

Food Contact Material challenges for Food processing line and possible solution

Marco Scialpi – 07.12.2020

Marco Scialpi – TÜV Rheinland FCM Global Business Development Head

Working experience

25 years experience in Food Safety, Quality Management, Product Risk Management and IT.

TUV International GmbH as FCM Global Business Development Head and FCM Technical Senior expert.

Develop, innovate and enhance FCM as regulatory, compliance, testing and digitalized services

Nestlé as R&D, Cereal Partner Worldwide, Deloitte & Touche MS, Cap Gemini, Ernest & Young and Det Norske Veritas



What I like at free time

Freediving apnea: to continue keeping the head under the water as well after work 😊

Cooking: Food is essential for an Italian to survive abroad and basic principle to understand other cultures

A project I like working on

TUVR 360° Digital compliance platform: to support value chain in handling in one place all product compliance requirements to safely distribute globally their own product and to develop the Product Digital Identity to enhance product consumer selection based on consumer values instead of only price or customer preferences.

TÜV Rheinland: at home on all continents

Since 1872 ensure Product quality & safety to Industry and Consumers



HQ in Cologne
Germany

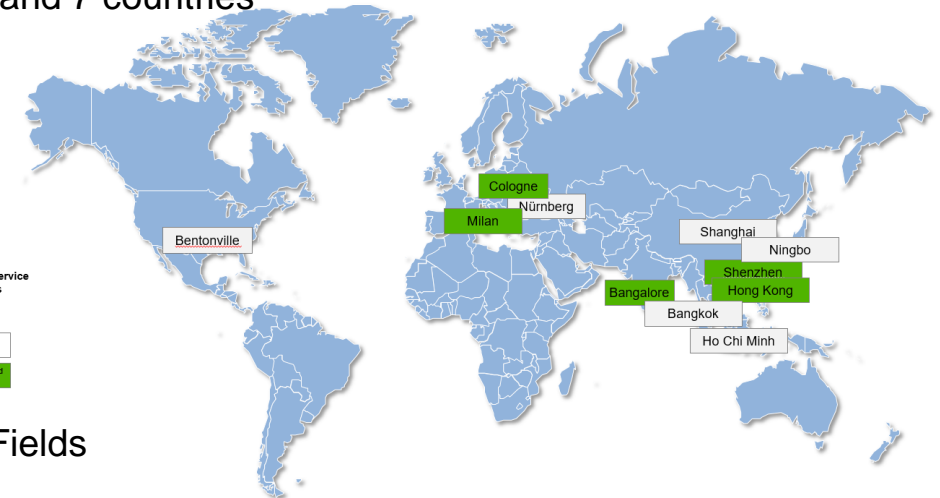
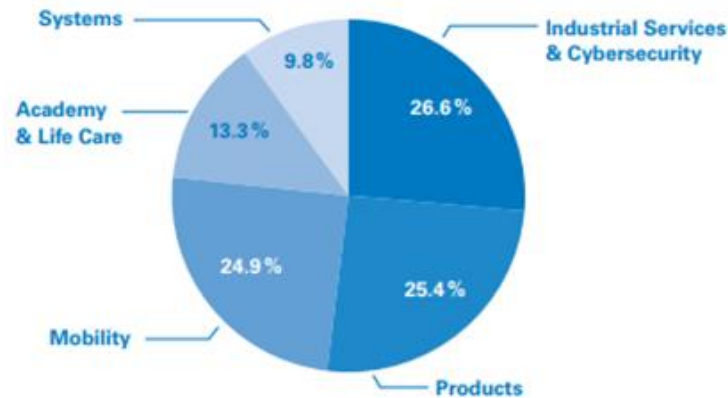
21.441

Employees worldwide 2019
57% outside of Germany

€ **2,085 mio € revenue 2019**
46% generated out of Germany



Over 500 offices and 11 FCM laboratories
In 56 and 7 countries

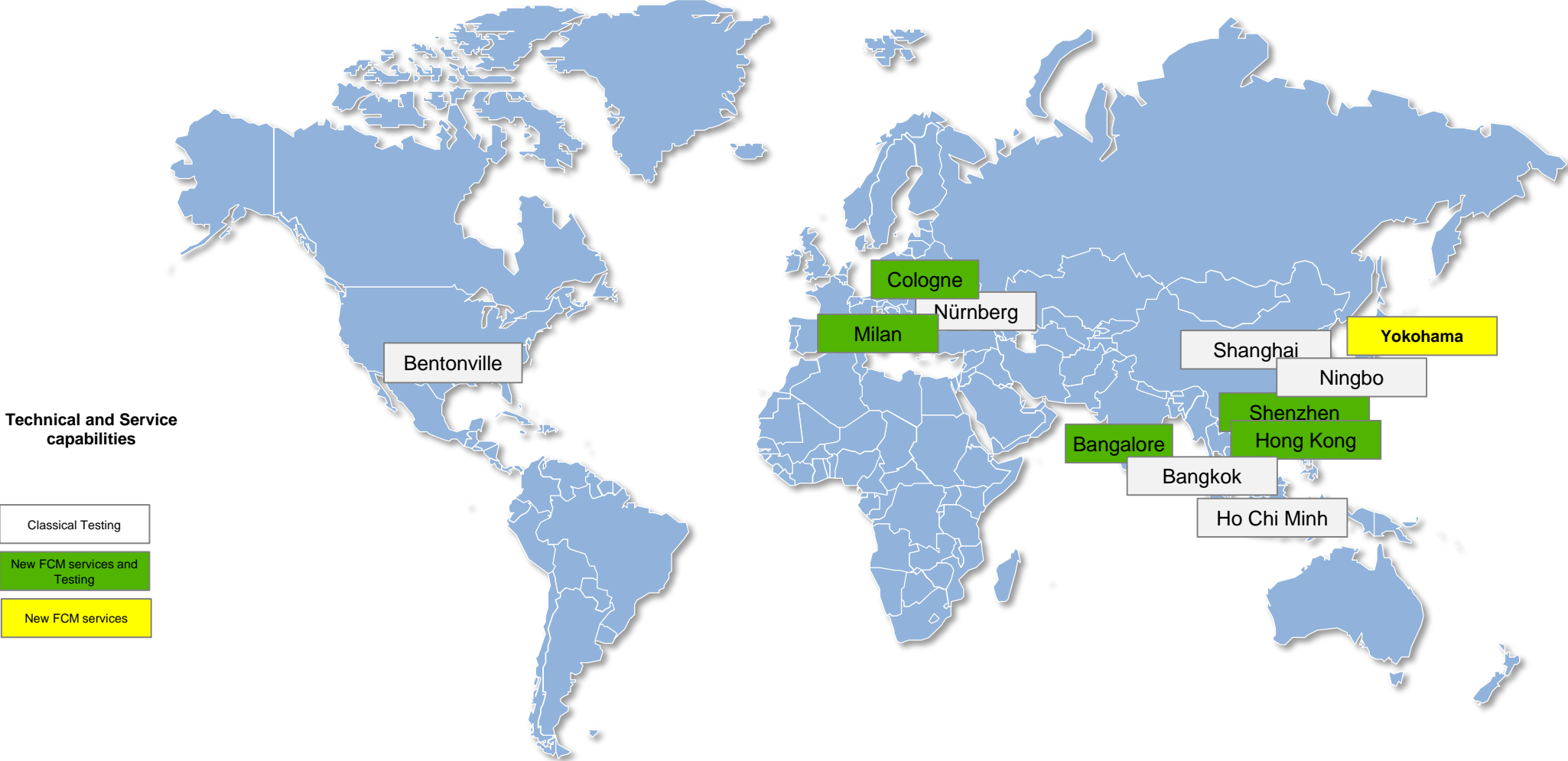


24 Business Fields

5 Business Streams

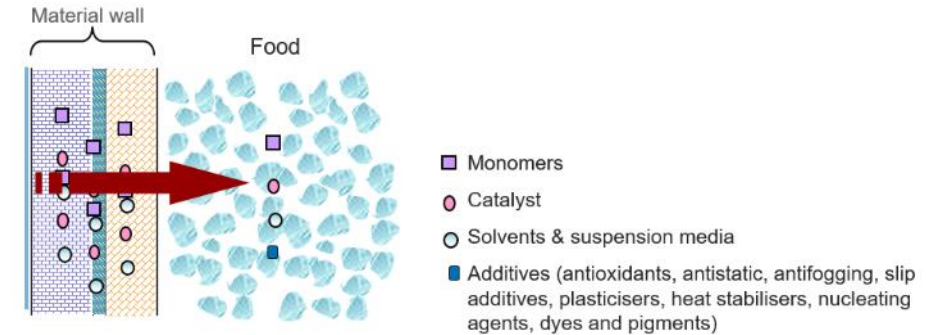


Global FCM Labs and FCM Services Capabilities



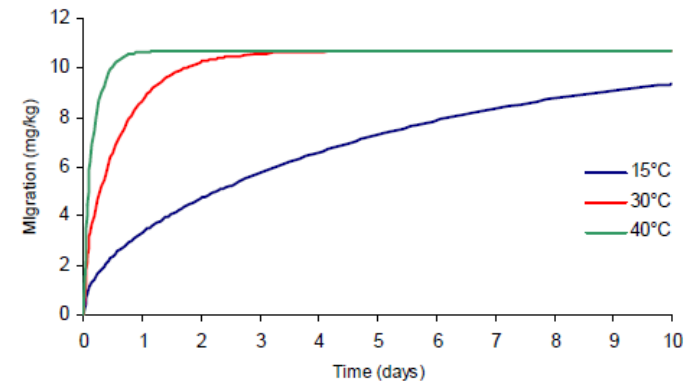
What is FCM migration into food?

Migration is the transfer of chemical substances via FCMs into food.

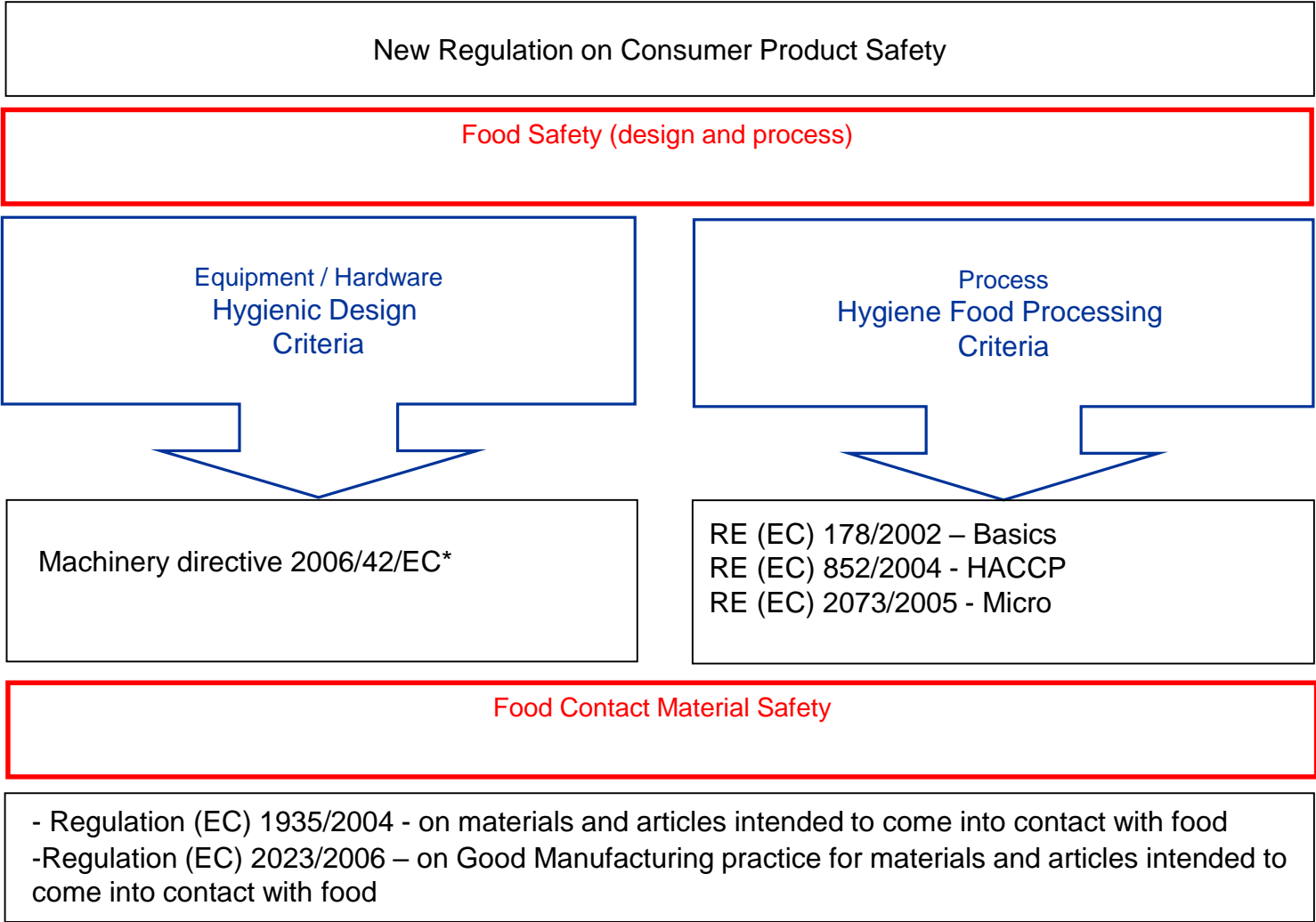


Factors affecting rate of migration from FCM into food

- Nature and composition of FCM (size, structure and type of molecules)
- Type of food
- Intended usage of FCM (e.g. food contact temperature, contact time & FCM surface area to food volume ratio)



FCM for food processing line regulatory request in Europe



Machine Directive 2006/42 aligned with FCM regulation



ANNEX I

Essential health and safety requirements relating to the the design and construction of machinery

GENERAL PRINCIPLES

2. SUPPLEMENTARY ESSENTIAL HEALTH AND SAFETY REQUIREMENTS FOR CERTAIN CATEGORIES OF MACHINERY

Foodstuffs machinery, machinery for cosmetics or pharmaceutical products, hand-held and/or hand-guided machinery, portable fixing and other impact machinery, machinery for working wood and material with similar physical characteristics must meet all the essential health and safety requirements described in this chapter (see General Principles, point 4).

2.1. FOODSTUFFS MACHINERY AND MACHINERY FOR COSMETICS OR PHARMACEUTICAL PRODUCTS

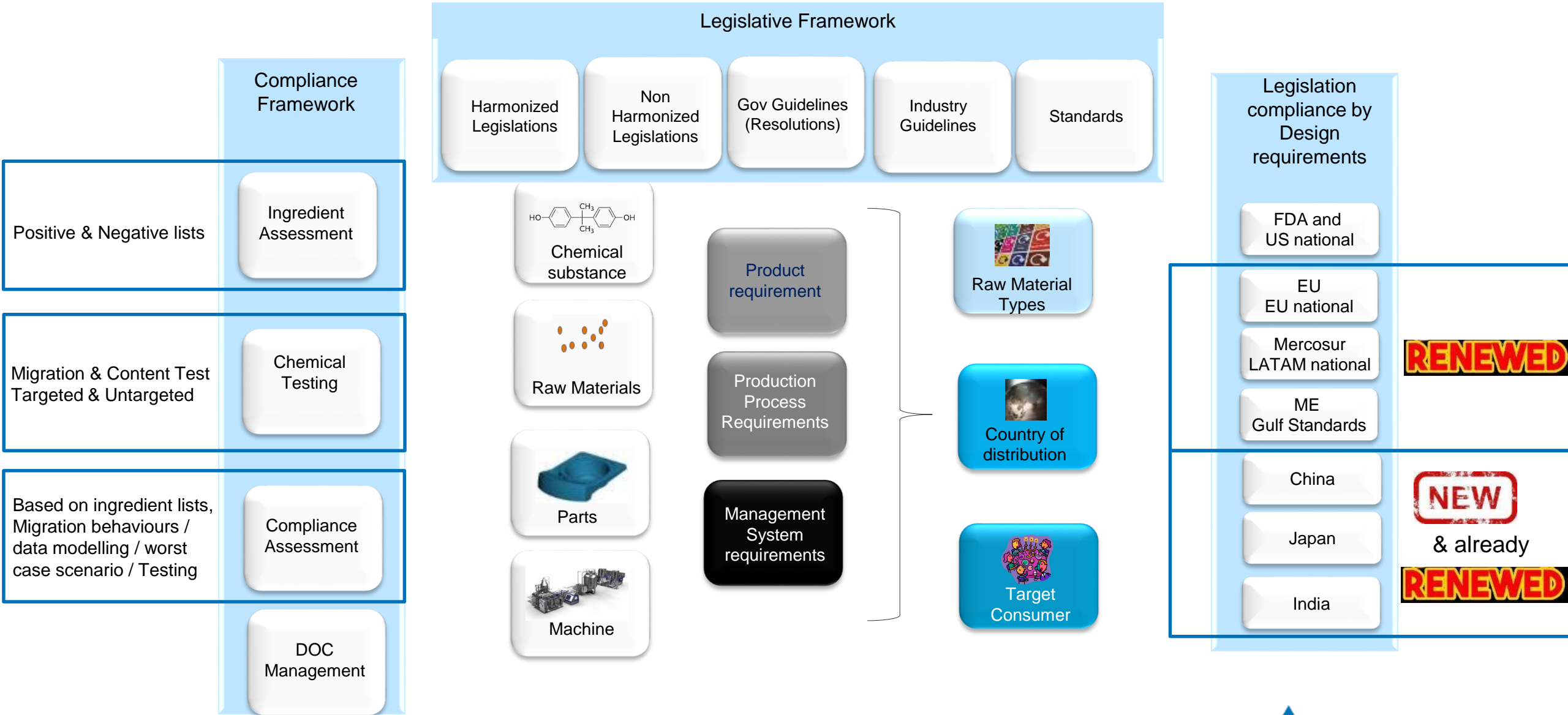
2.1.1. *General*

Machinery intended for use with foodstuffs or with cosmetics or pharmaceutical products must be designed and constructed in such a way as to avoid any risk of infection, sickness or contagion.

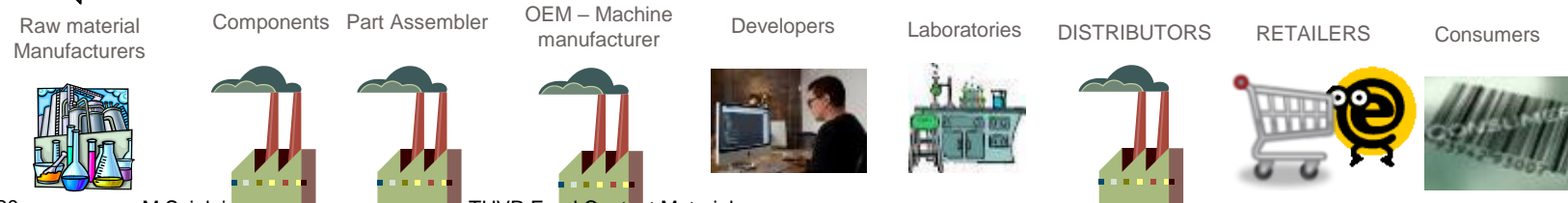
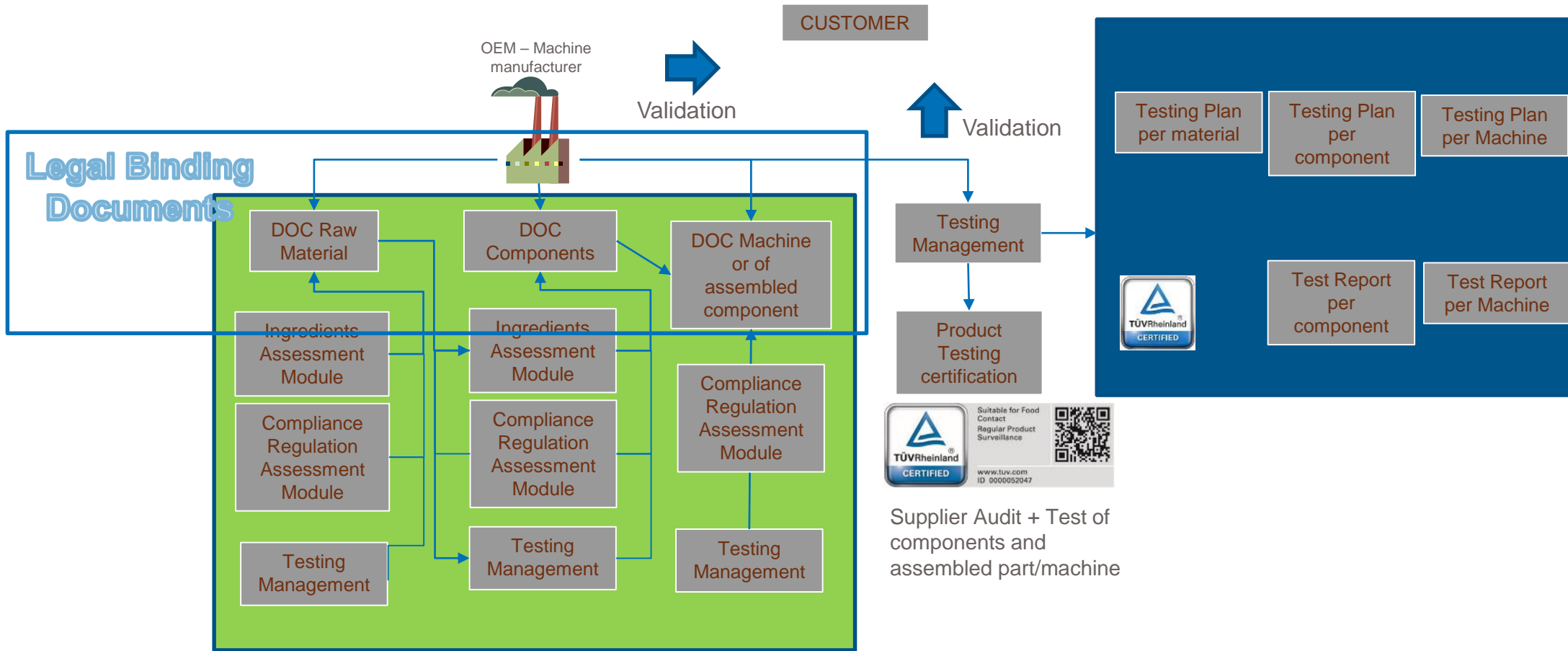
The following requirements must be observed:

- (a) materials in contact with, or intended to come into contact with, foodstuffs or cosmetics or pharmaceutical products must satisfy the conditions set down in the relevant Directives. The machinery must be designed and constructed in such a way that these materials can be cleaned before each use. Where this is not possible disposable parts must be used;

Complex Compliance Framework Logic and stronger renewal of the last 25years



FCM DOC Compliance process for FOOD SYSTEM



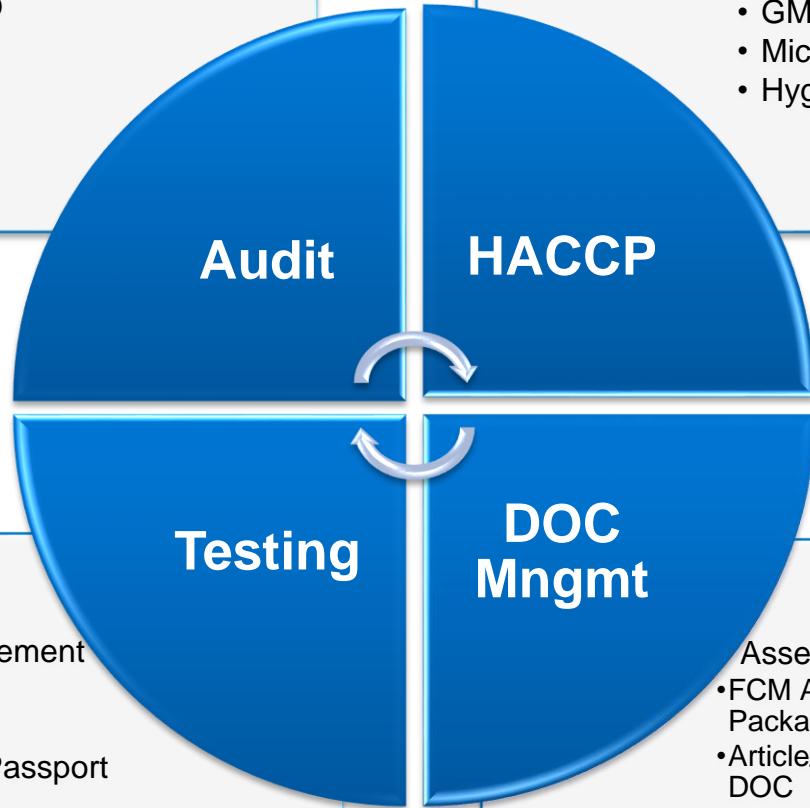
TUVR FCM Compliance Services to support you

Regulatory & Compliance Knowledge services

Compliance by Design services

- International standards BRCGS Packaging, ISO 22000, GMP+
- GMP audit services
- Pre-assessment audit services

- Design/Process HACCP
- GMP Visual standards
- Microbiological challenge test
- Hygienic Product certification



- Program testing management
- Testing plan definition
- Chemical testing / NIAS
- Chemical Water-Food Passport
- Sensory Test

- Assessment/Management of:
- FCM Assembled Article/Machine Packaging DOC
 - Article/Component/ Packaging DOC
 - Raw materials DOC

Continuous Supplier Training

Crisis Management Services



TUVR is the CQC Certification Recognized lab for testing and Initial factory audits for European Manufacturer sites, on both China GB standards and EU regulations.

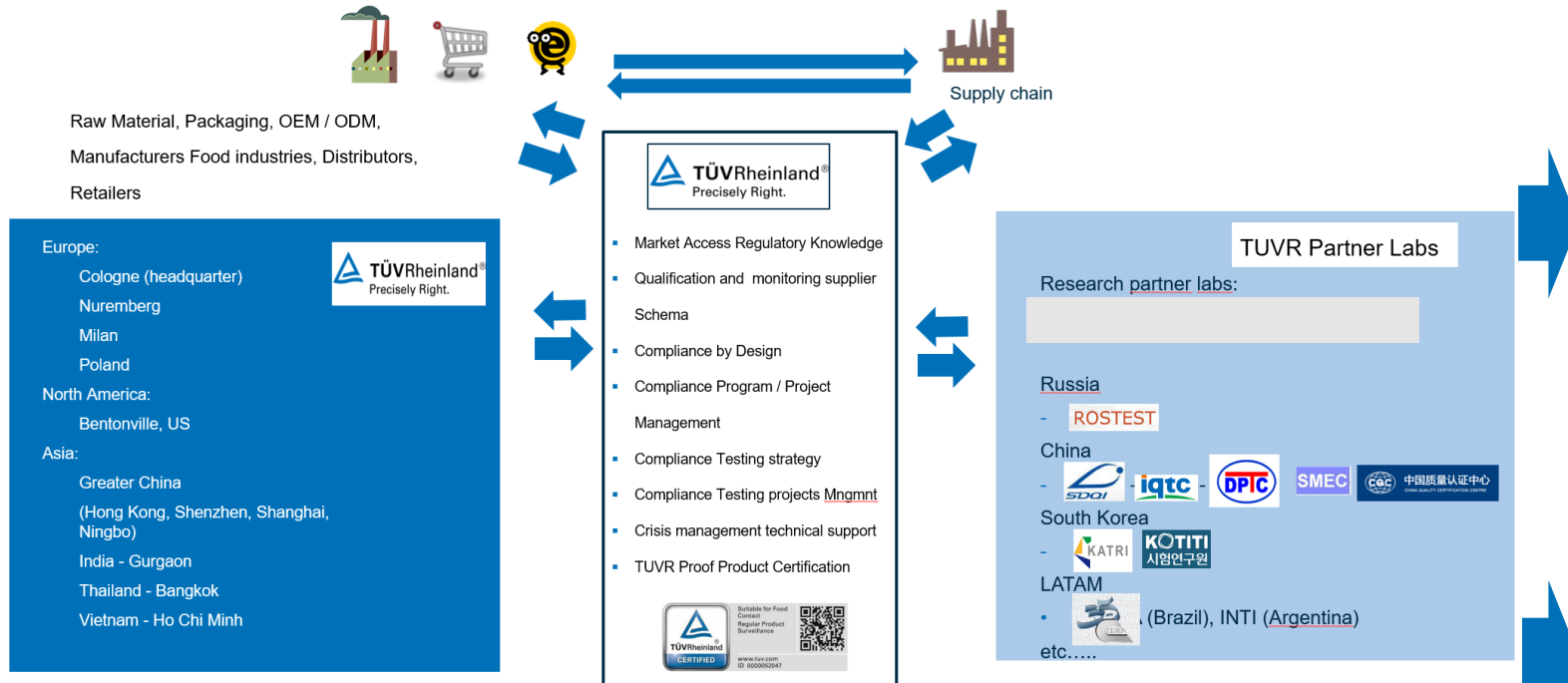


Our FCM Testing capability in global coverage

Testing standards capability

Europe		Asia - Pacific	North & South America
General EU*	Finland	Japan	Argentina
Germany	Poland	Korea	Brazil
Italy	Czech Republic	China	Colombia
France	Sweden	Taiwan	Mercosur
Switzerland	Austria	Singapore	United States (FDA)
Netherlands	Cyprus	Malaysia	
Belgium	Croatia	Thailand	Middle East
Norway	Portugal	Indonesia	Saudi Arabia
Luxembourg	Slovenia	India	
Denmark	Greece	Turkey	
Spain	Russia	Vietnam	
Hungary	Slovakia		

Internal and external partnership lab Networks



Customized Risk Base Profile testing plan

	Level 1	Level 2	Level 3
Test program	Test every single component	Composite test for component made of homogenous material - Composite testing of 3 components in single test group	Test only one component out of all homogenous materials - Select only one representative sample for testing
Cost	High		Low
Risk level	Low		High

How can we help?



TUVR FCM Web page: <https://www.tuv.com/landingpage/en/food-contact-materials/index-2.html>

TUV Rheinland Compliance service pages: <https://www.tuv.com/world/en/electrical-components.html?verbid=130>

Questions?

Please type your questions in the related chat or to send them to us by email!

For lack of time we may not be able to answer all of them immediately, but we will get in touch with you through dedicated communication.



Thank you for your attention

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<https://www.tuv.com/landingpage/en/food-contact-materials/index-2.html>

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