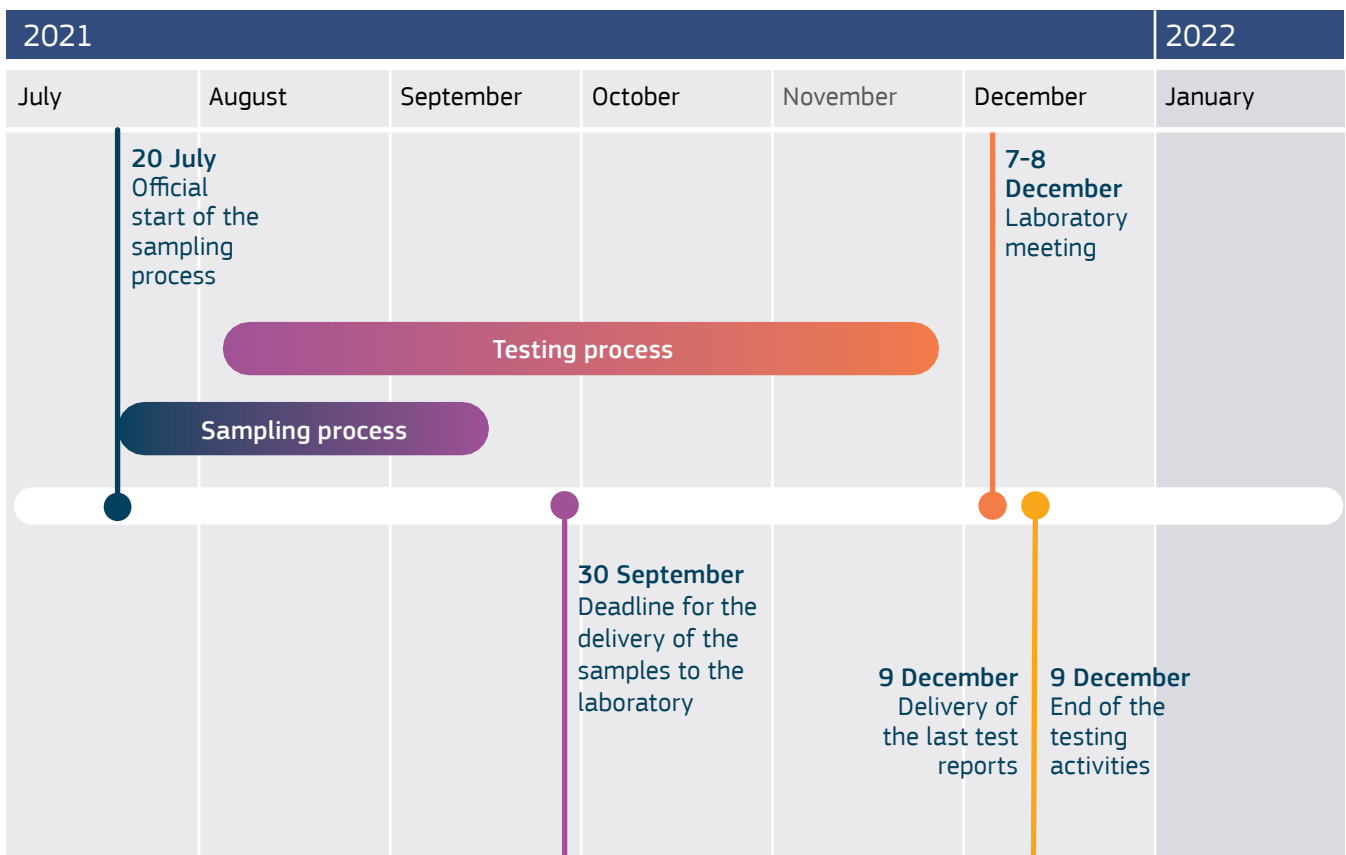
The MSAs chose their preferred sampling channels and collected the products both online and from physical shops. The majority of samples (67%) were collected in physical shops.

2.2 Testing process

Thanks to extensive desk research, 57 accredited laboratories located in the EU and EEA were identified. The project team prepared tender specifications and invited the laboratories to submit offers. The MSAs were presented with comparative analyses of the technical suitability and the financial offers of the nine laboratories that answered the call. The MSAs selected the laboratory that received the highest points in terms of technical quality; it had the accreditation and capacity needed to perform all the requested tests and the pricing was competitive.

The MSAs had 2.5 months to collect the samples and send them to the laboratory. The testing process was completed on 9 December; the laboratory meeting took place on 7 and 8 December 2021 (in a hybrid format¹).

Figure 1 - Timeline of the sampling and testing process



¹ Members of the Contractor’s team and the representatives from the Directorate-General for Justice and Consumers (DG JUST) were present at the laboratory’s premises with the audio-visual team, while the MSAs joined the meeting via Zoom.

3. Test results

3.1 Overview of the test results and main findings

A total of 91 out of the 131 samples tested by the laboratory met all the requirements defined in the final testing plan, as shown in the graph below. The remaining 40 samples did not meet at least one of the requirements.

Figure 2
Overall test results (N=131)

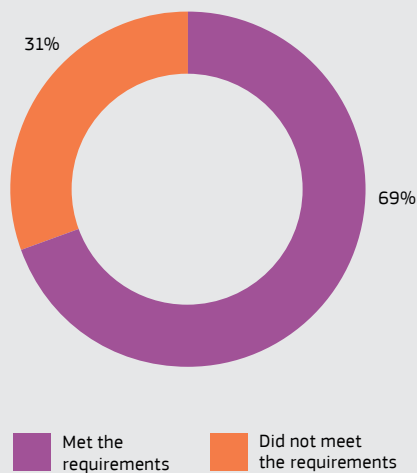
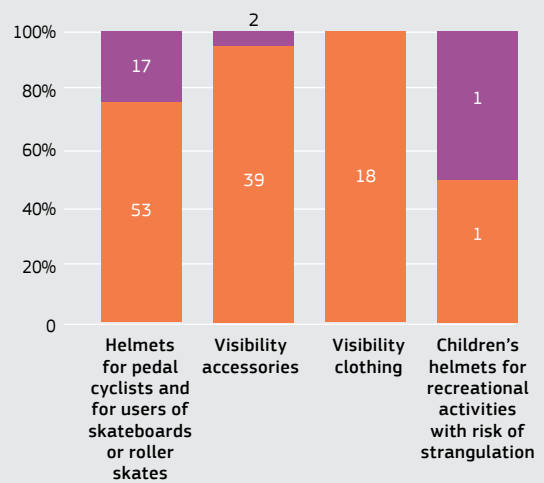


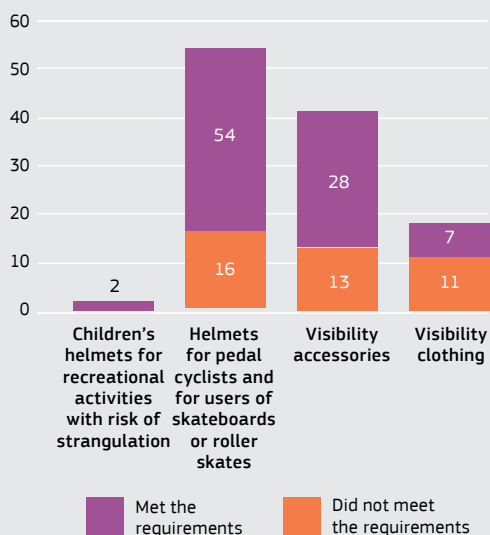
Figure 3
Results of the warnings, markings and instructions checks (N=131)



The MSAs performed checks on warnings, markings and instructions in their national languages: 85% of the samples did not meet the requirements.

3.2 Results per product type

Figure 4
Test results per product category (N=131)



The product category with the most samples that did not meet at least one of the requirements of the testing protocol was visibility clothing (61%), followed by visibility accessories (32%) and helmets for pedal cyclists and users of skateboards or roller skates (23%). All the 14 samples with LED lights that were tested met the requirements.

The test results per clause for each product category are illustrated in the graphs below.

Figure 5 - Test results per clause: EN 1078:2012+A1:2021 – Helmets for pedal cyclists and for users of skateboards or roller skates; and lateral test results

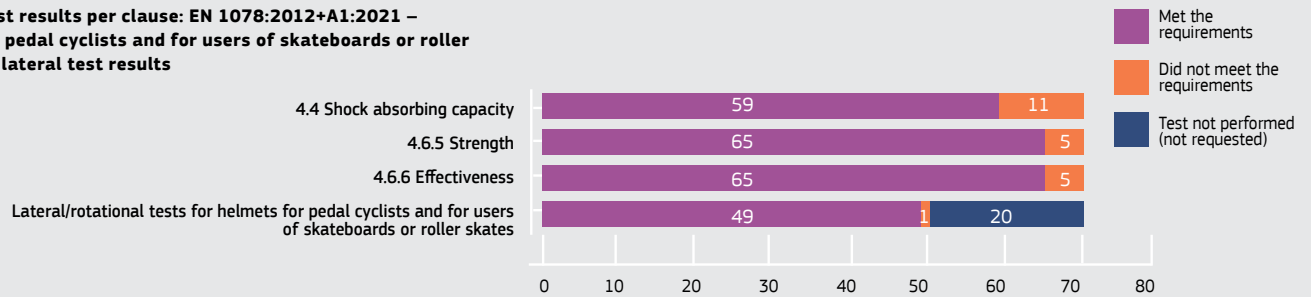


Figure 6 - Test results per clause: EN 1080:2013 – Children’s helmet for recreational activities with risk of strangulation; and lateral/rotational test results

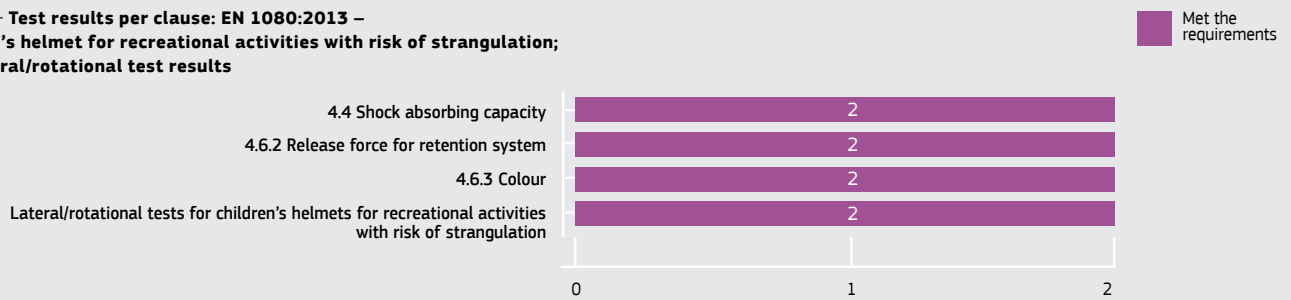


Figure 7 - Test results per clause: EN 13356:2001 – Visibility accessories; and LED lights test results

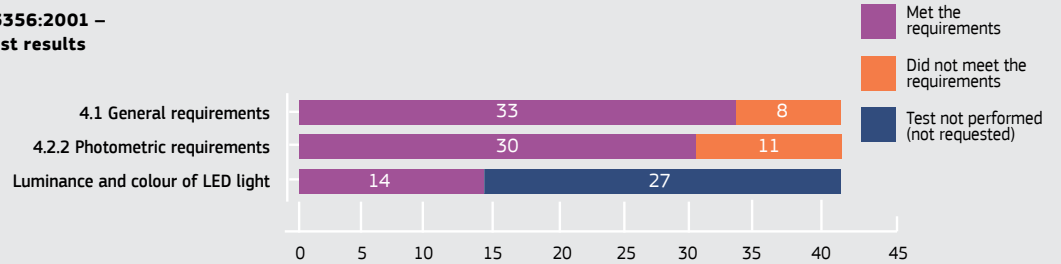
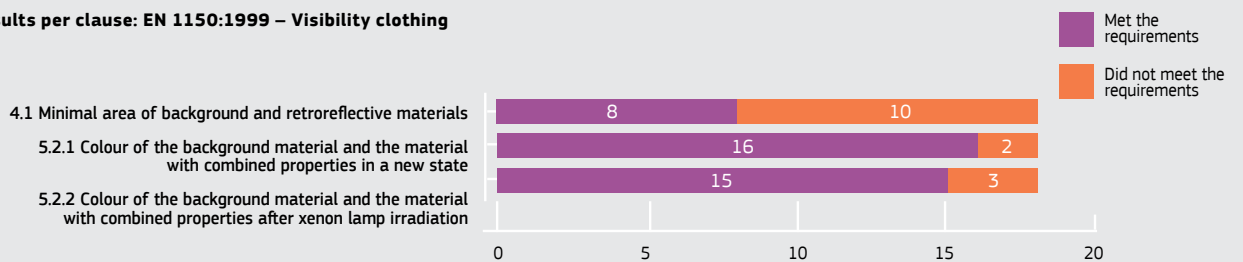


Figure 8 - Test results per clause: EN 1150:1999 – Visibility clothing



3.3 Results per retail channel

The testing revealed no differences between the products sampled from the different retail channels.

3.4 Conclusions on the test results

The results of the tests performed show that more than 25% of the products tested in this activity have safety issues, not only in relation to improper markings and incorrect or insufficient information but also regarding key safety failures identified using the test parameters. The results of the laboratory tests showed that 40 out of the 131 tested products (31%) did not fulfil at least one of the essential safety requirements set out in the harmonised standards (e.g. regarding the shock absorbing capacity of helmets or the visibility levels of visibility clothing and accessories).

Visibility clothing

The results of the tests for visibility clothing for non-professional users showed that 11 out of the 18 samples collected (61%) did not meet the relevant requirements. The main reason was that the area covered by the background material or the retroreflective material was too small.

Visibility accessories

The results of the tests for visibility accessories showed that 13 out of the 41 collected samples (31%) did not meet the relevant requirements. All the 14 samples with LED lights that were tested met the requirements of the testing protocol established by the laboratory (regarding colour and luminance).

Helmets for cycling/skateboarding/roller skating (for both adults and children) and helmets for young children intended for use during recreational activities in environments that have been proven to pose risks of head injuries in combination with strangulation

The results of the tests showed that 16 of the helmets (for both adults and children) out of the 70 samples collected (23%) did not meet the essential safety requirements. The results of the tests on children's helmets are particularly concerning due to the greater likelihood of accidents for this age group and the severity of head injuries.

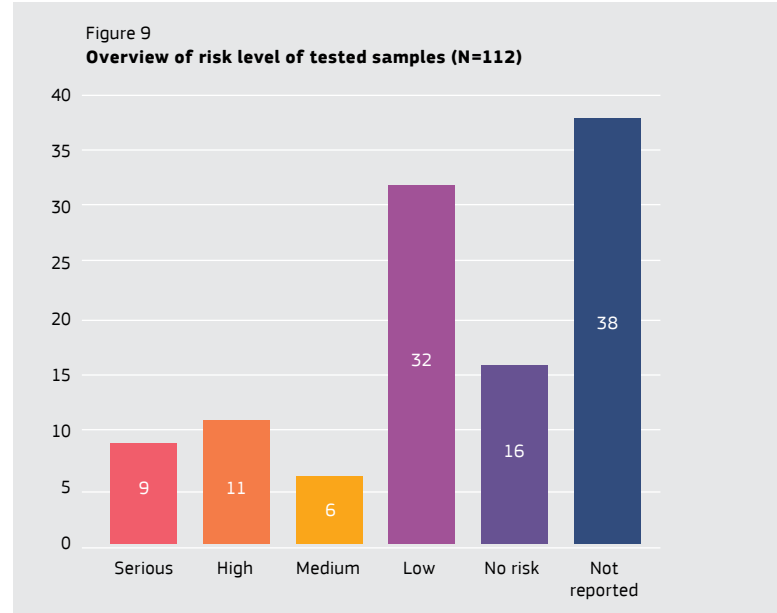


4. Risk assessment and measures

4.1 Risk assessment results

According to the PPE Regulation², PPE shall only be made available on the market if, when properly maintained and used for its intended purpose, it complies with this Regulation and does not endanger the health or safety of persons, domestic animals, or property. When assessing whether a product poses a risk, the approach must be based on Decision (EU) 2019/417³ (the RAPEX Guidelines). To develop the risk assessments, the MSAs used the Risk Assessment Guidelines (RAG) tool⁴ managed by the European Commission.

Figure 9 shows the risk levels (based on the risk assessments performed by the MSAs) of the samples that did not meet the requirements.

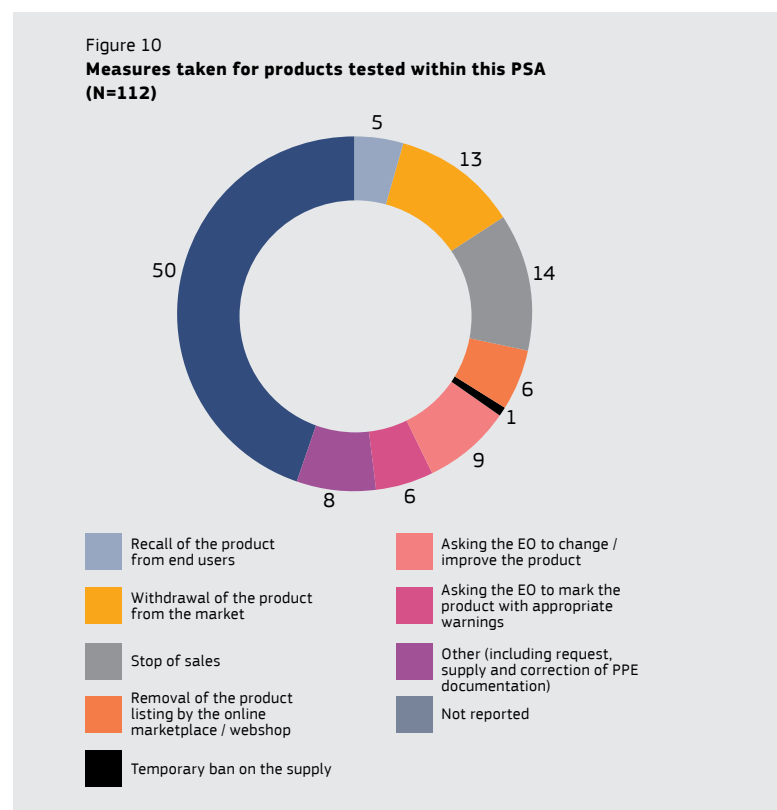


4.2 Corrective measures taken

Based on the test results and the risk assessments performed, the MSAs decide which corrective measures have to be taken regarding the products that do not comply with EU legislation and/or the applicable standards designed to stop dangerous products from appearing on the Single Market. Figure 10 illustrates the main measures taken.

Furthermore, when a serious risk is identified, MSAs are legally obliged to submit a notification in Safety Gate (pursuant to Article 12.1 of the GPSD). The RAPEX Guidelines⁵ also recommend submitting notifications on measures taken against products posing a less than serious risk.

Following the actions triggered by the joint testing campaign, as of 1 April 2022, three products were subject to Safety Gate notifications and notifications for another five products are pending.



² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R0425>

³ <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019D0417&from=EN>

⁴ <https://ec.europa.eu/rag/#/screen/home>

⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3A4390682>

5. Conclusions and recommendations

5.1 Conclusions

A total of 31% of the samples tested did not meet the requirements of the applicable standards. A much higher number of samples of visibility clothing did not meet the relevant requirements (61%) compared to the other product categories.

There is a large amount of PPE on the EU market that does not meet the requirements regarding warnings, markings and instructions.

Manufacturers should improve their products in order to protect EU consumers from PPE that does not meet the relevant requirements and could give a false sense of security to users.

MSAs issued three Safety Gate notifications based on the outcome of this PSA (another five notifications are pending) and asked the economic operators to stop selling the products that were assessed as posing a serious, high or medium risk, recall or withdraw them from the market, and remove the relevant listings on online market places/web shops.



5.2 Recommendations for stakeholders

The following recommendations are based on the outcomes of the testing process and discussions among MSAs during the project.

For consumers

Warnings, markings and instructions. Only buy products with a CE Mark and pay particular attention to the accompanying warnings and markings. These should be available in the national languages of the country of sale.

Use of products. Read the instructions supplied with the PPE carefully so the product can be used safely. PPE only offers limited protection. It does not fully protect against accidents, but it reduces the probability of injuries occurring, or the severity of any injury sustained.

Recalls and reporting safety problems. Be aware of where information about recalled products can be found and react when you are contacted as part of a recall. Check for updates regularly in the Safety Gate system (which contains information on recalled or banned products). Stop using a recalled product immediately and follow recall instructions. Any safety issue identified should always be reported to the relevant MSA as well as the manufacturer or retailer.

For EOs

The declaration of conformity must be available for each item of PPE. All PPE must meet the essential health and safety requirements set out in the PPE Regulation (by being tested against the harmonised standard that corresponds to the purpose of use declared by the manufacturer). If guidance is needed, the Commission and the MSAs are available.

Check that your products are not counterfeit. As a responsible business, you should take the time needed to verify that the products you supply are not counterfeit. You must check the markings and the declaration of conformity to verify that they meet the European safety requirements for the product. The PPE must carry the CE Mark. The CE Mark indicates that the EU-type examination procedure has been performed and that the product meets the essential health and safety requirements. In addition, all PPE should be marked with the manufacturer's name and address, type, model or serial number and batch number so that it can be properly identified.

Recalls. Clearly communicate with consumers on how they should register the products they purchase so they will receive information about recall actions. Make recall notices clear and accessible, and always indicate the hazards posed by the product. Regularly monitor the impact of a recall and adjust the strategy accordingly.

For standardisation organisations

LED testing. Many visibility accessories available to consumers contain LED lights. However, there are no standards that deal with this type of product. The standard for visibility accessories (EN 13356) should be revised to include requirements for LED lights, or a new standard should be developed.

For European and national authorities

Keep PPE under surveillance. In light of the large number of samples that did not meet the requirements of the laboratory tests or failed the checks on warnings, markings and instructions, PPE should be kept under surveillance and economic operators should be provided with guidance on the relevant documentary requirements.

The reference to the standard given in the declaration of conformity must correspond to the scope of the product's application. If the standard used by the manufacturer to assess the product's conformity (certification) does not match the scope of the product's application, to assess the safety of the product for consumers, MSAs shall perform tests against the standard designed to govern the declared purpose of use.

Harmonised guidelines for visibility accessories.

Harmonised guidelines are required for the classification of visibility products made of reflective/fluorescent material and/or LEDs in order to establish a common understanding about which kind of products are PPE and which are not.

1. What is CASP?

The Coordinated Activities on the Safety of Products (CASP) enable Market Surveillance Authorities (MSAs) from EU/EEA countries to cooperate and to reinforce the safety of products placed on the Single Market.

Product-specific activities (PSAs) test different types of products that may pose a risk to consumers. The products are selected and collected by the MSAs involved and are examined using a commonly agreed testing plan.

Horizontal activities (HAs) provide a forum for MSAs to exchange ideas and best practices. Under the guidance of a technical expert, they develop common approaches, procedures and practical tools for market surveillance.

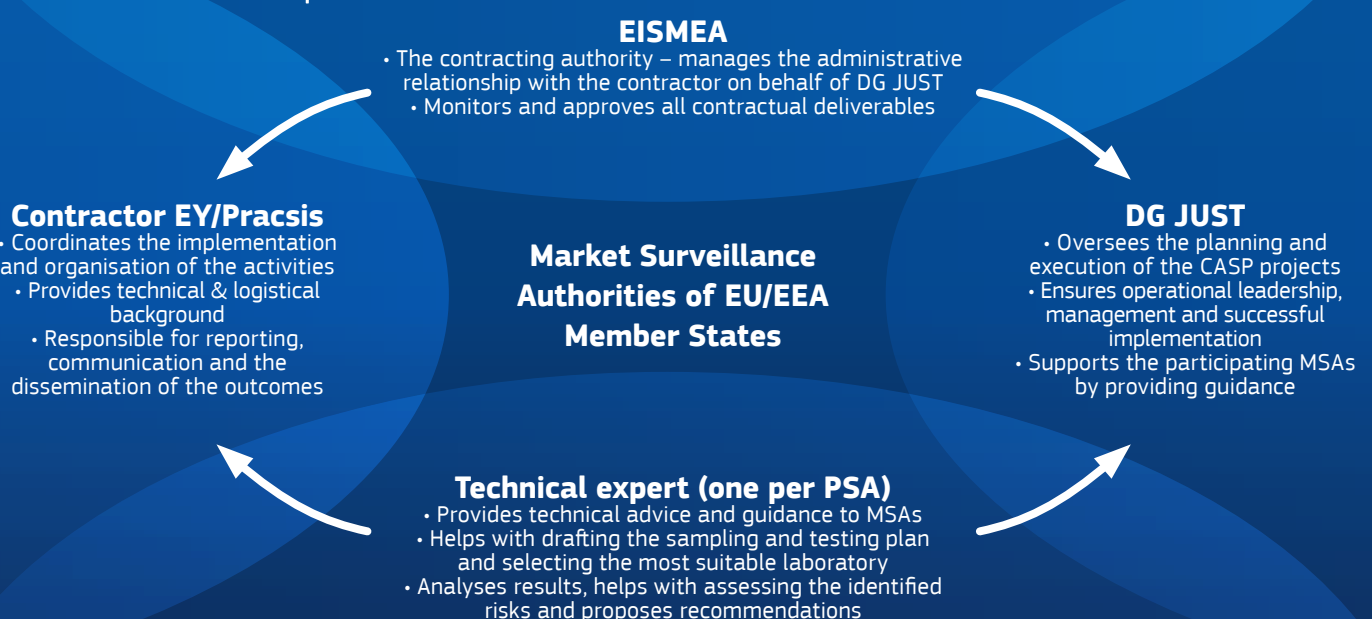
Hybrid activities facilitate horizontal discussions and conduct testing campaigns. The results are used to develop common approaches and methodologies.

CASP 2021 includes five PSAs, three HAs and one hybrid activity. They were pre-selected by the participating MSAs through a consultation organised by DG JUST.

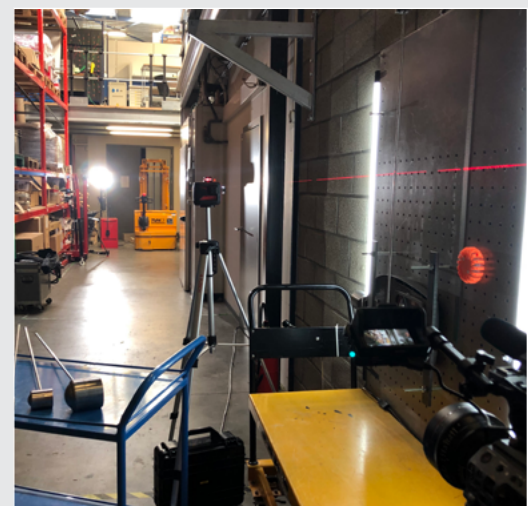
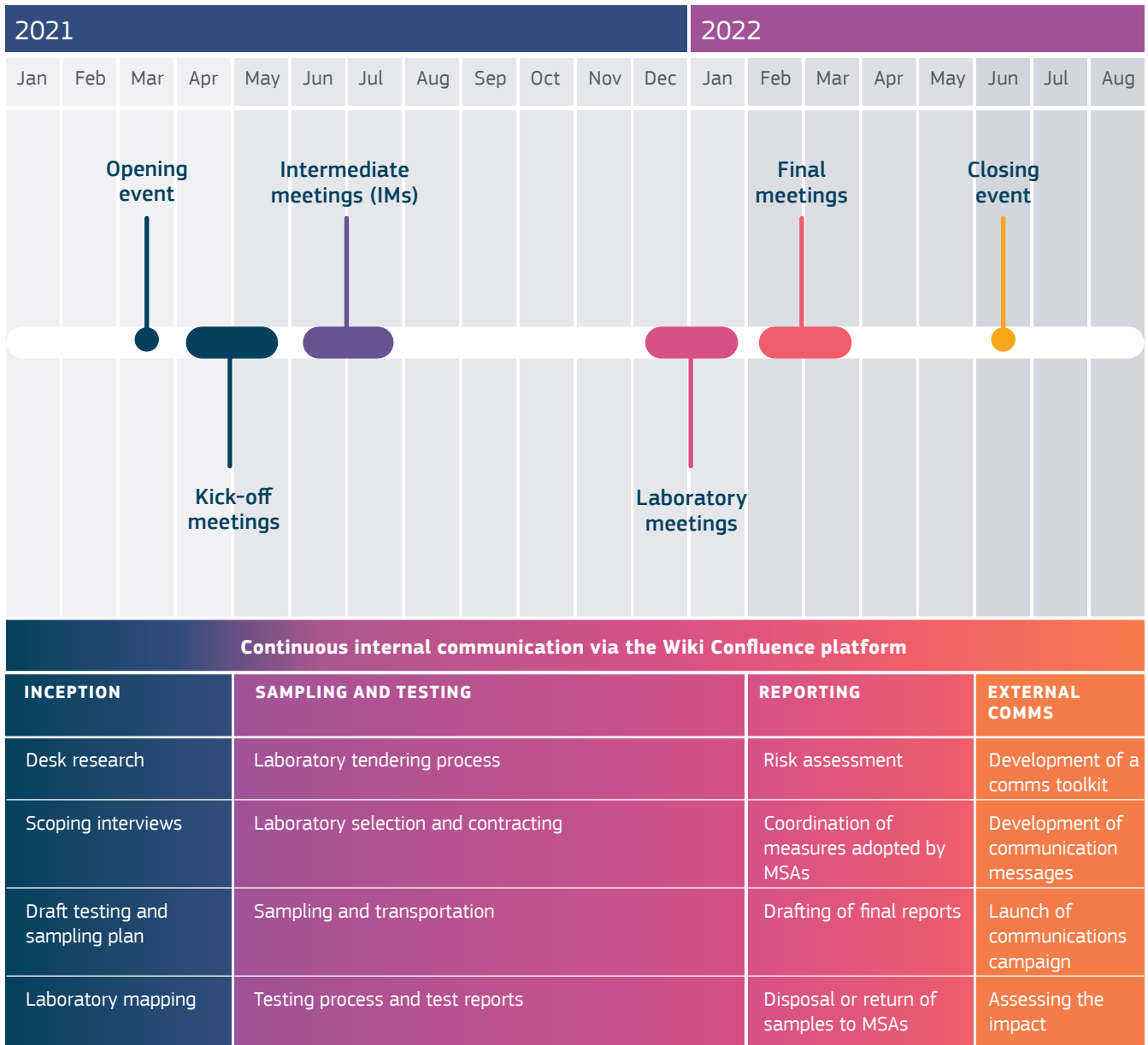
Product-specific activities (PSAs)



Roles and responsibilities



2. PSA work plan



3. PSA Tools & processes



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