REACH Restriction proposal on PFHxA, its salts and related substances

Implications for the filtration sector

Call with European Turbines Network

3 September 2020

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COALITION OF FILTRATION MEDIA MANUFACTURERS

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COALITION OF FILTRATION MEDIA MANUFACTURERS

Coalition includes the three leading manufacturers of filtration and separation media, with a strong European presence:

AHLSTROM MUNKSJÖ

HOLLINGSWORTH & VOSE

Lydall
specialty engineered products and materials

These companies have joined forces to request a derogation for the use of C6 fluorinated chemistry under the REACH restriction proposal in *"filtration and separation media used in high performance air and liquid applications that require a combination of water- and oil-repellency"*.

C6 RESTRICTION PROPOSAL

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PFHxA Restriction proposal

PROPOSAL

PFHxA, its salts and related substances shall not be produced, used or placed on the market as such or as constituent of another substance, mixture, or article above certain thresholds.

→Covers C6 fluorinated chemistry (C6 side-chain polymers)

Thresholds:

- 25 ppb for PFHxA and its salts, and
- 1000 ppb for PFHxA-related substances.

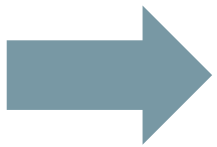
Transition period of 18 months from the entry into force of the restriction.

ISSUES

C6 are under the radar because of persistence and mobility (linked to the PMT/vPvM discussion), PFHxA is not classified as CMR or PBT, not SVHC.

No exemption proposed for use of C6 polymers in high performance filtration and separation applications although its use of C6 polymers remains without alternatives.

The only relevant exemption may relate to the use of C6 non woven media in medical respiratory equipment (exemption 9 c).



Need for a derogation!

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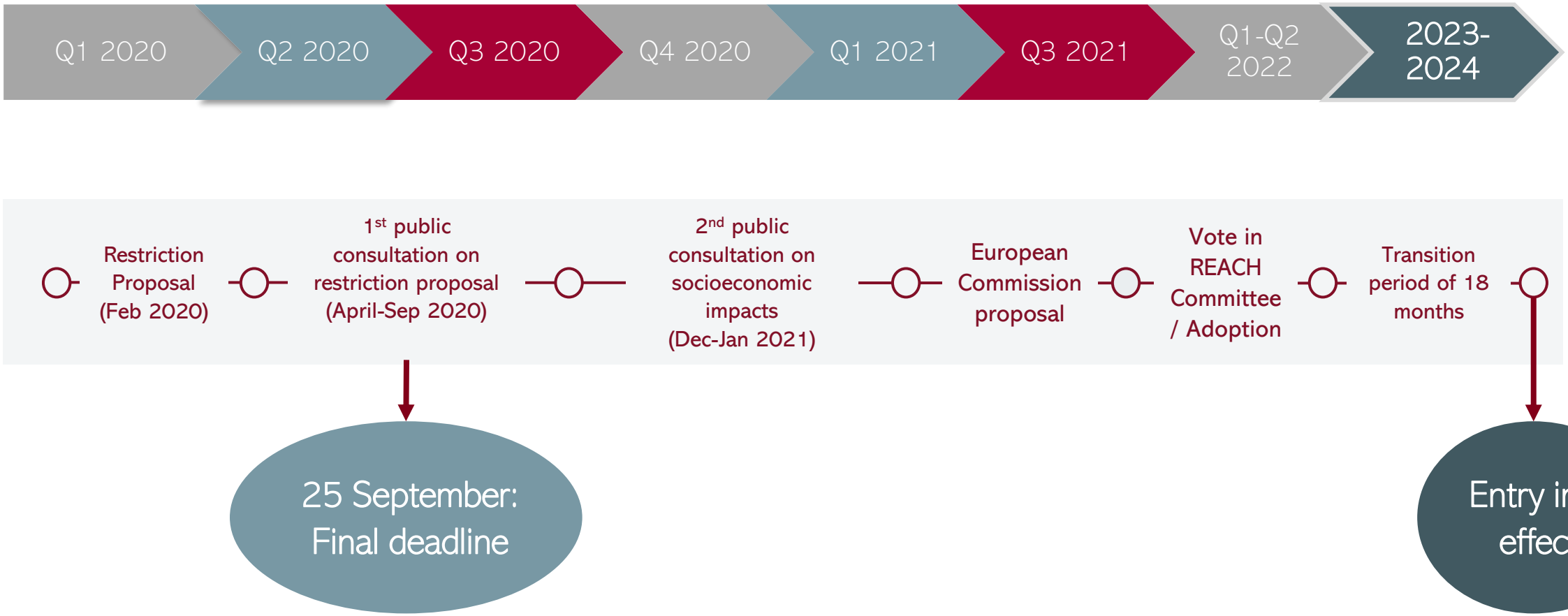
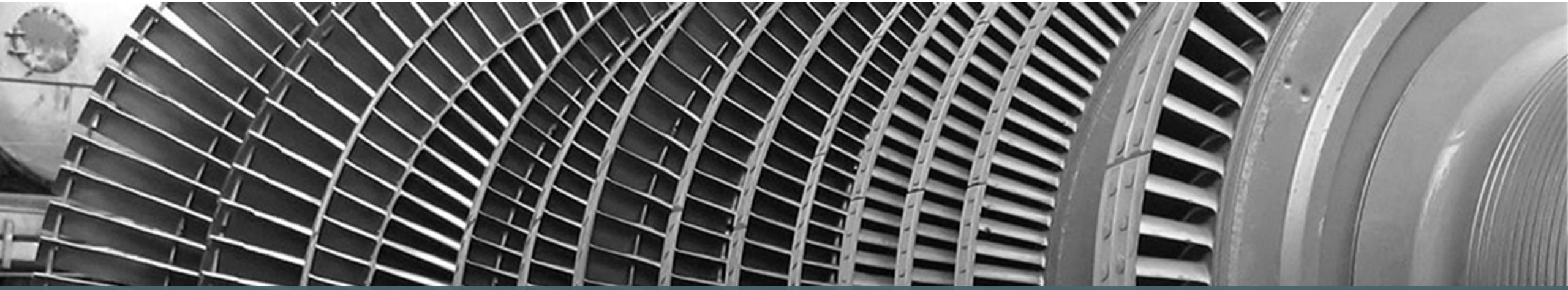
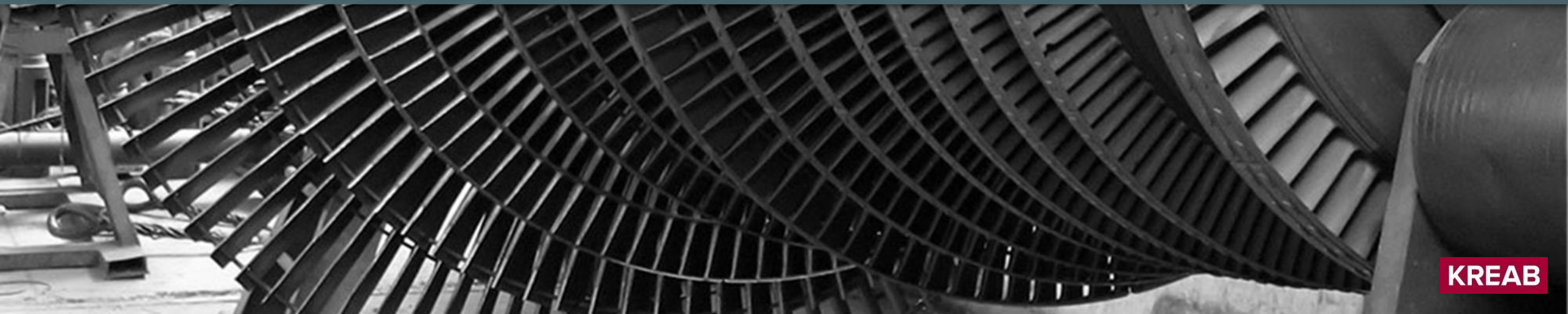
PFHxA Restriction Timeline





IMPORTANCE OF C6 POLYMERS IN FILTRATION AND SEPARATION



KEY PROPERTIES OF C6

Filtration media manufacturers add C6 during pulping step or in the chemical finishing treatment, in both cases in very small amount

Associated emissions to the environment are either non-detectable or very limited.

- **Durable water** and **oil repellency** due to unique low surface tension of fluorine, which helps **preventing fouling and ingress of salt** in off-shore conditions;
- **Glue-repellency** and **controlled wicking of compounding material;**
- **Reduced pressure drop** even in difficult operating conditions (high moisture content/ oily environment);
- High **dust holding capacity;**
- **Resistance** against **microbiological contaminants;**
- High **mechanical strength** maintaining stable shape of the filter and its pleats in highly humid/oily environments
- High **filtration efficiency even difficult operating conditions** (high moisture content at high temperatures); and
- **Compatibility** with other chemistries, final applications and processes.

These critical properties also contribute to **life-critical** and **energy-saving filtration** technologies on which many industries depend.

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KEY APPLICATIONS

- Gas Turbines
- HVAC and EPA/HEPA/ ULPA
- Air pollution control and dust collection
- Hydraulic applications
- Coalescers
- Fuel filtration and fuel-water separation
- Nuclear Industry
- Respiratory applications

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ALTERNATIVES

Non-fluorinated alternative candidates which have been evaluated:

- Flat modified polymers;
- Hyperbranched functionalized polymers;
- Paraffins: No sufficient temperature resistance. It is a paint wetting impairment substance;
- Silicones: It is a paint wetting impairment substance. Impurities of D4, D5, D6 which are listed as SVHCs;
- Polymeric compounds;

These candidate alternatives show a lower level of water repellency and no oil repellency.

Potential fluorinated alternatives are not seen as suitable alternatives due to separate workstream aiming at restricting “all PFAS”

There are no alternatives available to provide filtration and separation media with the essential combination of water- and oil-repellency.

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SOCIO-ECONOMIC IMPLICATIONS OF AN ABSENCE OF C6

- **Supply interruption** of filtration and separation media within the current technical specifications.
- An absence of C6-treated media will have **implications in the functioning of downstream applications, lead to increasing energy consumption** and **early replacement of filters.**
- The sector just completed its transition from C8 to C6 which already took 5 to 10 years, which represented a heavy economic burden on the industry. Transitioning to non-fluorinated chemistry will take even **more time and be significantly costlier**.
- The restriction may **penalise European filtration media and filter producers** that have already transitioned to C6 in a global competition context.

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PUBLIC CONSULTATION QUESTIONNAIRE

SECTION III. Specific Information Requests

Question 1: Additional uses

In addition to the uses described in the Annex XV dossier, are you aware of any other present or future intentional uses, or uses where impurities are above the concentration limit proposed?

The question concerns both uses in the EU and outside the EU involving imports to the EU. If such uses exist, please provide the following:

a. Description of the use, and

b. Quantities used and information regarding the potential risks to the environment (e.g. quantified release estimates).

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SECTION III. Specific Information Requests

8: For uses where substitution is regarded as being impossible:

a. What is the use?

b. What are the main obstacles to substitution?

c. Please describe the consequences that would result from the proposed restriction and provide information about the costs associated to these consequences.

10: For uses where substitution would be possible but is expected to lead to a lower quality of products or lower performance:

a. What is the use?

b. Please describe the impacts on the quality/performance of the products.

c. If possible, please provide an estimate of the economic impacts that could be expected on an annual basis.

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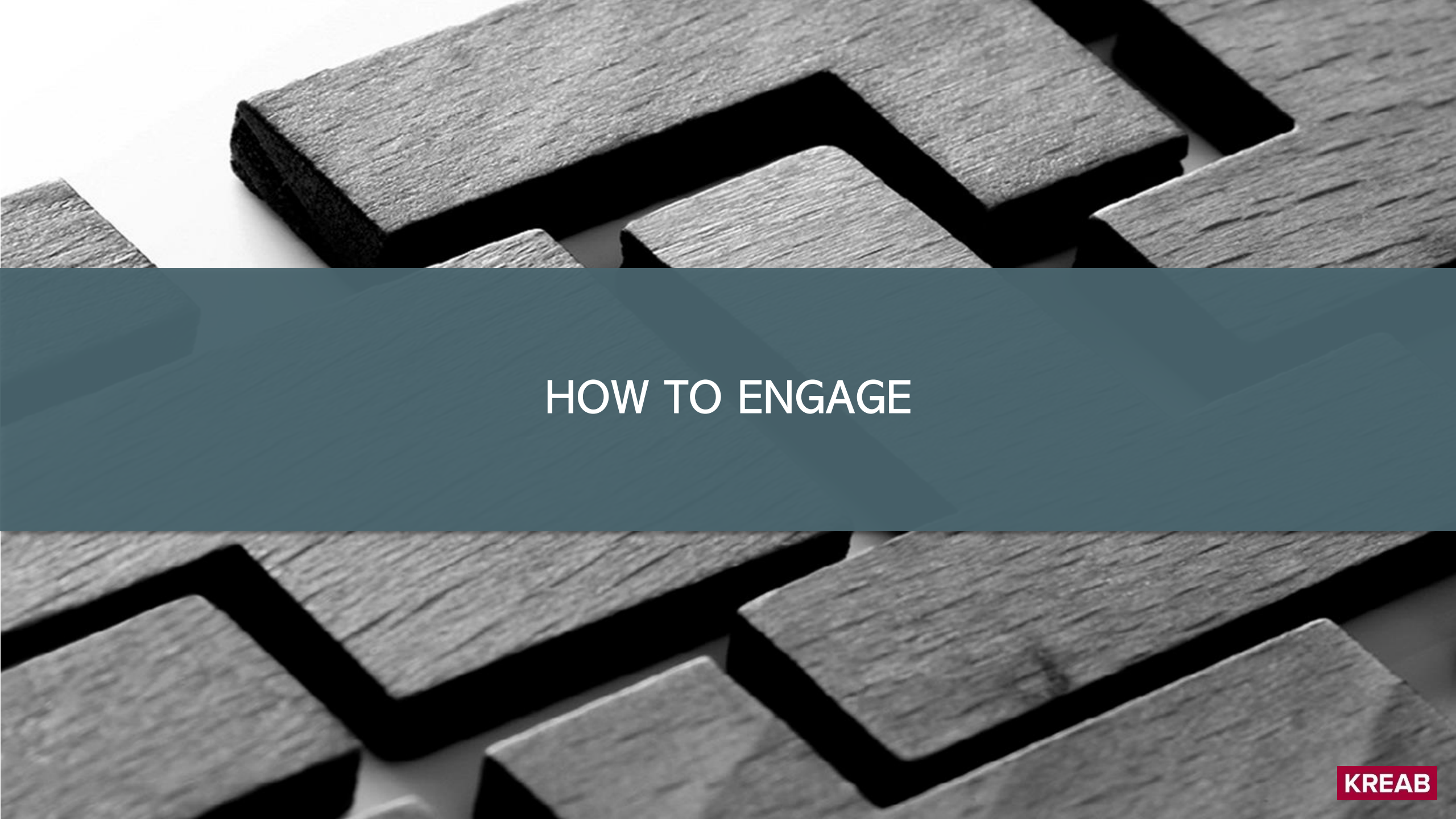

HOW TO ENGAGE

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HOW TO ENGAGE

Direct comments

Direct comments submitted by customers to the public consultation.

A 2-3 pages document could be sufficient.

This way, it is also possible to provide more **detailed information on applications and production processes**, possibly in a confidential manner.

Joint position paper

Position paper signed by ETN and other relevant associations.

This document could be possibly co-signed by the coalition.

This option shows **broad concern,** but it is less specific.

These options are complementary. Kreab is ready to support you with further guidance!

PRIORITY INFORMATION NEEDS

Question 1

Outline key steps in use of C6-treated filtration media for **production of filters**.

Highlight the importance of C6 **properties** (WOR/glue repellency) and **benefits** (e.g. energy efficiency)

Explain **typical conditions of use**, showing the low risk of release/exposure.

Provide information on handling of filters at **end-of-life** management.

Question 8-10

If available, provide information on (non) availability of **alternatives.**

Outline the **technical challenges of substitution for the production of filters,** as well as their **use in finished equipment** – requalification and technical standards.

Underlined the **economic importance of filter production** in the EU.

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QUESTION 1: EXTENDED INFORMATION GATHERING (OPTIONAL, COMPANY SPECIFIC)

Description of the use:

- A description of uses of C6-treated filtration media,
- A description of performance requirements and safety implications, and
- Estimated yearly production volumes of filters manufactured with C6.

Description of the substance function: essential criteria for fulfilling the substance function:

- Key properties: Water-, oil- and glue-repellence.
- Resulting benefits: Reduction of pressure drop properties in humid and/oily environments (e.g. low energy consumption and increased durability), higher dust holding capacity, prevention of microbiological growth, and protection against corrosion and damages.

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QUESTION 1: EXTENDED INFORMATION GATHERING (OPTIONAL, COMPANY SPECIFIC)

Description of typical conditions of use

- Further treatment of filtration media.
- To strengthen the exemption request, it is recommended to provide information showing low risk of release/exposure during use (e.g. encapsulated in larger equipment).

Waste Management

- How are the C6 containing filters handled at end of life?
- Is there any established waste code for filters? (e.g. incineration)
- Are there separate take back schemes for equipment in which these filters are integrated?

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QUESTION 8-10: EXTENDED INFORMATION GATHERING (OPTIONAL, COMPANY SPECIFIC)

Identification of possible alternatives:

- List of alternative substances or processes/technologies.
- Assessment of critical properties for filtration media.

Hazard and risk assessment: assessment of whether the transfer to the alternatives considered would result in reduced overall risks to human health and the environment

- No oil- nor glue-repellence: glue penetration inside the media, resulting in an increase of pressure drop properties as well as a reduced lifetime.
- Increase of pressure drop properties in humid and/oily environments: Increased energy consumption and premature change of the filter.

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QUESTION 8-10: EXTENDED INFORMATION (OPTIONAL, COMPANY SPECIFIC)

Technical feasibility of alternatives: process changes that may be required for possible transfer to the alternatives, or possible actions and timeframe within which technical feasibility can be achieved

- **Implications of use** of non-fluorinated alternatives in terms of performance,
- Explanation of the **re-qualification process** (steps and timeline) to be followed for the intended products,
- **Regulatory standards / product requirements** that cannot be achieved with non-fluorinated chemicals,

Economic impacts of an absence of derogation

- Socio-economic implications on your **individual company** (job losses, sales losses competitiveness)
- Socio-economic implications for the **filter production sector in the EU.**

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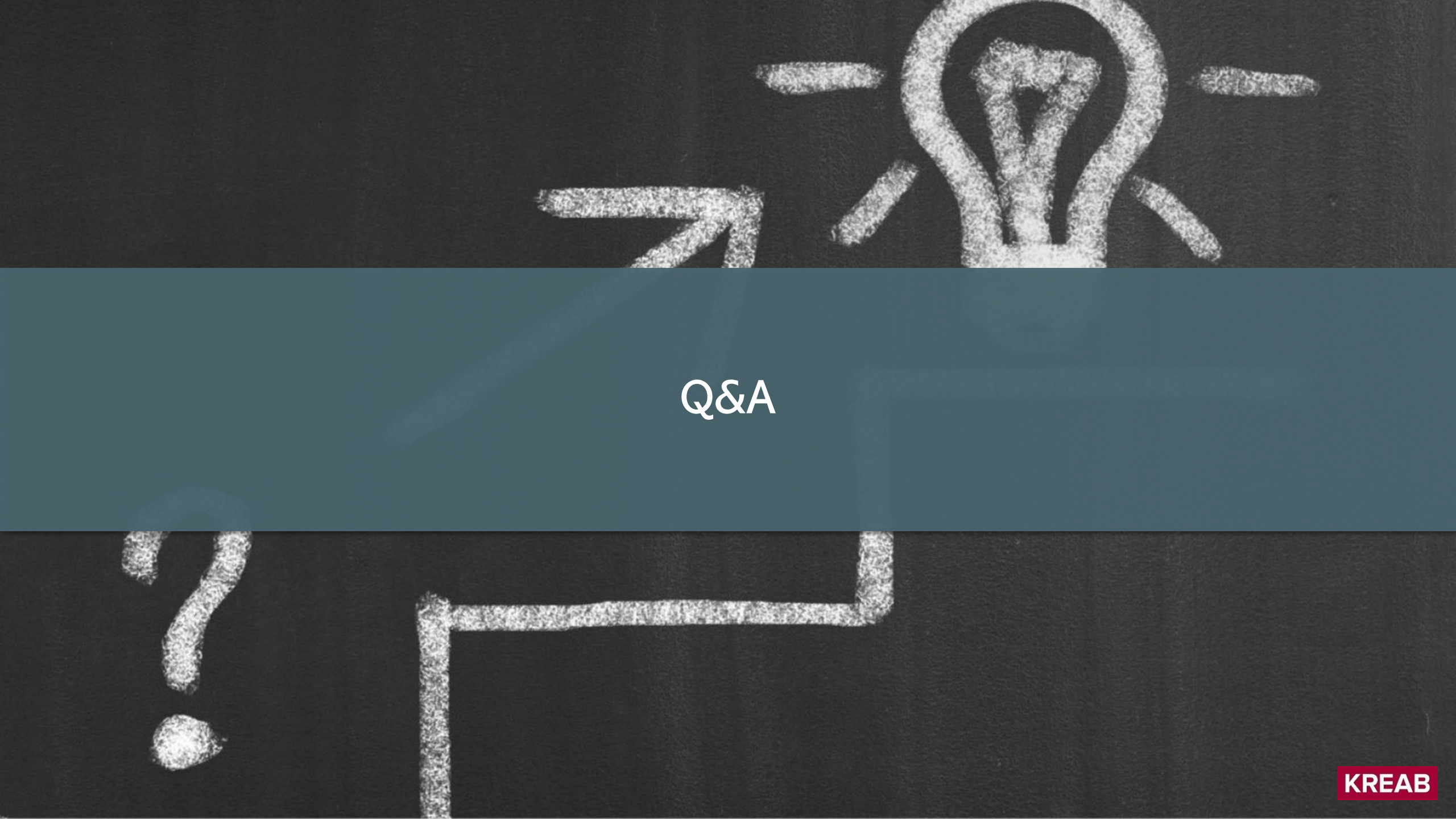
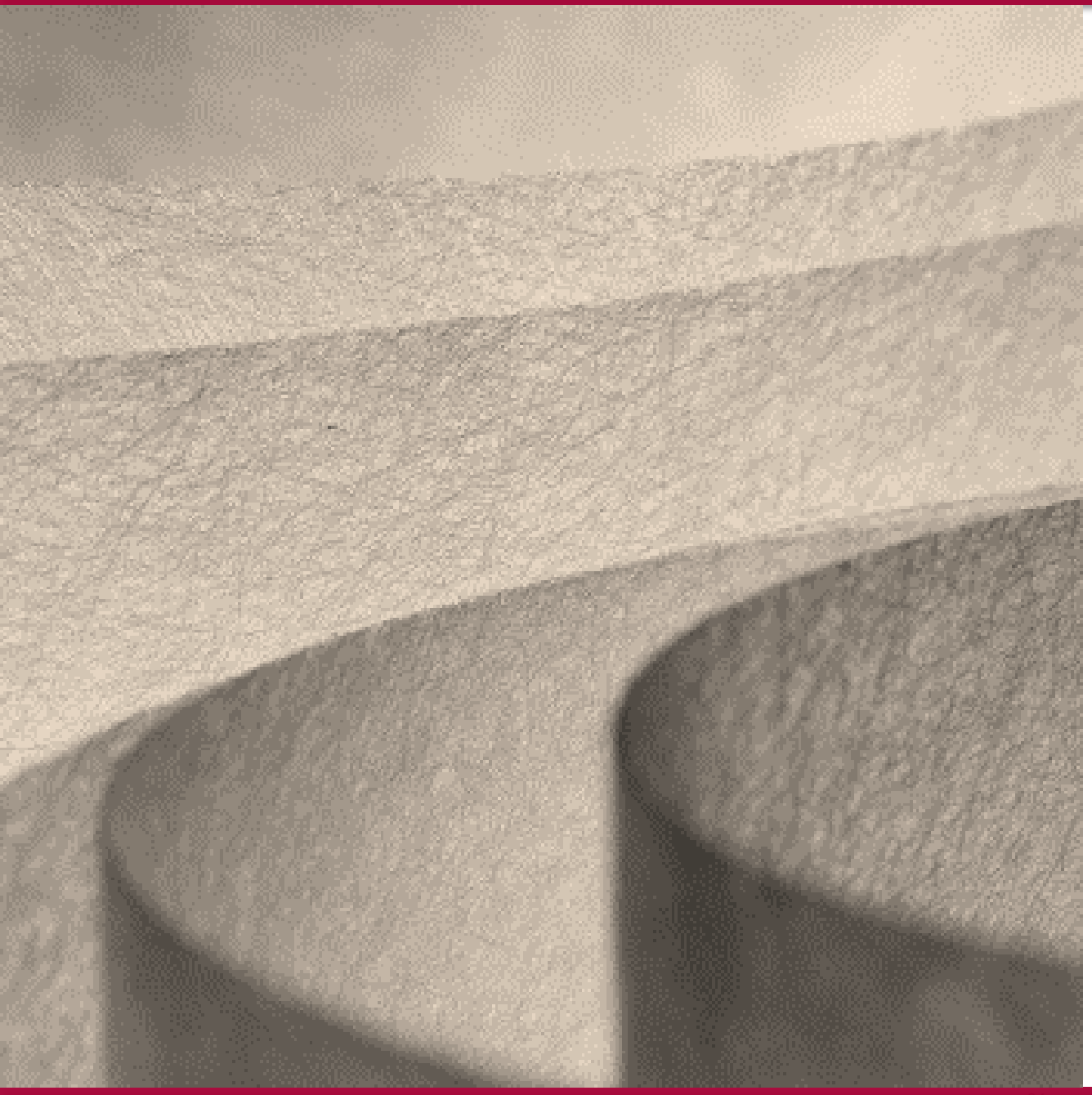


Q&A



THANK YOU!

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