PRODUCT SAFETY

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The current corona crisis with its shiploads of rejected medical masks has shown very clearly that it is of vital importance that products (such as masks) meet the required product and health requirements.

Because, being a manufacturer, you are ultimately responsible for the products you bring to market, a good management of product compliance and the processes around it enables you to save time, reduce costs and reduce risks.

Product conformity means that there is proof that your product complies with the essential requirements in the form of the applicable European directives, regulations and harmonised standards.

To imbed product conformity successfully in your organisation, Centexbel-VKC translates complex rules into an understandable approach, subjects your products to relevant tests, advises you on possible design and product improvements and is authorised to issue certificates for certain application areas.

Product conformity in the area of hazardous substances (REACH), where products are manufactured from fibre to finished product in ecological production sites under humane working conditions, is also demonstrated by obtaining an OEKO-TEX® certificate, a voluntary eco-label with a worldwide appearance.

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Together with you, Centexbel-VKC ensures that your product is brought to the consumer in full compliance and safety!

General Product Safety Directive

EU rules on product safety ensure that only safe products are sold on the market. Businesses should only sell products which are safe, and inform consumers of any risks associated with the products they supply. They also have to make sure any dangerous products present on the market can be traced so they can be removed to avoid any risks to consumers.

The General Product Safety Directive complements sector specific legislation such as specific rules that apply to toys, electrical and electronic goods, textiles, PPE, cosmetics, chemicals and other specific product groups. It does not cover pharmaceuticals, medical devices or food, which fall under separate legislation.

Requirements of the GPSD(2001/95/EC)

The GPSD imposes general safety requirements for any product put on the market for consumers or for any product that is likely to be used by them. This also includes all products that provide a service. Second-hand products that have antique value or those that need to be repaired are not subject to this requirement.

According to the GPSD, a safe product does not pose a threat or only a reduced threat, which is in accordance with the nature of its use and which is acceptable in view of maintaining a high level of protection for the health and safety of persons.

A product is considered to be safe once it conforms to the safety provisions in European legislation, or, in the absence of such rules, if it complies with the specific national regulations of the member state where it is being marketed or sold. The product is also considered to be safe if it complies with the European standard established according to the procedures in this GPSD, but a risk assessment report is required. In the absence of such regulations or standards, the product's compliance is determined according to the following:

- Voluntary national standards (transposing other relevant European standards), the Commission's recommendations (setting out guidelines on the assessment of product safety);
- Standards of the member state where the product is being marketed or sold;
- Codes of good practice regarding health and safety;
- The current state of the art;
- The safety expectations of consumers.

Manufacturer and Distributor obligations

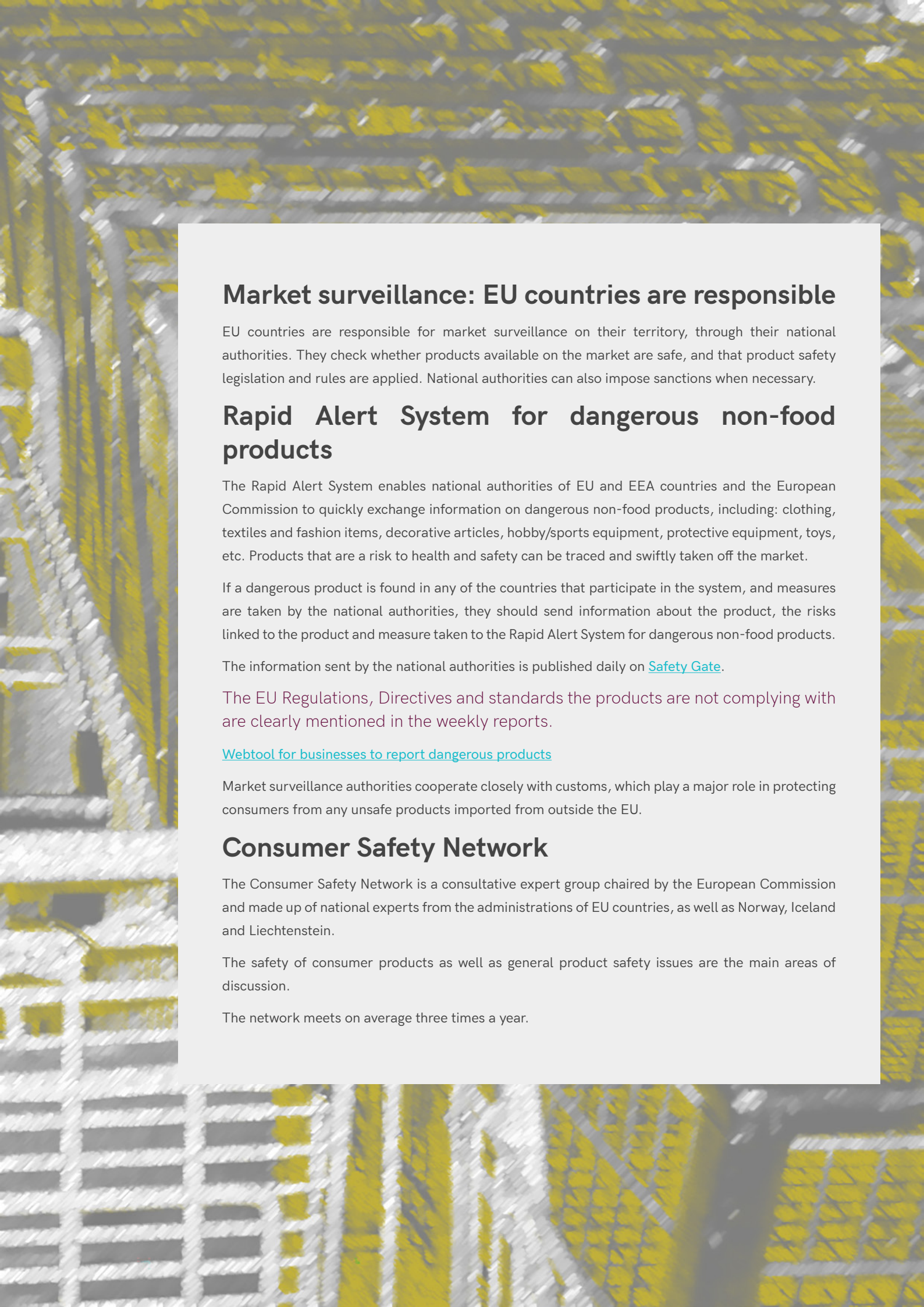
Manufacturers are obliged to market products that comply with the general safety requirements. In addition, they must:

- Provide consumers with the necessary information in order to assess a product's inherent threat, particularly when this is not directly obvious;
- Take the necessary measures to avoid such threats (e.g. withdraw products from the market, inform consumers, recall products which have already been supplied to consumers, etc.)

Distributors are also obliged to:

- Supply products that comply with the general safety requirements;
- Monitor the safety of products on the market
- Provide the necessary documents ensuring that the products can be traced.

If the manufacturers or the distributors discover that a product is dangerous, they must notify the competent authorities and, if necessary, cooperate with them in order to avoid serious consequences.



Market surveillance: EU countries are responsible

EU countries are responsible for market surveillance on their territory, through their national authorities. They check whether products available on the market are safe, and that product safety legislation and rules are applied. National authorities can also impose sanctions when necessary.

Rapid Alert System for dangerous non-food products

The Rapid Alert System enables national authorities of EU and EEA countries and the European Commission to quickly exchange information on dangerous non-food products, including: clothing, textiles and fashion items, decorative articles, hobby/sports equipment, protective equipment, toys, etc. Products that are a risk to health and safety can be traced and swiftly taken off the market.

If a dangerous product is found in any of the countries that participate in the system, and measures are taken by the national authorities, they should send information about the product, the risks linked to the product and measure taken to the Rapid Alert System for dangerous non-food products.

The information sent by the national authorities is published daily on Safety Gate.

The EU Regulations, Directives and standards the products are not complying with are clearly mentioned in the weekly reports.

Webtool for businesses to report dangerous products

Market surveillance authorities cooperate closely with customs, which play a major role in protecting consumers from any unsafe products imported from outside the EU.

Consumer Safety Network

The Consumer Safety Network is a consultative expert group chaired by the European Commission and made up of national experts from the administrations of EU countries, as well as Norway, Iceland and Liechtenstein.

The safety of consumer products as well as general product safety issues are the main areas of discussion.

The network meets on average three times a year.

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Share on

Alert number: A11/00053/20

Category: Toys

Product: Microwavable plush toy

Brand: Teddy Heaters

Name: Unknown

Type / number of model: 2758

Barcode: 7331626027588

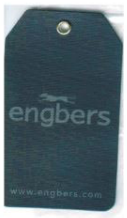
Batch number: Unknown
Counterfeit: NO

Risk type: Injuries

The tourmaline grains inside the toy are easily accessible due to the weakness of certain seams. A small child may inhale them when playing with the toy, leading to infections in the lungs. / The product does not comply with the requirements of the Toy Safety Directive and the relevant European standard EN 71-1.

Measures ordered by public authorities (to: Distributor): Ban on the marketing of the product and any accompanying measures

Description: A pale pink plush unicorn with a pouch of tourmaline grains inside (can be heated in microwave oven).
Packaging description:
Country of origin: People's Republic of China
Alert submitted by: Finland
Type of alert: Other



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Alert number: A12/00773/20

Category: Clothing, textiles and fashion items

Product: Black leather gloves

Brand: Engbers

Name: Handschuh Leder schwarz Größe XL

Type / number of model: Article ID 26324

Barcode: 4056462330175

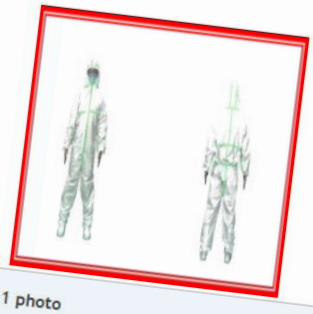
Batch number: EN.W1810.3440.000697.809
Counterfeit: NO

Risk type: Chemical

The leather in the product contains chromium VI (measured value : 8.5 mg/kg).
Chromium (VI) is sensitising and can trigger allergic reactions. / The product does not comply with REACH Regulation.

Measures taken by economic operators: Withdrawal of the product from the market (By: Distributor)

Description: Black leather gloves, fully lined with a black fabric lining and with a press-stud and loop in the wrist area.
Packaging description: A printed cardboard label is attached to the product.
Country of origin: Pakistan
Alert submitted by: Germany
Type of alert: Serious



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Alert number: A12/00793/20
Category: Protective equipment

Product: Protective coverall

Brand: BEAST

Name: Hooded Jumpsuit Protective Clothing

Type / number of model: Unknown

Barcode: Unknown

Batch number: Unknown
Counterfeit: **UNKNOWN**

Risk type: Health risk / other

The material of the product is permeable to splashes of liquids. Consequently, contagious fluids could penetrate the material allowing microorganisms to cross the coverall, increasing the risk of infection. / The product does not comply with the Personal Protective Equipment Regulation and the relevant European standard EN 14126.

Measures ordered by public authorities (to: Distributor): Ban on the marketing of the product and any accompanying measures

Description: Protective coverall of type 4 according to EN 14126, indicated against microbial contamination.
Packaging description:
Country of origin: People's Republic of China
Alert submitted by: Poland
Type of alert: Serious

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Share on

Alert number: A12/00789/20
Category: Protective equipment

Product: Particle filter mask

Brand: E GOOD

Name: KN95

Type / number of model: EGM-KN95L

Barcode: Unknown

Batch number: Unknown
Counterfeit: **UNKNOWN**

Risk type: Health risk / other

The particle/filter retention of the material is insufficient (measured value ≤ 68 %). Consequently, an excessive amount of particles or microorganisms might pass through the mask, increasing the risk of infection if not combined with additional protective measures. / The product does not comply with the Personal Protective Equipment Regulation and the relevant European standard EN 149.

Measures ordered by public authorities (to: Distributor): Ban on the marketing of the product and any accompanying measures

Description: Respiratory protective filtration half-face mask of category KN95.
Packaging description: The product is individually wrapped in a plastic bag with a zip closure.
Country of origin: Unknown
Alert submitted by: Poland
Type of alert: Serious

Source: Safety Gate: Rapid Alert System for dangerous non-food products - Weekly Report

Report 22 (Published on: 29/05/2020)

Alert number	A12/00783/20
Category	Protective equipment
Product	Particle filter mask
Brand	Yicheng Yi Liao
Name	KN95 Mask
Type / number of model	Filter efficiency ≥ 99.9%
Barcode	Unknown
Batch number	Unknown
Counterfeit	NO

Risk type: Health risk / other

The particle/filter retention of the material is insufficient (measured value ≤ 90 %) and the mask does not properly adapt to the face. Consequently, an excessive amount of particles or microorganisms might pass through the mask, increasing the risk of infection if not combined with additional protective measures. / The product does not comply with the Personal Protective Equipment Regulation.

Measures ordered by public authorities (to: Importer): Ban on the marketing of the product and any accompanying measures

Description	Respiratory protective mask of category KN95.
Packaging description	The product is sold in a plastic bag containing 10 units and packaged in a blue cardboard box.
Country of origin	People's Republic of China
Alert submitted by	Belgium
Type of alert	Serious

COVID-19

Conformity assessment procedures for protective equipment

Which are the applicable EU legal frameworks in the case of protective equipment?

COVID-19 is transmitted via small airborne droplets emitted by infected people when sneezing, coughing or talking. Therefore, a wide array of protective products designed to ensure protection against airborne particles or small droplets are used such as: face masks, gloves, coveralls, etc.

Most of these products are among the so-called 'harmonised products' for which there is specific EU product legislation in place. A majority of the products used in the context of the current health crisis, including FFP-type masks, are considered as Personal Protective Equipment (PPE) and hence fall under the scope of Regulation (EU) 2016/425.

Other products such as medical gloves, surgical masks, intensive care and other medical equipment are products falling within the scope of Regulation (EU) 2017/745 since 26 May 2020.

Each of the two legal frameworks fully harmonises the performance requirements for the products that it covers in order to ensure protection of the health and safety of users. Thus, products manufactured in accordance with these rules can circulate freely throughout the internal market and Member States may not introduce additional and diverging requirements regarding the manufacturing and placement on the market of such products.

Are there mandatory EU standards, which should be followed in order to produce protective equipment?

Both the PPE Regulation and the Directive on Medical Devices lay down essential requirements on health, safety and performance of the products they cover. However, both EU legal frameworks are technologically neutral and do not prescribe any specific mandatory technical solutions for the design of the products. Therefore, a number of technical solutions may be used by manufacturers to meet these essential requirements. Both the PPE Regulation and the Directive on Medical Devices offer the possibility for manufacturers to rely on specific technical solutions, which are detailed in harmonised standards or parts thereof. The references of these harmonised standards have been published in the Official Journal of the European Union. Where a manufacturer chooses to adopt such a technical solution, the product is presumed to be in conformity with the applicable essential health, safety and performance requirements.

In the case of face masks, the harmonised standards are EN 149:2001+A1:2009 for the FFP-type masks and EN 14683:2019 for surgical masks.

Compliance with the exact specifications laid down in these standards is not mandatory since manufacturers may choose to adopt different technical solutions. However, the major advantage offered by these technical solutions is that compliance with their prescriptions allows a swifter placement on the market. The reason is that the product does not have to be re-tested once again by a third party/certification authority prior to the placement on the market, if the manufacturer brings evidence that his product has passed all the necessary tests prescribed in the standard.

If a manufacturer chooses to follow the EN 14683 standard on surgical masks, who should perform the tests specified therein?

The tests are prescribed in the standard and can be performed by the manufacturer himself or by a laboratory on his behalf. These tests are not strictly speaking a mandatory step prior to the placement on the market. However, in case of control by the market surveillance authorities, if the manufacturer claims that the product complies with the standard, a sample may be tested in accordance with the test prescribed therein.

If a manufacturer intends to follow the EN 149 or EN 14683 standards, where can these standards be obtained?

European standards are copyright-owned by the European standardisation organisations which have developed them. Normally, manufacturers must purchase the standards they need from the national members of the European standardisation organisations, i.e. the national standardisation bodies. However, to ensure that European industry can quickly respond to the increased demand for protective equipment generated by the COVID-19 outbreak, the Commission has agreed with the European standardisation organisation CEN that 14 standards (including EN 149 and 14683) will be exceptionally made freely and fully available by the national standardisation bodies. Manufacturers can download the standards EN 149 and EN 14683 for free from the online catalogues of the national standardisation bodies.

Are there any other standards that can be followed in order to produce protective equipment?

Any standard or specific technical solution may be used provided that it complies with the applicable essential requirements laid down by the EU legal frameworks. While the harmonised standards (e.g. EN 149 and EN 14683 on masks above) tend to be the technical solution most widely used by the industry in the EU, there are other specific technical solutions which ensure a comparable level of safety. The World Health Organisation guidelines on the choice of protective equipment provide a reference in that respect.

However, in contrast to the use of harmonised standards (EN 149 and EN 14683), where a manufacturer chooses to follow one of the alternative standards referred to by the WHO, a sample of the product should be tested by a notified body (third party testing body) in the case of products falling within the scope of the PPE Regulation

In the COVID-19 context, the Commission issued on 13 March 2020 a Recommendation to facilitate the rapid uptake of new products on the EU market. On the one hand, the Commission urged all notified bodies (third party testing bodies) to prioritise any new requests submitted by manufacturers for COVID-19 related products. The attention of the notified bodies was drawn to the fact that the WHO guidelines could present alternative adequate technical solutions.

Is there any authorisation/mandatory certification that needs to be performed before the products are placed on the market?

Surgical/medical masks, examination gloves and some types of gowns (when supplied in non-sterile condition) are 'Class I Medical devices'. As such, they do not require the mandatory involvement of a notified body (third party testing body) prior to being placed on the market. The manufacturer must certify that the product complies with the applicable requirements. This regime is essentially one of self-certification. If such devices are supplied in a sterile condition they are however classified in a higher risk class and a conformity assessment by a Notified Body is required.

Conversely, face masks and other equipment used in the COVID-19 context that are covered by the PPE Regulation are considered as 'PPE of Category III'. Therefore, a notified body (third party testing body) must be involved in all cases. A sample of the product needs to be presented to such a body for assessment prior to placing on the market. However, under the PPE Regulation, once the initial sample is tested, there is no obligation to subject every single item coming off the production line to the same tests. Instead, there are supervised product checks at random intervals or other similar production control procedures, which are put in place.

Should the CE marking be affixed in all circumstances?

The CE marking is the final step, marking the end of all procedures prior to the placement on the market. In the case of some Medical Devices, the manufacture may affix this marking, without necessarily involving a third party. In the case of PPE items, the CE marking should normally be affixed by the manufacturer once the first sample of the product has been assessed and approved by the notified body (third party testing body). In the specific COVID-19 context however, there might be derogations to this requirement in specific circumstances.

Please note that according to both legal frameworks, the CE marking should be affixed on each individual item.

Are there any specifications as to the exact materials to be used to manufacture face masks?

Neither the applicable EU legal frameworks, nor the harmonised standards EN 149 and EN 14683 impose any mandatory specifications as to the materials to be used. The legal frameworks essentially introduce performance requirements, which are further detailed by the relevant standards.

Therefore, manufacturers retain full choice as to the type of materials they can use.

Source: https://ec.europa.eu/growth/sectors/mechanical-engineering/personal-protective-equipment_en

TOYS

Safety Gate: Rapid Alert System for dangerous non-food products

Weekly Report - Report 22 (Published on: 29/05/2020) - selected product category: "toys"

1. Risk type: Choking

The eye of the unicorn can easily be detached from the toy, generating a small part. A small child may put it in the mouth and choke on it.
The product does not comply with the requirements of the Toy Safety Directive and the relevant European standard EN 71-1.
Measures ordered by public authorities (to: Distributor): Ban on the marketing of the product and any accompanying measures

2. Risk type: Chemical, Choking

The battery compartment can be easily opened, leaving the button batteries accessible. A child may put them in the mouth and swallow them, which could cause choking or damage to the child's gastrointestinal tract.
The fibrous stuffing material is easily accessible due to the weakness of certain seams. A small child may put the stuffing material in the mouth and choke.
The product does not comply with the requirements of the Toy Safety Directive and the relevant European standards EN 71-1 and EN 62115.
Measures ordered by public authorities (to: Distributor): Withdrawal of the product from the market

3. Risk type: Chemical

The plastic material of the product contains an excessive amount of bis(2-ethylhexyl) phthalate (DEHP) (measured values: 28,3 % by weight). DEHP may harm the health of children, causing possible damage to their reproductive system.
The product does not comply with the REACH Regulation.
Measures ordered by public authorities (to: Importer): Withdrawal of the product from the market

4. Risk type: Injuries

The kinetic energy of the arrows fired from the crossbow is too high and can lead to eye injuries.
The product does not comply with the requirements of the Toy Safety Directive and the relevant European standard EN 71-1.
Measures ordered by public authorities (to: Distributor): Destruction of the product, Import rejected at border

5. Risk type: Choking

The toy can easily break releasing small parts. A small child may put the small parts in the mouth and choke.
The product does not comply with the requirements of the Toy Safety Directive and the relevant European Standard EN 71-1.
Measures taken by economic operators: Destruction of the product (By: Importer)
Measures ordered by public authorities (to: Importer): Withdrawal of the product from the market

6.Risk type: Chemical

The plastic material of the product contains an excessive amount of bis(2-ethylhexyl) phthalate (DEHP)(measured value: 20 % by weight).
This phthalate may harm the health of children, causing possible damage to their reproductive system.
The product does not comply with the REACH Regulation.
Measures ordered by public authorities (to: Retailer): Withdrawal of the product from the market

Conformity and safety assessment procedures for toys

Inge De Witte | idw@centexbel.be

There are around 80 million children under 14 in the EU, and about 2 000 companies employing over 100 000 people directly in the toys and games sector, most are small and medium-sized enterprises (SMEs).

Toys and games are vital tools for child development. Whilst manufacturers are responsible for the safety of their products, importers, notified bodies and national authorities all have a role to play in ensuring toys sold in Europe's shops fulfil all safety requirements.

Ensuring safety requirements and standards to keep up with the latest toy trends is vital, especially as new materials and manufacturing processes are constantly being developed.

The internal market for toys has positively contributed to the development of the sector and to consumer protection, by harmonising the safety characteristics of toys across the EU. The new Toy Safety Directive (TSD) strengthens provisions on enforcement and new safety requirements, ensuring children continue to benefit from the highest levels of protection.

"Any product or material designed or intended whether or not exclusively for use in play by children under 14 years of age", including items products with double functions such as e.g. key-ring with a teddy bear attached to it. It is worth noting that this actual definition of toys was meant to be aligned with what are believed to be the current practices of toy

manufacturers.

Conformity assessment procedure

Each toy to be placed on the market is submitted to a conformity assessment procedure. The objective of the conformity assessment procedure is to demonstrate to the manufacturer and the public authorities that a toy placed on the market complies with the legal requirements of the 2009 TSD.

Conformity assessment is the procedure by which a manufacturer establishes that his toy fulfills the applicable safety provisions of the directive. The manufacturer is required to apply one of two possible procedures depending upon the nature of the toy:

1. Self verification

Self verification is used in cases where harmonized standards cover all relevant safety aspects of a toy. In such instances, the manufacturer must apply the existing harmonized standards and ensure that the toy is in conformity therewith. The manufacturer must also put in place an internal production procedure in accordance with Module A of Annex II to Decision No. 768/2008/EC. Module A does not require the involvement of a notified body.

2. Third party verification

Conformity to type or Module B is often referred to as "EC-type examination". EC-type examination and certification is required in cases where:

- harmonized standards do not exist;
- harmonized standards have not or only partly been applied by a manufacturer;
- one or more harmonized standards have been published with a restriction; or
- the manufacturer considers that the nature, design, construction or purpose of the toy requires third party verification.

In such cases a manufacturer submits a model of the toy to a notified body for EC-type examination. Under Module B, the notified body examines the technical design of a toy and verifies and attests that the technical design of the toy meets the requirements of the 2009 TSD by issuing an EC-type examination certificate.

It is important to note that Module B covers the design phase only, whereas Module C covers the production phase and follows Module B. Under Module C, the manufacturer ensures the conformity of the toys with the type described in the EC-type examination certificate and with the relevant requirements of the legislative instrument that apply. This conformity is evaluated against an approved EC-type examination certificate issued under Module B. Unlike Module B, Module C does not require the involvement of a notified body. Difference between safety assessment and conformity assessment.

The objective of the safety assessment is to identify the potential hazards of a toy, as well as to assess the potential exposure to those hazards. The conformity assessment procedure, on the other hand, is to provide demonstrable evidence that the toy is in conformity with the legal requirements under the 2009 TSD. In general, the safety assessment is drawn up before submitting the toy to the appropriate conformity assessment procedure (although it may be completed at a later stage) and must be completed before the toy is placed on the market.

Safety assessment procedure

A safety assessment requires the manufacturer to identify the potential hazards that the toy may present, and to assess the potential exposure to those hazards. This procedure is mandatory under the 2009 TSD and must be performed before the toy is placed on the market.

The safety assessment is the responsibility of the manufacturer and must be carried out before the toy is placed on the Community market. It must cover the various chemical, physical, mechanical, electrical, flammability, hygienic and radioactivity hazards that the toy may present. A list of the various requirements that a manufacturer must assess in relation to these hazards is provided in Annex II of the 2009 TSD.

Many of these requirements are embodied in the harmonized toy safety standards; however, the manufacturer remains obliged to assess whether there are any gaps in the standard and/or features in the toy that could present a potential hazard. The outcome of a safety assessment will determine which conformity assessment procedure is required, and any appropriate risk minimization steps and/or testing.

The safety assessment must be kept by the manufacturer in the technical documentation for ten (10) years after the toy has been placed on the market.

Warnings

General rules

General warnings which specify user limitations should be provided with the toy where appropriate for safe use. In addition, Part B of Annex V of the 2009 TSD provides that specific warnings for certain categories of toys should be provided.

In addition to the mandatory requirements set out in the 2009 TSD, the harmonized standards also specify warnings that should accompany certain categories of toys. Within its territory, a Member State may stipulate that the warnings shall be written in a language or languages easily understood by consumers, as determined by the Member State.

Location of the warnings

The manufacturer shall mark the warnings in a clearly visible, easily legible and understandable and accurate manner. Warnings must be marked on the toy, an affixed label or the packaging. If appropriate, warnings should also be included in the instructions. It is important to note that in cases where the toy is sold without packaging, the warning needs to be affixed on the toy itself. Affixing warnings on a counter display box is not sufficient to meet the requirements of the 2009 TSD. Warnings which determine the purchase decision, such as minimum and maximum user age indications and the specific warnings described in Part B of Annex V of the 2009 TSD, must appear on the consumer packaging or be otherwise clearly visible to the consumer before the purchase, even in cases where the purchase is made online.

Specific warnings

User limitations must contain at least the minimum or maximum age of the user. If appropriate, they shall also contain the abilities or characteristics required by a user to be able to use the toy safely (e.g. ability to sit unaided, maximum and minimum weight of the user, need to use the toy under supervision). Economic operators may choose between a warning phrase or pictogram (or both):

Warning – Not suitable for children under 36 months

In any case, the wording and/or the pictogram must be preceded by the word "Warning" or "warnings" as appropriate. The specific warning "Not suitable for children under 3 years" and pictogram described in Part B of Annex V of the 2009 TSD in relation to children under 3 years cannot be used for toys intended for children under 3 years. More generally, specific warnings provided for certain categories of toys must not conflict with the intended use of the toy, as determined by virtue of its function, dimension and characteristics. If necessary, the European Commission may propose wording for the specific warnings of certain categories of toys.

Traceability

What the 2009 TSD says: Every manufacturer must ensure that their toy can be identified. This can be done by using a type, batch, serial/ model number or other element allowing the toy to be identified. The toy must also bear the manufacturer's name, registered trade name/ mark. A single contact point address for the manufacturer must also be provided.

If the size or nature of the toy does not allow it to bear the identification element and the manufacturer's information, the manufacturer must place the required information on the packaging or in a document accompanying the toy. It is important to note that the single address at which the manufacturer can be contacted must be a street address or post box (a website will not be considered as a point of contact address).

If an importer places a toy on the market, the importer's name, registered trade name/mark, and single contact address point must also all be on the toy or, where that is not possible, on its packaging or in a document accompanying the toy.

Possible options for manufacturers Manufacturers have the freedom to choose the element they wish to use on a toy to allow its identification, as long as traceability is in fact ensured.

Declaration of conformity

When a toy is placed on the market, the manufacturer must draw up an EC declaration of conformity (DoC). By doing so, the manufacturer certifies and assumes responsibility for the compliance of the toy with the essential requirements of the 2009 TSD.

The manufacturer or the authorized representative established within the EU must keep the DoC for ten (10) years after the toy is put on the market. The DoC needs to be translated into the languages required by the Member States in whose market the toy is placed or made available. The DoC should state that the fulfillment of the 2009 TSD safety requirements has been demonstrated, and should at a minimum include (for the layout, please see Annex III of the 2009 TSD):

- the (unique) identification number of the toy;
- the name and address of the manufacturer or his authorized representative;
- the statement that "This declaration of conformity is issued under the sole responsibility of the manufacturer";
- the object of the declaration (including a colour image);
- the references to the relevant harmonized standards used or references to the specifications in relation to which conformity is declared;
- (where applicable,) the statement that "the notified body... (name, number)... performed ... (description of intervention performed)... and issued the certificate";
- additional information, such as the date, place, signature of manufacturer, and function of signatory.

It is worth noting that an importer must keep a copy of the manufacturer's DoC for a period of ten (10) years after the toy has been placed on the market. More than one toy could be referenced by the DoC provided the above requirements are fulfilled but there is a requirement to continuously update the DoC should changes be necessary.

Sources of information: https://ec.europa.eu/growth/sectors/toys/safety/guidance_en

Download this Practical Guide to the Legal Obligations of Manufacturers, Importers and Distributors of Toys

Problematic substances still used in toys

BEUC, the European Consumer Organisation reported at the end of 2019 that its member organisations regularly put toys under a microscope to look for unwanted chemicals. It turns out 2019 has been no exception to previous years: problematic substances still make it into toys.

Children come in close contact with the chemicals in toys as they can absorb them through their mouth or skin while playing. The health of little ones is particularly at risk, as their organisms are still developing.

The issue of chemicals in toys is unfortunately nothing new. In the 2019 release of the list of dangerous products that made it to the EU's recall system, the Safety Gate, toys again made it to the top.

In many cases, the most problematic products were purchased on online platforms, from third party sellers sitting outside the EU. Numerous dangerous products can be found online that urge for follow-up actions.

Many consumer groups have advised people to take extra care when buying toys through such online marketplaces. Similarly, some national authorities have recommended to avoid toys that seem unreasonably cheap.

These test results shed light on the urgent need for EU authorities to tackle harmful chemicals in toys head on to protect children's health via a reform of the Toy Safety Directive. Changes should include more ambitious rules for chemicals in toys and more resources for Member states to enforce existing rules.

Nitrosamines in toys & balloons

According to the Dutch Food and Consumer Product Safety Authority (NVWA), a quarter of the balloons it had examined in 2018-2019 did not meet European standards on the release of nitrosamines. This report was reproduced in the Belgian press via the Belga press agency.

To check whether your products comply with legal requirements, you can call on the internationally recognised expertise of Centexbel's chemical laboratory. In this "state-of-the-art" equipped laboratory, we analyse toys, including balloons for children, for the presence of dangerous substances such as nitrosamines and nitrosatable substances according to EN 71-12 and all kinds of rubber products according to criteria determined by governments and labels (e.g. standard 100 and Leather standard by OEKO-TEX®).

Nitrosamines are a group of carcinogenic substances found in various rubber and latex products. Methods exist to extract, concentrate and detect the migration of volatile nitrosamines present in latex gloves and balloons via headspace solid-phase micro-extraction and gas chromatography with mass spectrometer detection.

Most N-nitrosamines have been found to be genotoxic carcinogens in animals and humans. Humans are exposed to the substances via, among others: food, tobacco, cosmetics and all kinds of rubber products (yoga mats). Recently, attention has been paid to the migration of nitrosamines from various latex products such as soothers, condoms, gloves and balloons.

Nitrosamines end up in rubber products during the vulcanization process and migrate to the surface during storage and use. Standards EN12868 - Articles for infants and young children - Methods for determining the release of N-nitrosamines and N-nitrosatable substances from rubber teats and soothers made of elastomers or rubber and ISO 29941:2010 Condoms - Determination of nitrosamines migrating from natural rubber latex condoms have been developed.

The Europan Directive 93/11/EC[1] determines the limit values in elastomer or rubber-manufactured parts of the soother on:

- 0,01 mg total released N-nitrosamines/kg
- 0,1 mg total N-nitrosatble substances/kg.

1 Commission Directive 93/11/EEC 15 March 1993 concerning the release of the N-nitrosamines and N- nitrosatable substances from elastomer or rubber teats and soothers

Determination of N-Nitrosamines and N-nitrosatable Substances in Toys

Toys sold on the EU market must comply with both the Toys Directive and all other applicable EU legislation, such as REACH, CLP, the revised RoHS provisions and Persistent Organic Pollutants (POPs). In addition to European legislation, there are national regulations, such as the Danish legal order 855 of 5 September 2009 on phthalates. These substances are also included in the requirements of OEKO-TEX®.

EN 71-12 prohibits the use of N-nitrosamines and N-nitrosatable substances in toys intended for use by children under 36 months, in other toys intended to be put in the mouth such as rubber or elastomeric toys (such as balloons), and in finger paints intended for use by children under 36 months, unless the migration limits:

- less than 0,05 mg/kg for N-nitrosamines
- less than 1 mg/kg for N-nitrosatable substances

EN 71-12 describes **test methods** to determine N-nitrosamines and N-nitrosatable substances in certain types of toys.

Elastomers, such as rubber, silicone and thermoplastic elastomers (TPEs) can contain N-nitrosamines from, for example, accelerators. N-nitrosamines in finger paints are formed under certain acid conditions in the presence of N-nitrosatable substances (e.g. secondary amines) and a nitrosating agent such as nitrite.

Limit values according to EN 71-12 "Requirements for N-Nitrosamines and N-Nitrosatable Substances":

Types of materials and toys	Migration limit values	
	Sum of all N-nitrosamines [mg/kg]	Sum of all N-nitrosatable substances [mg/kg]
Elastomers in toys and parts of toys intended for children under 36 months (e.g. soothers)	0.05	1
Elastomers in toys and parts of toys intended to be put in the mouth (e.g. balloons)	0.05	1
Finger paints	0.02	1

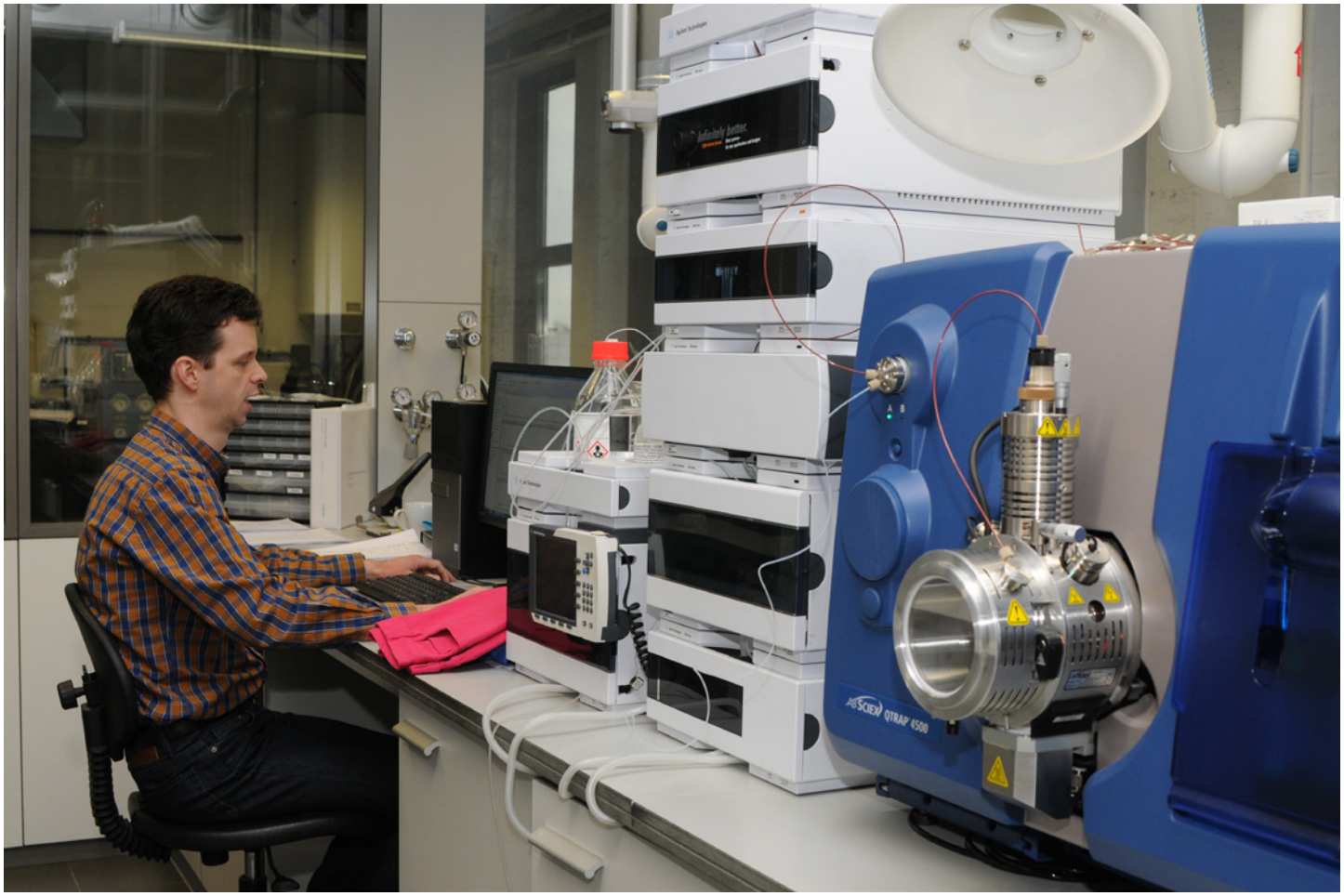
The low EN 71-12 limit of 0.02 mg/kg for N-nitrosamines in finger paints takes into account the relatively frequent cases where certain N-nitrosamines, such as NDELA, are absorbed through the skin, so that the child is much more likely to absorb NDELA from finger paints through the skin than through the mouth.

Each type of toy material is tested in a different way.

Elastomers are extracted via a nitrite-containing saliva solution, as this substance is mainly absorbed through the mouth. The test solution is then divided into a part for the direct analysis of N-nitrosamines, and a part that is acidified to convert the N-nitrosatable substances into further N-nitrosamines.

Finger paints are extracted using two test methods: water to extract the N-nitrosamines (simulation of absorption through the skin). The conversion of N-nitrosatable substances requires acidic conditions (e.g. stomach). Therefore, the water is replaced by nitrite-containing saliva.

N-nitrosamines are analyzed by means of the High Performance Liquid Chromatograpy - Mass Spectrometriy (HPLC-MS/MS) technique.



Centexbel is equipped to determine extremely low concentrations that amply meet the strictest legal requirements for the detection of chemical components in materials. Photo: HPLC/MS device operated by David Van de Vyver who developed the test method for OEKO-TEX®.

EN 71-12 requires elastomers to be tested for the presence of N-nitrosamines (13 in total) found in toy materials, together with NDELA in finger paints.

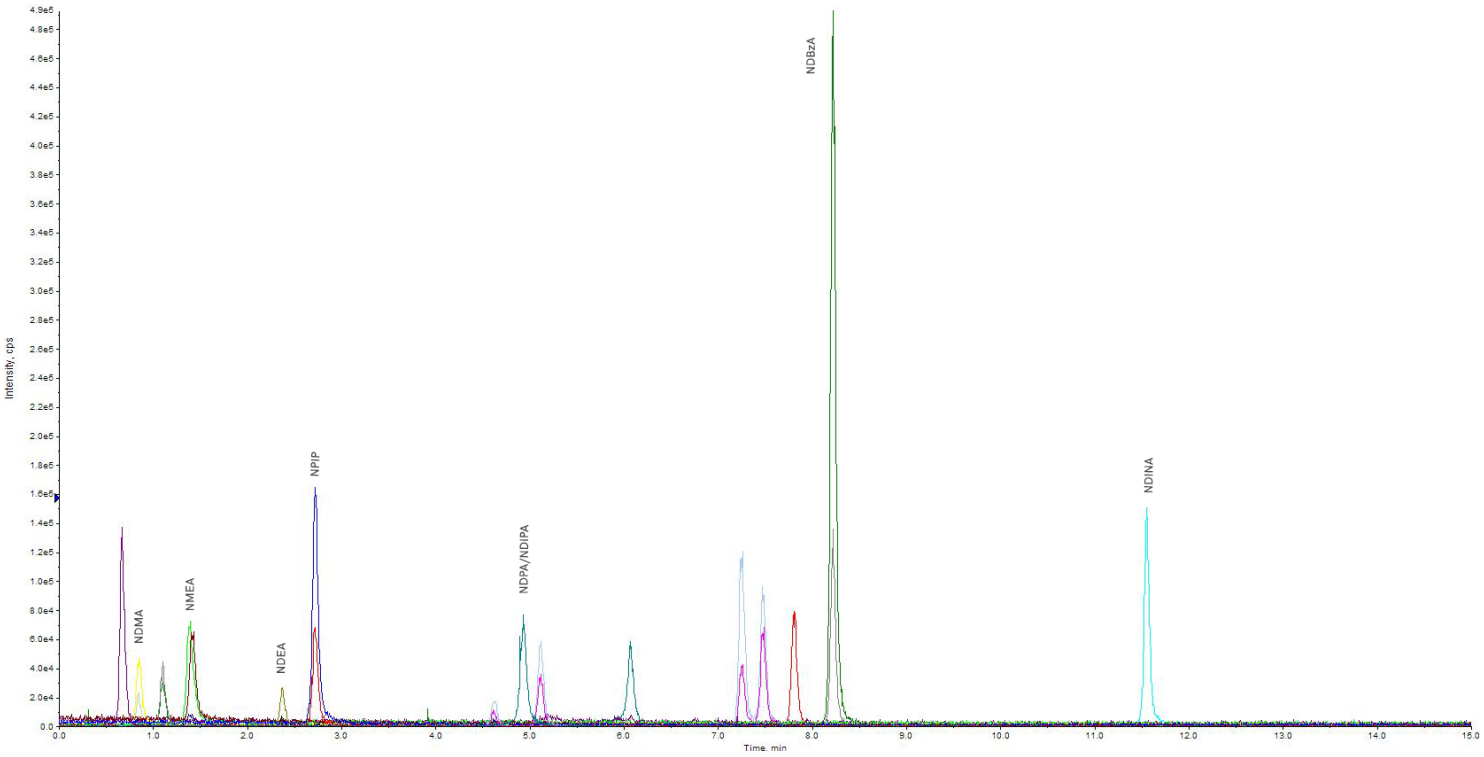
N-Nitrosamines to be determined in elastomers:

N-Nitrosamine	CAS Number	Abbreviation
N-nitrosodibenzylamine	5336-53-8	NDBzA
N-nitrosodibutylamine	924-16-3	NDBA
N-nitrosodiethanolamine	1116-54-7	NDELA
N-nitrosodiethylamine	55-18-5	NDEA
N-nitrosodiisobutylamine	997-95-5	NDiBA
N-nitrosodiisononylamine	1207995-62-7	NDiNA
N-nitrosodiisopropylamine	601-77-4	NDiPA
N-nitrosodimethylamine	62-75-9	NDMA
N-nitrosodipropylamine	621-64-7	NDPA
N-nitrosomorpholine	59-89-2	NMOR
N-nitroso-N-ethyl-N-phenylamine	612-64-6	NEPhA
N-nitroso-N-methyl-N-phenylamine	614-00-6	NMPhA
N-nitrosopiperidine	100-75-4	NPIP

N-Nitrosamines to be determined in finger paints:

N-Nitrosamine	CAS Number	Abbreviation
N-nitrosodiethanolamine	1116-54-7	NDELA

The result of the measurement is displayed in a chromatrogram - the concentration of the different components in mix measured here is **0.01 µg/ml.**



THE ALARA PRINCIPLE VERSUS THE TECHNOLOGICAL FEASIBILITY OF SETTING MINIMUM VALUES[1]

The ALARA principle (As Low As Reasonably Achievable) is used to protect consuments and to minimise the risk of exposure to N-nitrosamines.

According to an opinion paper of the German Federal Institute for Risk Assessment (BfR) of January 2011, this ALARA principle should be applied in particular to the migration limit values for toys made of natural and synthetic rubber that small children (under 36 months) can put (whether the toy is intended or not) into the mouth. BfR claims that the limit values of 0.5 mg N-nitrosamines per kg of material used by the European Toys Directive 2009/48/EC are too high and were mainly motivated by what was technically feasible when determining the limit values.

As demonstrated above, Centexbel is able to detect chemical substances up to 0.01µ/ml, which removes this argument and allows the ALARA principle to fully apply.

1 https://mobil.bfr.bund.de/cm/349/toys-made-of-natural-and-synthetic-rubber-for-children-under-three-years-of-age-release-of-n-nitrosamines-should-be-as-low-as-possible.pdf

Since 2019, nitrosamines and N-nitrosatable compounds have been included in the OEKO-TEX® test criteria.

These components are included in the STANDARD 100 by OEKO-TEX® and in the LEATHER STANDARD by OEKO-TEX®. For this purpose, OEKO-TEX, in collaboration with Centexbel and others, has developed a test method that extracts nitrosamines and N-nitrosatable compounds from the material and uses an APPI HPLC-LC/MS/MS technique for the determination. This technique enables us to perform trace analysis for these components.

OEKO-TEX®
CONFIDENCE IN TEXTILES
STANDARD 100

OEKO-TEX®
CONFIDENCE IN LEATHER
LEATHER STANDARD

CHEMICAL SAFETY

Download Centexbel's brochure on REACH testing

The EU regulations for the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), for the Classification, Labelling and Packaging of substances and mixtures (CLP) and the Biocidal Products Regulation (BPR) have an impact on the business of most companies in the EU and in Iceland, Liechtenstein and Norway, which are part of the European Economic Area (EEA).

However, recent surveys and inspections in all EU/EEA countries show that nearly 70% of SMEs outside the chemical sector are unaware that REACH and CLP have a direct impact on their business. Smaller companies by their turnover are least likely to believe that they have to comply with REACH. This poses a risk of placing non-compliant and unsafe chemical products on the market.

At the same time, surveys of SMEs and manufacturing companies show that when small firms are aware of these EU regulations and know how they affect their business, they are the most active in re-designing their manufacturing processes. Companies of all sizes are also involved in replacing the most hazardous chemical products with safer alternatives.

Chemical safety is a business asset!

Complying with REACH, CLP and the BPR can help your clients to meet their business needs to:

- Be legally on the EU market;
- Ensure the safe supply, use and management of chemicals;
- Make the working environment safer;
- Save costs by reducing the impact on health at the workplace and on the environment;
- Improve their reputation towards customers, consumers, investors and the community who are getting more sensitive to the responsible care of chemicals and to sustainability;
- Find new markets if they have developed safer alternatives to very hazardous chemicals, for example, those that will have to be phased out due to the high concern for human health and the environment;
- Be more competitive on international markets.

The general rules for the marketing of chemicals in the EU are set in REACH and CLP. These two horizontal chemical safety laws are complemented by other, sector specific legislation, such as the BPR.

REACH, CLP and the BPR have a common aim to ensure a high level of protection for human health and the environment by making industry responsible for the safety of chemicals placed on the EU market. The regulations respond to important business and societal needs for sound chemicals management and their safe use. They apply to the European Economic Area (EEA), i.e. the 28 EU Member States and Iceland, Liechtenstein and Norway.

SMEs have the same responsibilities as large companies and cannot be exempt from any of the requirements for chemical safety. The only SME specific provisions are to pay reduced fees and charges.

REACH is the regulation for the Registration, Evaluation, Authorisation and Restriction of chemicals (EC) No 1907/2006. It is the main EU law on chemicals, covering in principle all substances on their own or in mixtures or in articles for industrial, professional or consumer use. Therefore, REACH has an impact on most industrial sectors and applies to most companies in the EU.

REACH sets the most ambitious chemical safety standards worldwide. Manufacturers and importers have to demonstrate how a substance they place on the market can be used safely and communicate the risk management measures to their customers. Communication in the supply chain is required by all actors to ensure the safe use. If the risks cannot be managed, authorities can restrict the use of a substance or make it subject to prior authorisation.

The REACH requirements for chemical stewardship put pressure on companies to review their portfolio of chemicals and to replace the most hazardous ones with safer alternatives. One of the aims of the regulation is to stimulate innovation and enhance the competitiveness of European brands on international markets.

Information generated for REACH can be used by companies to comply with other legislation.

CLP is the regulation for the Classification, Labelling and Packaging of substances and mixtures (EC) No 1272/2008. It complements the REACH Regulation and ensures that the hazards of chemicals are clearly communicated to workers and consumers through labels with standardised statements and pictograms.

Before placing chemical products on the EU market, industry must classify them in line with the identified hazards and then label and package them according to the CLP system. This makes the hazard characteristics of the product easier to understand in the EU and worldwide and facilitates global trade as the CLP implements the United Nations' Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The CLP regulation replaces the Dangerous Substances Directive (67/548/EEC) and the Dangerous Preparations Directive (1999/45/EC).

Substances have had to be classified and labelled according to the CLP system since 1 December 2010, while for mixtures the deadline to switch to CLP was 1 June 2015.

CLP deals with the majority of the chemicals placed on the industrial, professional and consumer markets in the EU, including those supplied free of charge.

More than 20 EU laws refer to the classifying and labelling of chemicals, meaning that once a substance is classified as hazardous, other legal requirements kick-in to control their use, such as the requirement to undertake chemical safety assessment within the workplace. When substances cannot be placed on the market for certain uses because of their classification, companies need to find alternatives. For example, substances which are classified as carcinogenic, mutagenic or toxic for reproduction cannot be used in consumer products above certain concentration levels.

The **BPR** is the Biocidal Products Regulation (EU) 528/2012. It concerns the making available on the market and use of biocidal products, which have the purpose of protecting humans, animals, materials or articles against harmful organisms like pests or bacteria, by the action of the active substances contained in the biocidal product. The BPR repeals and replaces the Biocidal Products Directive 98/8/EC. The aim of the regulation is to improve the functioning of the biocidal products market in the EU, while ensuring a high level of protection for humans and the environment.

All biocidal products require an authorisation before they can be made available on the market, and the active substances contained in that biocidal product must be previously approved with the exception of those that are undergoing review.

Contact:

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Click here for source text and further reading

REACH includes PFAS in restrictions

What are PFAS?

PFAS substances are currently being targeted under REACH. To this purpose, ECHA has created a dedicated page on their website. Perfluoralkyl and polyfluoralkyl (PFAS) are a large family of thousands of synthetic chemicals widely used and present in the environment. They all contain carbon fluoride bonds, which are one of the strongest chemical bonds in organic chemistry. This means that they are resistant to degradation in use and also in the environment.

Most PFAS are also easily transported in the environment over long distances, away from the source of release.

PFAS substances pollute groundwater, surface water and soil. Remediation of contaminated sites is technically difficult and expensive. If the release of PFAS is not controlled, they will continue to accumulate in the environment, drinking water and food.

For all your questions on PFAS and POPs screening, contact Stijn Steuperaert | sst@centexbel.be

Restriction proposals of Perfluorhexanoic acid (PFHxA)

The German authority on REACH, BAuA, has submitted a proposal to the European Chemicals Agency (ECHA) to restrict the marketing and use of perfluorhexanoic acid (PFHxA), its salts and related substances.

Thanks to their unique properties (oil- and dirt-repellent), PFHxA, its salts and related substances are used in a wide range of applications in Europe, including fire-retardant foams, textiles, food-content materials, cosmetics, semiconductors, etc. Moreover, their use is increasing in view of the restrictions already in place for long-chain perfluorinated substances (C8 to 14).

BAuA explains its initiative because PFHxA has a number of dangerous properties. PFHxA is very persistent, which gives rise to an increasing presence in the environment in the event of uncontrolled emissions. In addition, the substance is also mobile and has surfactant properties so that its use causes pollution of groundwater, surface water and the marine environment on a large geographical scale.

The proposed restriction means that PFHxA may no longer be used and placed on the market either in a mixture or an article in a concentration equal to or greater than 25 ppb for the sum of PFHxA and its salts or 1000 ppb for the sum of the PFHxA-related substances.

However, an **exception** is provided for **personal protective equipment and non-woven medical textiles**. Companies benefiting from this exception are required to submit an annual report to the competent authorities on the use of these substances, in particular the identity and the quantities used.

ECHA will organise a **public consultation** on this restriction proposal until 25 September 2020. All interested parties will have the opportunity to comment on this proposal during this period.

ECHA also intends to use the public consultation to gather additional information on a number of questions. For example, ECHA requests more information on the proportion of imported clothing treated with fluoropolymers and PFHxA in particular, the concentration present, substitution possibilities, performance loss if fluorine-free alternatives are used for textiles and membranes, etc.

Fedustria (Belgian level) and Euratex (European level) will participate in this public consultation so that essential critical uses in the textile sector can be exempted from this restriction.

To this end, a special working group has been set up in which the companies concerned can also participate. A number of Belgian companies, mainly specialised in protective clothing, are already participating in this working group.

If there are other textile uses for which PFHxA is essential to your company, you are invited to inform Fedustria as soon as possible, so that you can also be involved in the further elaboration of our response to the public consultation.

What are POPs?

Persistent Organic Pollutants (POPs) are organic (i.e. carbon-based) chemical substances. They possess a particular combination of physical and chemical properties such that, once released into the environment, they:

- remain intact for exceptionally long periods of time (many years);
- become widely distributed throughout the environment as a result of natural processes involving soil, water and, most notably, air;
- accumulate in the fatty tissue of living organisms including humans, and are found at high concentrations in the food chain;
- are toxic to both humans and wildlife.

As a result of releases to the environment over the past several decades due especially to human activities, POPs are now widely distributed over large regions (including those where POPs have never been used) and, in some cases, they are found around the globe. This extensive contamination of environmental media and living organisms includes many foodstuffs and has resulted in the sustained exposure of many species, including humans, for periods of time that span generations, resulting in both acute and chronic toxic effects.

In addition, POPs concentrate in living organisms through another process called bioaccumulation. Though not soluble in water, POPs are readily absorbed in fatty tissue, where concentrations can become magnified by up to 70,000 times the background levels. Fish, predatory birds, mammals, and humans are high up the food chain and so absorb the greatest concentrations. When they travel, the POPs travel with them. As a result of these two processes, POPs can be found in people and animals living in regions such as the Arctic, thousands of kilometers from any major POPs source.

Specific effects of POPs can include cancer, allergies and hypersensitivity, damage to the central and peripheral nervous systems, reproductive disorders, and disruption of the immune system. Some POPs are also considered to be endocrine disrupters, which, by altering the hormonal system, can damage the reproductive and immune systems of exposed individuals as well as their offspring; they can also have developmental and carcinogenic effects.

PFOA is now part of POP Convention

This means that its production, use and placing on the market should be stopped or phased out as much as possible. This amendment to the Stockholm Convention on PFOA should therefore be transposed into European legislation by amending Regulation 2019/1021. **The inclusion of PFOA in this regulation will therefore replace the existing (REACH) restriction on PFOA.** The proposal for this regulation retains the existing **exception for the use of PFOA in protective clothing** (until 4 July 2023), but is worded somewhat differently. In the REACH restriction, the exception applies to "textile products for the protection of workers from risks to their health and safety" (see page 22), while the POPs proposal refers to "textiles for oil and water repellency for the protection of workers from dangerous liquids that comprise risks to their health and safety".

However, the REACH restriction also provided for an exemption for medical devices other than implantable medical devices within the scope of Directive 93/42/EEC until 4 July 2032. This exception was not retained in the Stockholm Convention and is therefore not foreseen in the proposal for the POPs Regulation. Only a kind of transitional period until 3 December 2020 is foreseen. In other words, after this date, PFOA should no longer be used for these 'other medical devices'.

For the past two decades, POPs have been regulated at the global level. The United Nations Economic Commission for Europe's (UNECE) Protocol on Persistent Organic Pollutants (commonly known as the Aarhus Protocol) was adopted in 1998. This was closely followed in 2001, by the adoption of the Stockholm Convention which identified the initial 12 POPs (dirty dozen). Since then, this list has been expanded to include 33 POPs.

Some examples of newer POPs, which are gradually being phased out worldwide, include:

- **perfluorooctane sulfonic acid** (PFOS), used in consumer products, such as some outdoor textiles and leather goods; metal plating; fire-fighting foams; and in stain repellents; and
- **hexabromocyclododecane** (HBCDD) widely used as a flame retardant additive in textiles, electrical and electronic appliances, and construction materials.

At the European Union level, the POPs Regulation is the Union's effort to implement the Stockholm Convention and the Convention on Long-Range Transboundary Air Pollution's Protocol on POPs. The regulation aims to eliminate the manufacturing, placing on the market and use of POPs, whether on their own, in mixtures or in articles.

It contains provisions to minimise the unintentional production and release of POPs, and ensure the safe management of stockpiles and waste. Furthermore, Member States have set up emission inventories for unintentionally produced POPs, national implementation plans, and mechanisms to monitor and exchange information.

Centexbel is equiped to screen all newly listed POPs

For all your questions on EDC screening, contact Stijn Steuperaert | sst@centexbel.be

Endocrine Disruptor list

The aim of the Endocrine Disruptor List website is to primarily inform stakeholders about the current status of substances identified as endocrine disruptors (EDs), or under evaluation for endocrine disrupting properties within the EU.
The intention of compiling this information is to improve knowledge about EDs, increase transparency, coherence and consistency, as well as coordination across legislative areas. It is also possible that identification and regulation of additional EDs may be facilitated by this single repository of information.

This initiative by Belgium, Denmark, the Netherlands, France and Sweden will contribute to a coordinated legislation for better protection of human health and the environment.

In recent decades, substances with endocrine disrupting properties have become a serious concern for politicians, scientists and civil society. Endocrine disrupters have been associated with cancers, reduced IQ, infertility, Alzheimer's, obesity, etc. and are found in a range of everyday products, from shampoo to closet tickets and toys.

Belgium wants to better eliminate endocrine disrupters from our daily lives by regulating these substances and is working with its European partners to increase knowledge about endocrine disrupters. The lists of (potential) endocrine disrupters will speed up the identification and regulation of endocrine disrupters in the EU and improve coherence in the assessment of substances.

The database contains a list of substances identified as endocrine disrupters at EU level (List I) and another list of substances currently assessed under EU legislation for endocrine disrupting properties (List II). In addition, there is a third list of substances for which endocrine-disrupting properties have been assessed on the basis of scientific evidence by a participating national authority (List III).

Endocrine-disrupting chemicals (EDCs)

The endocrine system is a network of glands and organs that produce, store, and secrete hormones. When functioning normally, the endocrine system works with other systems to regulate your body's healthy development and function throughout life. Endocrine-disrupting chemicals (EDCs) are substances in the environment (air, soil, or water supply), food sources, personal care products, and manufactured products that interfere with the normal function of your body's endocrine system.

What are EDCs?

EDCs are chemicals or mixtures of chemicals that interfere with the way the body's hormones work.

Some EDCs act like "hormone mimics" and trick our body into thinking that they are hormones, while other EDCs block natural hormones from doing their job. Other EDCs can increase or decrease the levels of hormones in our blood by affecting how they are made, broken down, or stored in our body. Finally, other EDCs can change how sensitive our bodies are to different hormones.

EDCs can disrupt many different hormones, which is why they have been linked to numerous adverse human health outcomes including alterations in sperm quality and fertility, abnormalities in sex organs, endometriosis, early puberty, altered nervous system function, immune function, certain cancers, respiratory problems, metabolic issues, diabetes, obesity, cardiovascular problems, growth, neurological and learning disabilities, and more.

Sensitive Windows of Development

High EDC exposures during fetal development and childhood can have long-lasting health effects since there are periods where hormones regulate the formation and maturation of organs. Early-life exposures have been linked to developmental abnormalities and may increase the risk for a variety of diseases later-in-life. Importantly, various EDCs have been found to cross the placenta and become concentrated in the fetus' circulation. Other EDCs can be transferred from mother to infant through breast milk.

How are We Exposed?

Since EDCs come from many different sources, people are exposed in several ways, including the air we breathe, the food we eat, and the water we drink. EDCs can also enter the body through the skin.

Example of Common EDC Sources:

- Industrial chemicals and pesticides can leach into soil and groundwater, and make their way into the food chain by building up in fish, animals, and people.
- Non-organic produce can have pesticide residues
- Some consumer products contain EDCs or are packaged in containers which can leach EDCs, such as household chemicals, fabrics treated with flame retardants, cosmetics, lotions, products with fragrance, and anti-bacterial soaps
- Processed foods can accumulate traces of EDCs that leach out of materials used in manufacturing, processing, transportation, and storage
- Soy-based products contain phytoestrogens, which are chemicals produced by plants that mimic estrogen
- Household dust can contain EDCs such as lead, flame retardants, and PCBs from weathering construction material or furniture

Common EDCs	Used In
DDT, Chlorpyrifos, Atrazine, 2, 4-D, Glyphosate	Pesticides
Lead, Phthalates, Cadmium	Children's Products
Polychlorinated biphenyls (PCBs) and Dioxins	Industrial Solvents or Lubricants and their Byproducts
Bisphenol A (BPA), Phthalates, Phenol	Plastics and Food Storage Materials
Brominated Flame Retardants, PCBs	Electronics and Building Materials
Phthalates, Parabeans, UV Filters	Personal Care Products, Medical Tubing, Suncreen
Triclosan	Anti-Bacterial Soaps, Colgate Total
Perfluorochemicals	Textiles, Clothing, Non-Stick Food Wrappers, Mircowave Popcorn Bags, Old Teflon Cookware

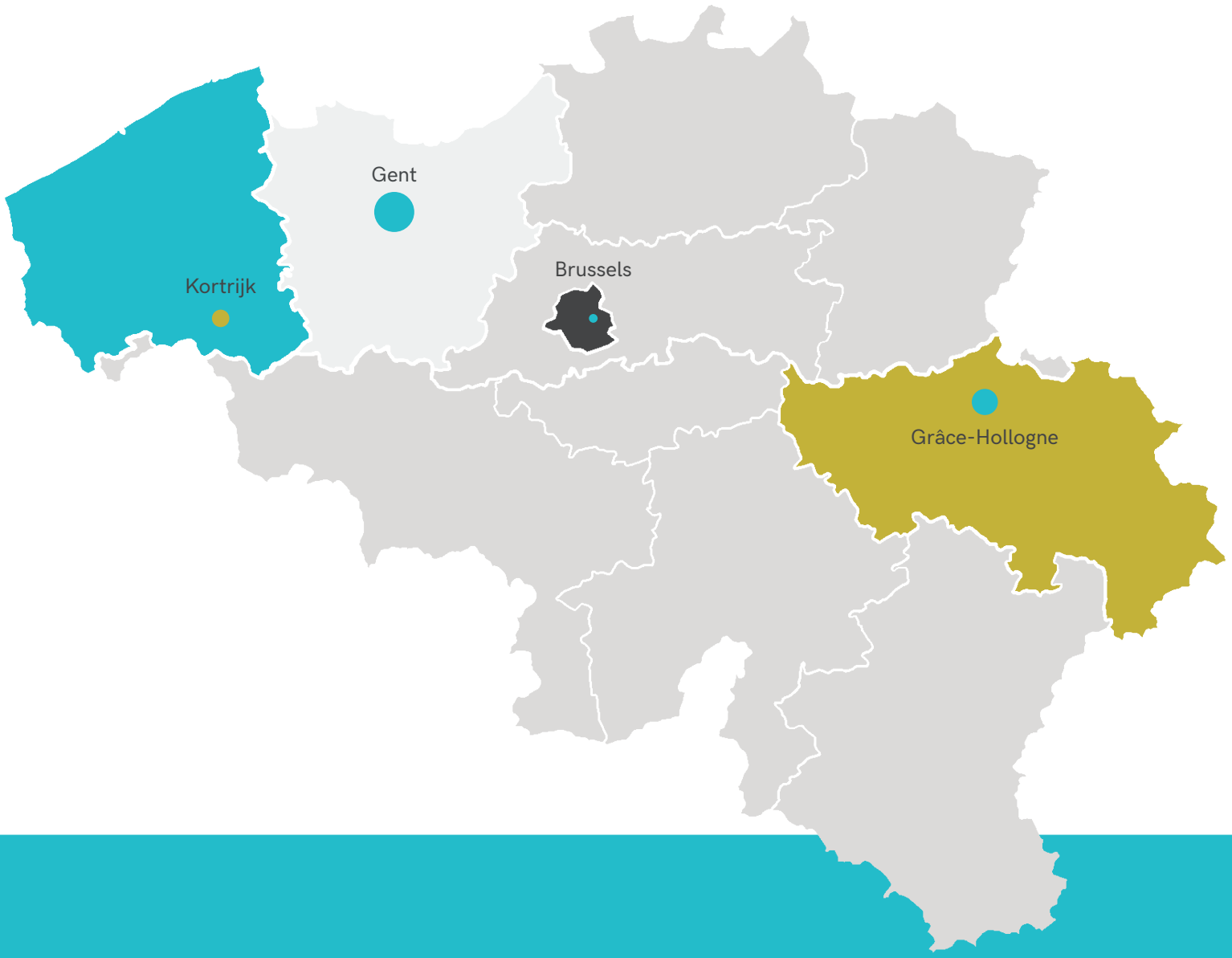
Centexbel is equiped to screen all EDCs

CREATE

CONNECT

INSPIRE

SOLVE



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