

# RoHS



## GMA Solutions - RoHS

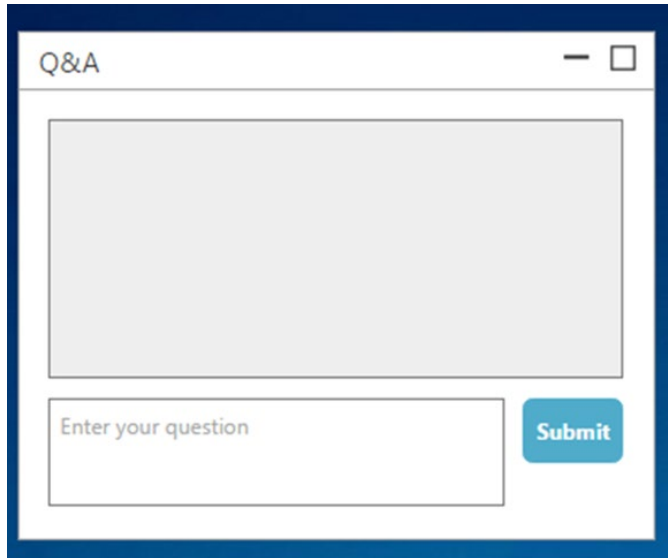
Global GMA  
- May 2020



**Mehr Wert.  
Mehr Vertrauen.**

**Add value.  
Inspire trust.**

# Housekeeping



The image shows a screenshot of a Q&A chat window. The window has a title bar with "Q&A" and standard window controls (minimize, maximize). The main area is a large, empty text box for questions. Below this is a smaller text input field with the placeholder text "Enter your question" and a blue "Submit" button to its right.

- Everyone will automatically be placed on “mute mode” on entry to reduce background noise.
- Please send any questions you may have through the On24 Q&A chat function and they will be addressed at the end of the presentation.
- The session will be recorded and made available for download.

# About the presenter



**Theresa Glenna**, *GMA Senior Project Manager/Sales & Training Specialist*

- More than 15 years of global market access experience and 20 years of experience within the TÜV SÜD America Group
- A senior member of the USA based GMA team, dedicated to providing upfront support to ensure customers obtain correct information to make informed decisions about global markets
- Wide knowledge base for obtaining approvals on various product types, ranging from wireless and information technology equipment to household appliances, machinery, and more.

# Introduction

- RoHS stands for Restriction of Hazardous Substances, and impacts the entire electronics industry and many electrical products as well.
- Keep up-to-date with RoHS initiatives and compliance regulations worldwide.



# Country Requirements



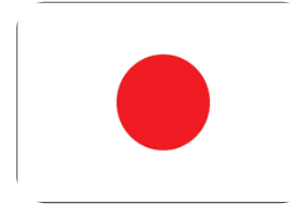
China



EAEU



India



Japan



Korea



Singapore



Taiwan



UAE



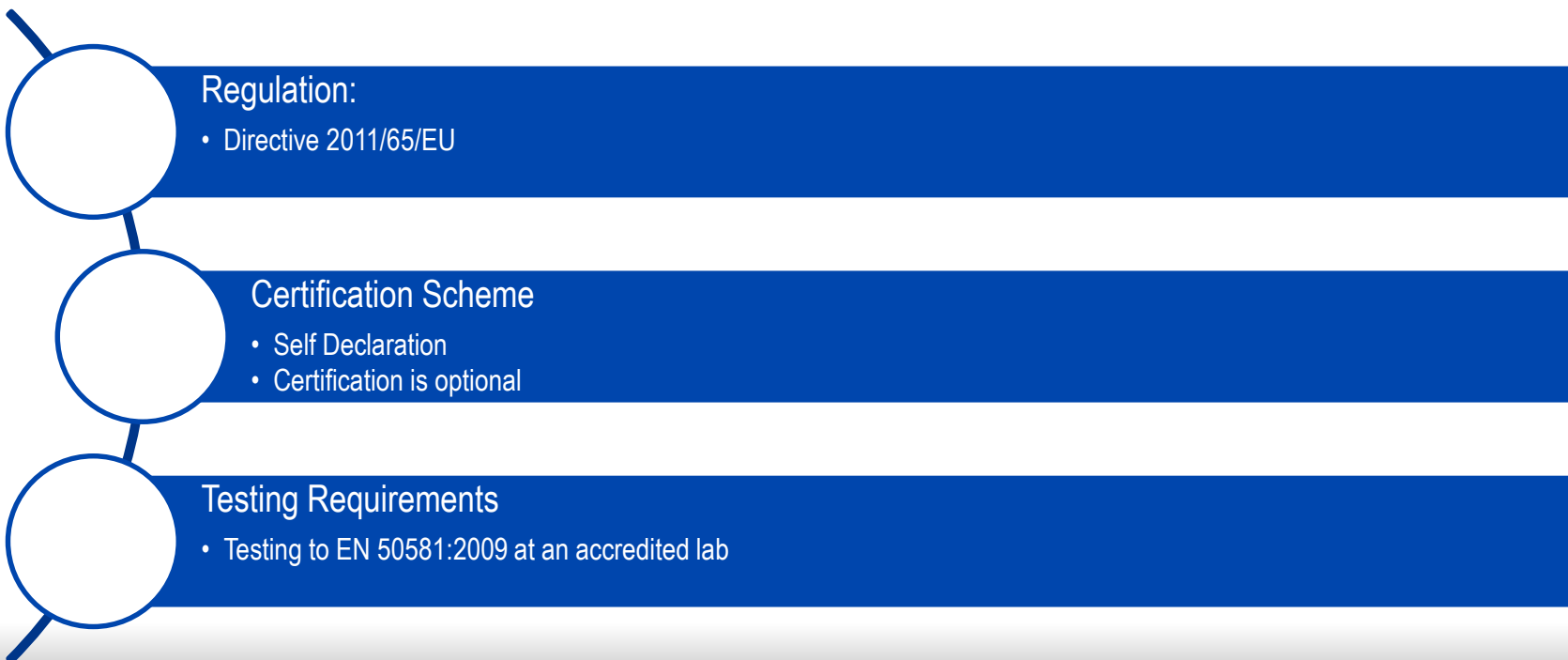
Ukraine



Vietnam

# European RoHS Regulation

Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing	
CE RoHS	Yes	Optional	Yes	Yes	No	Yes



Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biphenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%
Bis (2-ethylhexyl) phthalate (DEHP)	≤0.1%
Butyl benzyl phthalate (BBP)	≤0.1%
Dibutyl phthalate (DBP)	≤0.1%
Diisobutyl phthalate (DIBP)	≤0.1%

# Comprehensive List of Restricted Substances: Global Scale

<b>Lead</b>
<b>Mercury</b>
<b>Cadmium</b>
<b>Hexavalent chromium</b>
<b>Polybrominated biphenyls (PBB)</b>
<b>Polybrominated diphenyl ethers (PBDE)</b>
Bis (2-ethylhexyl) phthalate (DEHP)
Butyl benzyl phthalate (BBP)
Dibutyl phthalate (DBP)
Diisobutyl phthalate (DIBP)

# GMA Focus – China

Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing	
China RoHS 2.0	Yes	No	Yes	No	No	Yes

## Certification Scheme

- China RoHS 2.0
- 12 products have option of China Voluntary RoHS Certification or Self Declaration

## Reports Accepted

- Depends on scheme. EN/IEC RoHS Report for China RoHS 2.0 or
- Reports to applicable Chinese standards for voluntary RoHS certification

## Testing Requirements

- Testing at accredited lab for self declaration.
- In-country testing at Chinese accredited lab for voluntary certification scheme



Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biphenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%



# GMA Focus – China

What kind of products are in the scope?

**Regulated Product Categories:**

- Telecommunication device / Communications equipment
- Broadcasting and TV Equipment
- Computers and other office equipment
- Household appliances, electronic equipment
- Electronic Instruments
- Industrial electrical and electronic equipment
- Electrical tools
- Medical electronic equipment and devices
- Lighting Products
- Electronic culture, education, arts & crafts, sports and entertainment products, etc.

**Products that should fall within the requirements of restricted hazardous substance limits:**

1. Refrigerators
2. Air conditioners
3. Washing machines
4. Electric water heaters
5. Printers
6. Copiers
7. Fax machines
8. Televisions
9. Monitors
10. Microcomputers
11. Mobile communication devices
12. Telephones



# Labeling Requirements- China

## China RoHS 2.0

- Green “e” symbol = Product does not contain any hazardous substances exceeding limits and is a green environmentally friendly product that can be recycled.
- Orange symbol = This product contains certain hazardous substances and can be used safely during its environmental protection use period (as indicated by the number in the center), which should then enter into the recycling system.



## Voluntary Certification or SDoC for 12 specified products

- Must use one of the below marks in addition to the green or orange symbol above.



Label 1: China Voluntary RoHS Certification



Label 2: Self Declaration



# GMA Focus – Eurasian Economic Union

Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing*	
EAEU-RoHS	Yes	Yes	No	Yes	No	Yes

## Certification Scheme

- EAEU RoHS DoC, Technical regulation: EAEU TR 037/2016

## Reports Accepted

- EN/IEC RoHS Test Reports (EN 50581, IEC 62321 parts 1, 2, 3, 4, and 5)

## Testing Requirements

- Testing at an ISO 17025 accredited lab with applicable standards in scope
- Alternative: Risk Assessment according to IEC63000 plus additional documentation



Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biphenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%

# GMA Focus – EAEU

## What kind of products are in the scope?

- Electrical apparatus and appliances for domestic use.
- Electronic computers and devices connected to them, including their combinations.
- Means of telecommunication (terminal telecommunication devices).
- Copiers and other electrical office (office) equipment.
- Electronic tools (manual and portable electric machines).
- Sources of light and light equipment, including equipment, built into furniture.
- Eelectromusical tools.
- Game and trading automatic machines.
- Cash registers, ticket printing machines, ID card readers, ATMs, information kiosks.
- Cables, wires and cords intended for use at a rated voltage of not more than 500 V AC and / or DC, except for fiber optic cables.
- Automatic switches and residual current devices.
- Fire, security and fire-security detectors.



# GMA Focus – EAEU

## Implementation Date

- March 1, 2020

## Documentation Required

- EU RoHS DoC
- Internal or 3<sup>rd</sup> party RoHS Test Report\*
- ISO 9000 (or other QMS) Certificate of factory
- Manual in Russian
- **\*Note:** if RoHS Test report for end product is not available, we can alternately use:
  - Manufacturer's RoHS Risk assessment procedure
  - Supplier and material confidence assessment
  - Bill of Materials
  - Supplier declarations/certificates for components
  - Evaluate the quality and trustworthiness of the technical documents

## Labeling Requirements

- Product should bear EAC mark



# GMA Focus – India

Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing	
India RoHS	Yes	No	Yes	No	Yes	No



**Certification Scheme**

- E-Waste (Management) Rules, 2016

**Reports Accepted**

- No. In country testing to EN 62321,
- Manufacturer to issue the SDoC based on Test report.

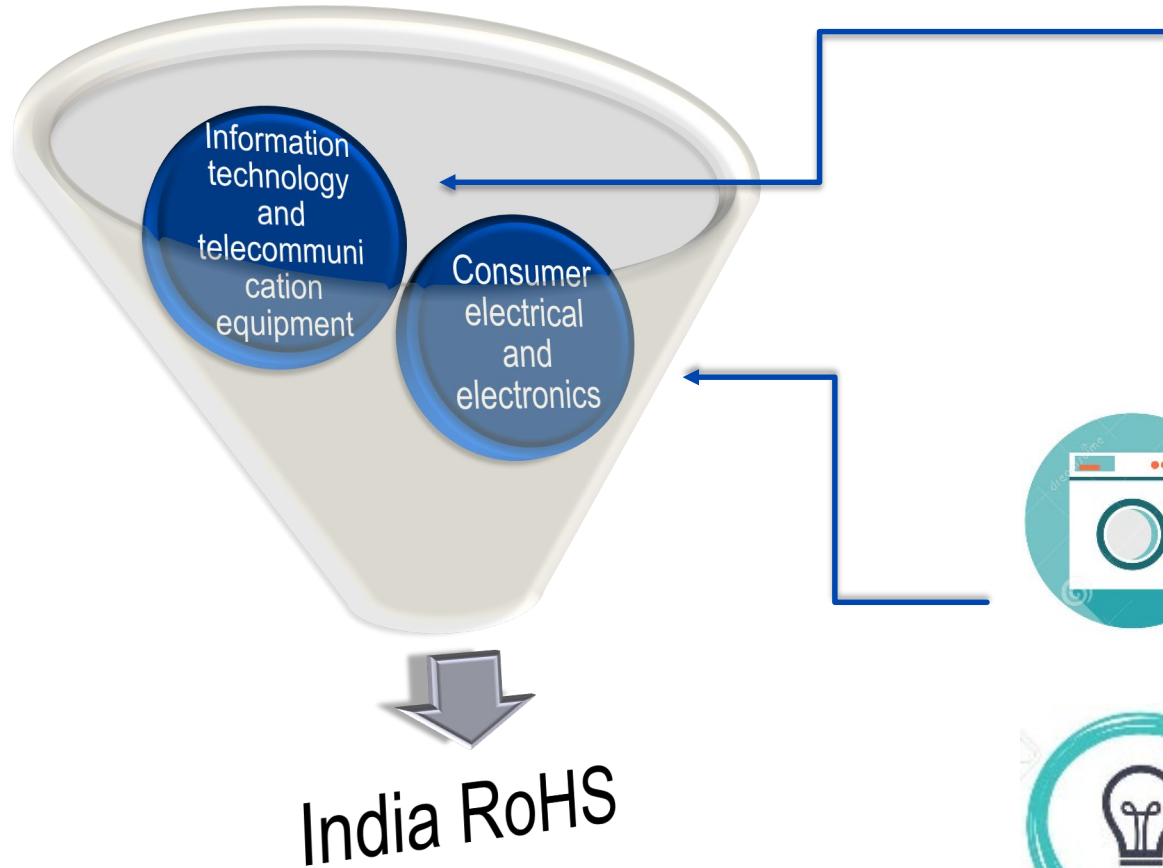
**Testing Requirements**

- In Country Testing – TUV SUD accredited lab in India is accredited

Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biphenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%

# GMA Focus – India

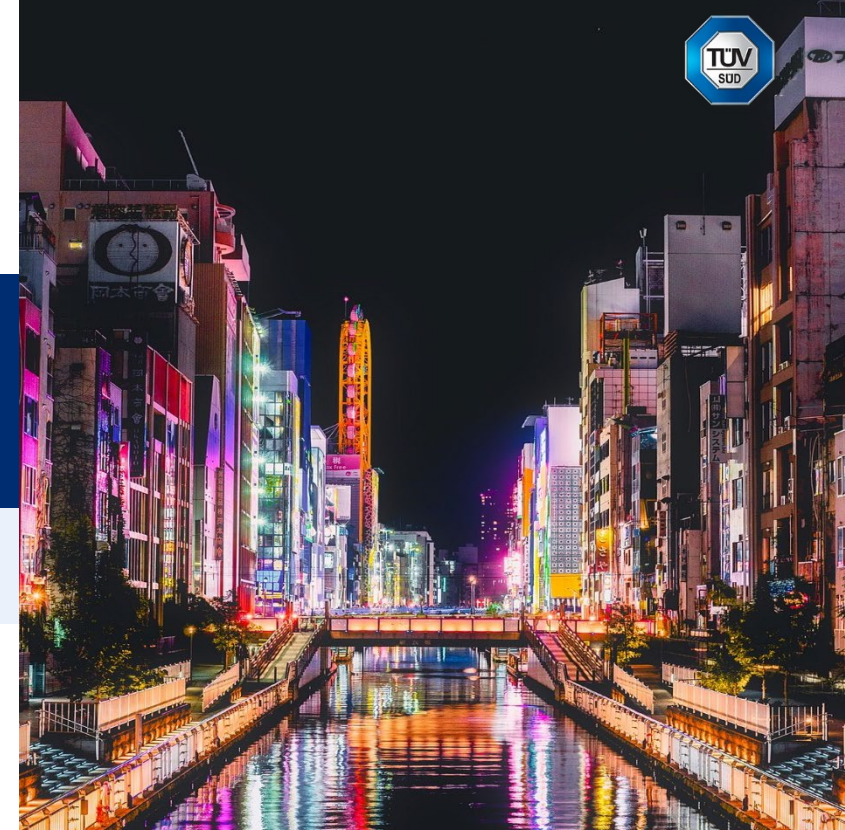
What kind of products are in the scope?



\*: contact with [Global GMA](#) for the exemptions

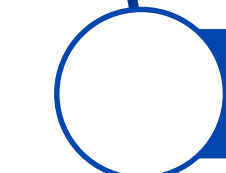
# GMA Focus – Japan

Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing	
J-MOSS	Yes	Yes	No	No	Yes	Yes



## Certification Scheme

- J-Moss: The Japanese Recycling Law (the Law for Promotion of Effective Utilization of Resources)



## Reports Accepted

- JIS C0950:2008



## Testing Requirements

- Testing to be performed by an accredited lab with related Japanese standard

Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biphenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%



# GMA Focus – Japan

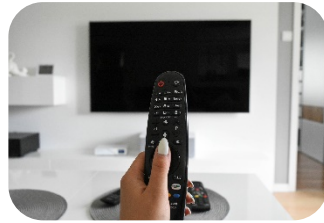
What kind of products are in the scope?



Personal computers



Unit-type air conditioners



Television Sets



Refrigerators



Washing machines



Clothes dryers



Microwaves



# Labeling Requirements- Japan

## Condition 1: Some of the 6 substances are over the target value

- Describe the presence condition of 6 substances on the website in Japanese in accordance with JIS. Also required to describe its URL in catalogues. **<Mandatory by law>**

**Example 1** Example of marking of content conditions when the substances to be calculated have a value exceeding the respective reference percentage contents

Equipment name : Television receiver Type designation : ○○-AAA

Coarse classification	Chemical substance symbol					
	Pb	Hg	Cd	Cr(VI)	PBB	PBDE
Mounting substrate	Exceeding 0.1 wt%	○	○	○	○	○
Cabinet	○	○	Exceeding 0.01 wt%	○	○	Exceeding 0.1 wt%
Cathode-ray tube	Exemption	○	○	○	○	○
Speaker	○	○	○	Exceeding 0.1 wt%	○	○

NOTE 1 The "exceeding 0.1 wt%" and "exceeding 0.01 wt%" indicate that the percentage content of the substance to be calculated is exceeding the reference percentage content.  
 NOTE 2 The "○" indicates that the percentage content of the substance to be calculated is not exceeding the reference percentage content.  
 NOTE 3 The "exemption" indicates that the substance to be calculated corresponds the exemption from content marks.

**JIS C 0950**

- Required to place the "content mark (orange mark)" on the product, packaging and catalogues. **<mandatory by law>**



注：“XX”、“YY”是物质的化学符号。  
 图3-带有物质化学符号的强制性橙色标志（Orange-Mark）



# Labeling Requirements- Japan

Condition 2: Some of the 6 substances are over the target value but it falls under the “exemptions” which are listed in the Annex B of JIS C 0950:2008

- Describe the presence condition of 6 substances on the website in Japanese in accordance with JIS. Also required to describe its URL in catalogues.  
<Mandatory by law>
- Do not need to place the "content mark (orange mark)" on the products, etc.
- Place the J-Moss Green mark on the products and/or packaging and/or catalogues voluntarily.

Condition 3: None of the 6 substances is over the target value (whether or not it falls under the "exemptions")

- Do not need to describe the presence condition of 6 substances on the website.
- Do not need to place the "content mark (orange mark)" on the products, etc.
- Place the J-Moss Green mark on the products and/or packaging and/or catalogues voluntarily



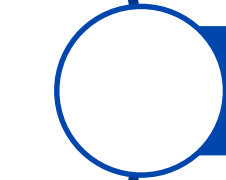
# GMA Focus – Korea

Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing	
Korea RoHS	Yes	No	Yes	No	Yes	No



## Certification Scheme

- Act for Resource Recycling of Electrical/Electronic Products and Automobiles



## Reports Accepted

- KS C IEC 62321



## Testing Requirements

- In-country testing by nationally accredited testing lab (KTL)



Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biphenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%

# GMA Focus – Korea

## What kind of products are in the scope?

### Electronic & Electrical Products



- TVs,
- Refrigerators,
- Mobile devices (include battery and charger),
- Washers (household use only),
- Personal computers (Include monitor and keyboard),
- Audio equipment (exclude portable audio),
- Air-conditioners,
- Printers,
- Copiers and fax machines
- New product scope

### Vehicles



- Passenger cars, vans and trucks under 3.5 tons
  - Only control 4 substances

Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%

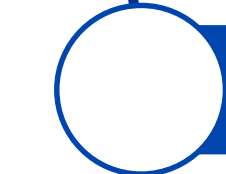
# GMA Focus – Singapore

Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing	
SG-RoHS	Yes	Yes (only for exceeding the limits)	Yes	Yes	No	No



## Certification Scheme

- Environmental Protection and Management Act (EPMA)



## Reports Accepted

- European RoHS Test Reports (EN 50581, EN 62321)



## Testing Requirements

- Testing at a ISO 17025 accredited lab with applicable standards in scope

Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biphenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%

# GMA Focus – Singapore

What kind of products are in the scope for EAEU?

Mobile phone

Portable computers

Refrigerators

Air conditioners

Panel TVs

Washing machines



# GMA Focus – Taiwan

Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing	
BSMI-RoHS	Yes	Yes (Part of BSMI certification)	Yes	Yes	No	Yes



**Certification Scheme**

- BSMI RoHS – CNS 15663 Section 5 “Marking of Presence”

**Reports Accepted**

- CNS 15050 (Harmonized with IEC 62321)
- European RoHS reports are accepted.

**Testing Requirements**

- Testing at ISO 17025 accredited lab with applicable standards in scope.

Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biophenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%



# GMA Focus – Taiwan

What kind of products are in the scope?









All ENE products regulated by BSMI certification scheme, except battery.

Examples:

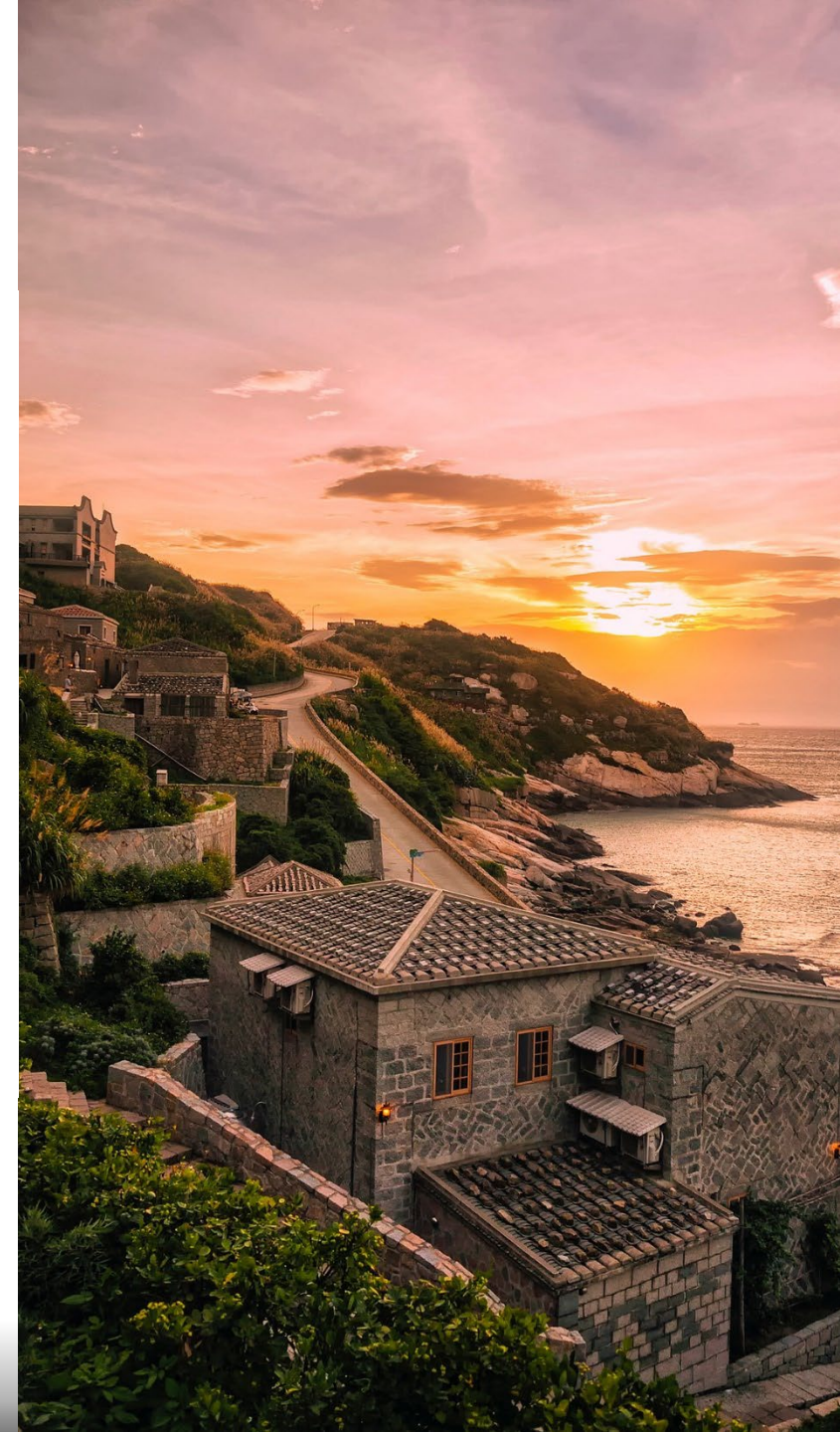
- Consumer Electronics
- Household Appliances
- IT Equipment
- Tools
- Etc.



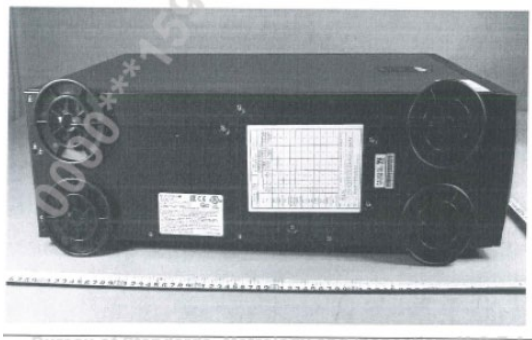
# Labeling Requirements- Taiwan

	All 6 hazardous substances do not exceed specified concentration limits, except the exemption from CNS 15663.	The product contains certain hazardous substances that have exceeded specified concentration limits, except the exemption from CNS 15663. Ex: RoHS(Pb)
RPC:	 R30001 RoHS  R30001 RoHS	 R30001 RoHS(XX,XX)  R30001 RoHS(XX,XX)
TABI:	 T30001 RoHS  T30001 RoHS	 T30001 RoHS(XX,XX)  T30001 RoHS(XX,XX)

- RoHS and the BSMI mark should NOT be separated.
- The size of the mark and characters should be applied proportionally.



# Taiwan \_ Location of the “Marking of Presence”



Product

Smallest package



樣張標示位置於產品外箱側面，  
限用物質含有情況標示表尺寸為長 10.1cm \* 寬 8.9cm

Rating label

User Manual



樣張標示位置  
The location of sample of the marking

該範圍為說明書，若為本體、包裝、標貼均檢附圖片或照片。

液晶平面電腦  
說明書  
廠牌 XXX

限制物質名稱 Restricted substance	RoHS (SVHC)	RoHS 限制物質名稱 RoHS Restricted substance name				
		鉛 Pb	鎘 Cd	汞 Hg	六價鉻 Cr(VI)	多環芳香烴 Polychlorinated Biphenyls (PCBs)
電鍍層 Coating	Y	○	○	○	○	○
印刷 Printing	Y	○	○	○	○	○
絕緣液 Insulation liquid	Y	○	○	○	○	○
絕緣材料 Insulation material	Y	○	○	○	○	○
其他 Others	Y	○	○	○	○	○

頁次 26/26

# GMA Focus – United Arab Emirates



Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing	
UAE-RoHS	Yes	Yes	Yes	Yes	No	Yes

**Certification Scheme**

- Mandatory under ECAS – UAE RoHS, Voluntary under EQM

**Reports Accepted**

- EN/IEC RoHS Reports
- **Alternative: Risk Assessment according to IEC63000 plus RoHS test reports of 3 critical components**

**Testing Requirements**

- ISO 17025 Accredited Lab with applicable standards in scope

Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biphenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%
Bis (2-ethylhexyl) phthalate (DEHP)	≤0.1%
Butyl benzyl phthalate (BBP)	≤0.1%
Dibutyl phthalate (DBP)	≤0.1%
Diisobutyl phthalate (DIBP)	≤0.1%

# GMA Focus – UAE

What kind of products are in the scope?

---

Large household appliances

---

Small household appliances

---

Information technology and telecommunications equipment

---

Consumer equipment

---

Lighting equipment

---

Electrical and electronic tools

---

Toys, leisure and sports equipment

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Medical devices (including in vitro diagnostic medical devices)

---

Monitoring and control instruments (including industrial monitoring and control instruments)

---

Automatic dispensers

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Other electrical and electronic equipment not covered by categories 1-10



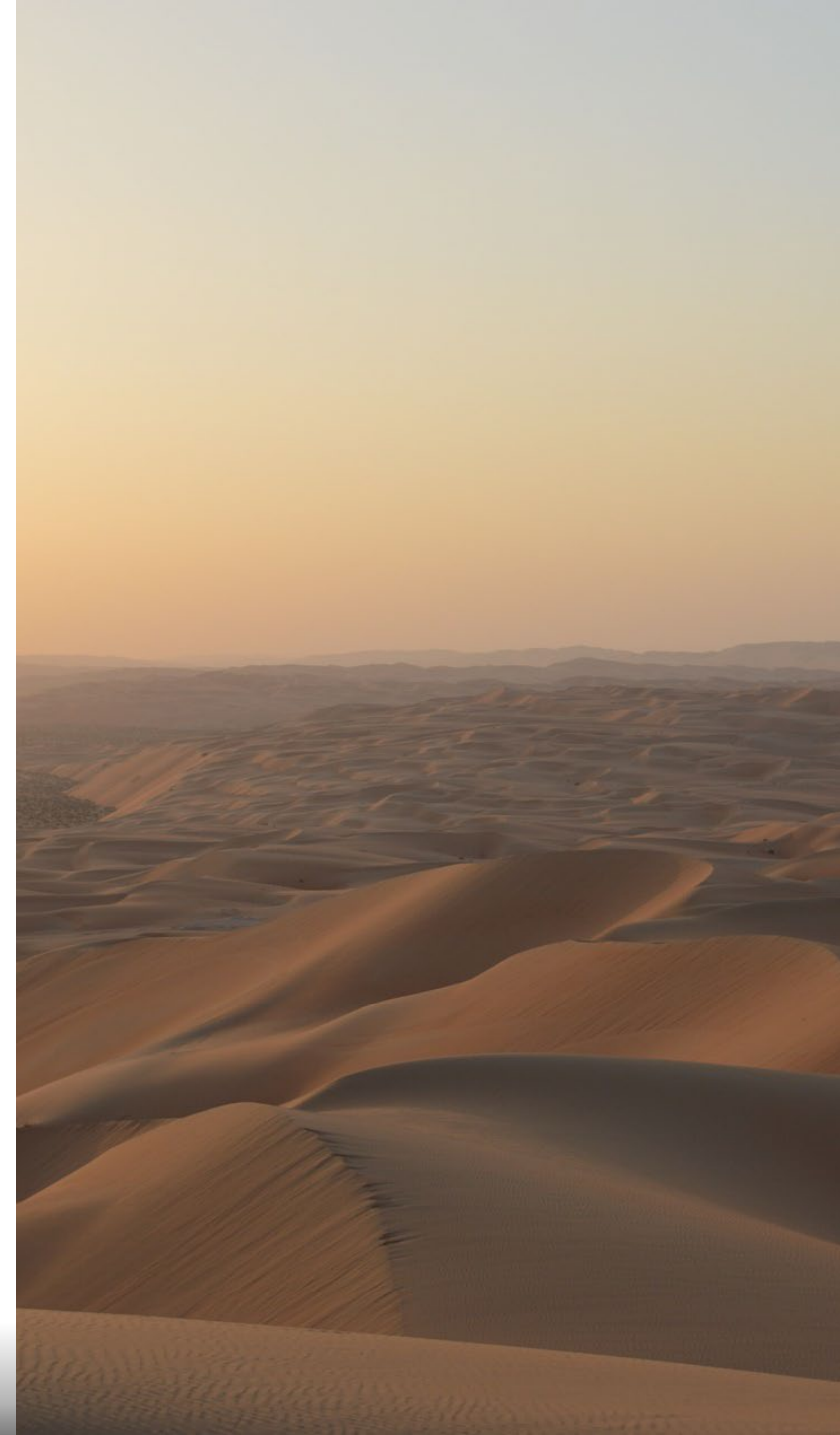
# GMA Focus - UAE

## Implementation Dates

- January 1, 2022
  - Cables and spare parts of products in scope
- January 1, 2020
  - All products in category 11, Medical devices, IVD, Monitoring and Control Instruments
- January 1, 2018
  - All other products except those mentioned above.

## Exemptions

- Military
- Large scale stationary industrial equipment
- Non-type approved vehicles/transport means
- Non-road mobile machinery (Professional use only)
- Active implantable medical devices
- Professional Photovoltaic panels
- R&D equipment
- Products for general lighting



# Labeling Requirements- UAE

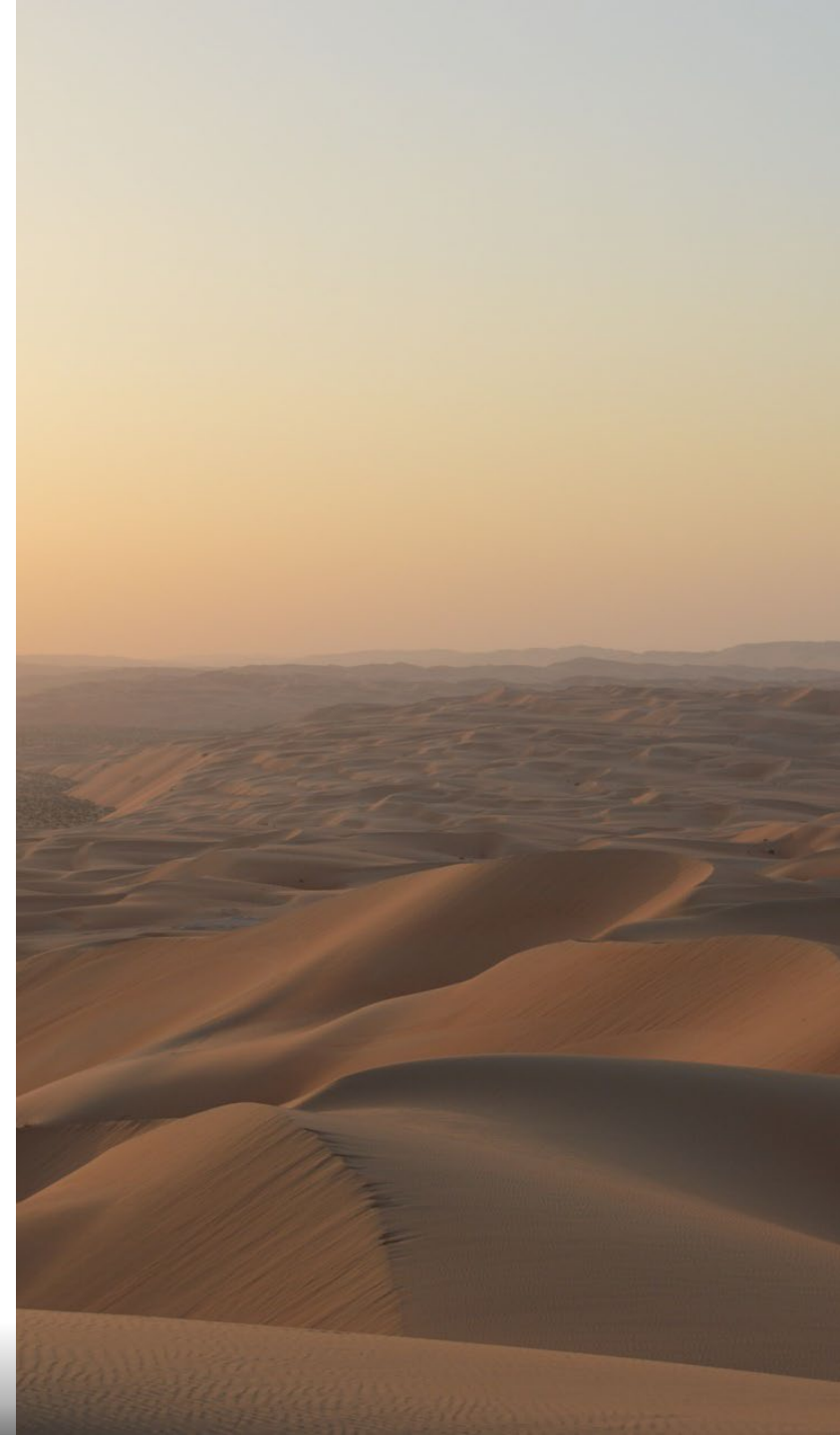
## ECAS



## EQM - Model H

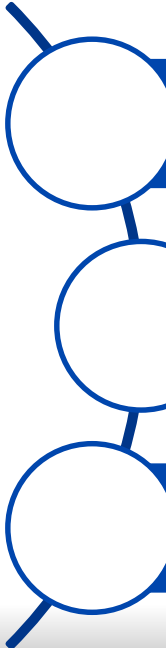


علامة الجودة الإماراتية  
Emirates Quality Mark



# GMA Focus – Ukraine

Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing	
Ukraine RoHS	Yes	Yes	Yes	Yes	No	Yes



## Certification Scheme

- Technical Regulation for RoHS and European Directive 2011/65/EU

## Reports Accepted

- IEC 62321

## Testing Requirements

- ISO 17025 Accredited Lab with applicable standards in scope

Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biphenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%
Bis (2-ethylhexyl) phthalate (DEHP)	≤0.1%
Butyl benzyl phthalate (BBP)	≤0.1%
Dibutyl phthalate (DBP)	≤0.1%
Diisobutyl phthalate (DIBP)	≤0.1%



# GMA Focus – Ukraine

What kind of products are in the scope?

Large household appliances

Small household appliances

Information technology and telecommunications equipment

Consumer equipment

Lighting equipment

Electrical and electronic tools

Toys, leisure and sports equipment

Medical devices (including in vitro diagnostic medical devices)

Monitoring and control instruments (including industrial monitoring and control instruments)

Automatic dispensers

Other electrical and electronic equipment not covered by categories 1-10



# Labeling Requirements- Ukraine

Non RF Products if UA CB was not involved



Applicable for Non RF products if UA CB was involved  
Applicable for all RF products



XXX

or



UA.TR.XXX



# GMA Focus – Vietnam

Scheme	Mandatory ?	Certification		Test Report Acceptance		Label
		Authority Certification	SDoC	IEC/EN RoHS Report	In Country Testing	
Vietnam RoHS	Yes	No	Yes	No	Yes	No

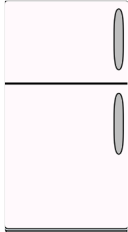
- Certification Scheme**
  - Vietnam Circular 30/2011/TT-BCT and Decision No. 4693/QD-BCT
- Reports accepted**
  - IEC 62321 is temporarily applied until new technical regulation is issued.
- Testing Requirements**
  - In-country testing at MIT Nationally Designated Laboratory




Restricted hazardous substances to be calculated	Requirements (wt %)
Lead	≤0.1%
Mercury	≤0.1%
Cadmium	≤0.01%
Hexavalent chromium	≤0.1%
Polybrominated biphenyls (PBB)	≤0.1%
Polybrominated diphenyl ethers (PBDE)	≤0.1%

# GMA Focus – Vietnam

What kind of products are in the scope?



Large Household appliances



Household appliances of small size




Telecommunication and IT equipment




Entertainment and similar appliances products



Lighting equipment



Electrical , electronic portable equipment



Sport and entertainment equipment



Automotive measuring equipment



# Labeling Requirements- Vietnam

## NO MANDATORY LABELING REQUIREMENTS

- Publicize the declaration in ways described in the circular:
  - Website of manufacturer or importer
  - Product manual (hard or soft copy)
  - Electronic media (CD, etc.)
  - Printed directly on the product or packaging



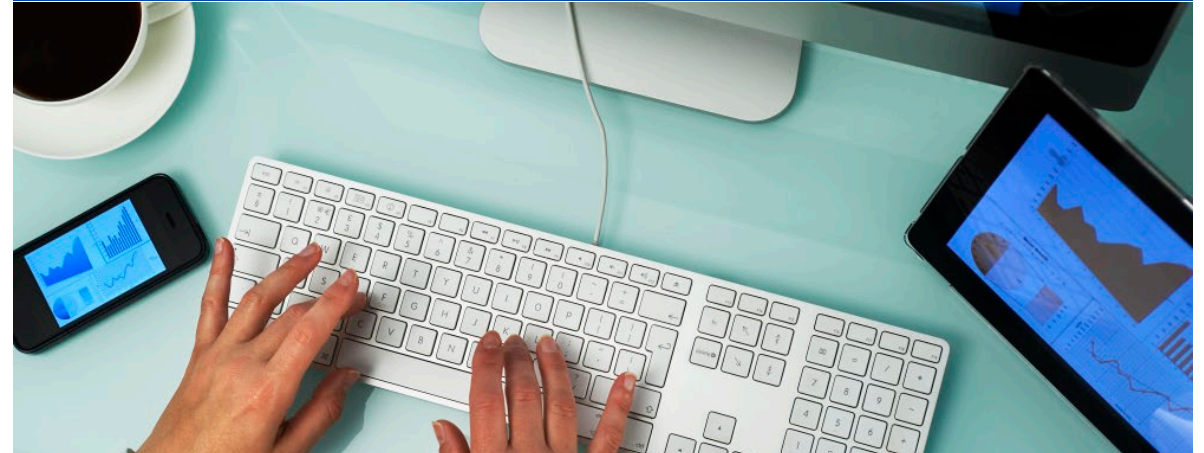
# Stay Informed

## Contact



- Understand the conformity requirements of your target country(s).
- Identify the conformity requirements that apply to your unique product.
- Assist with necessary data and procedures required as part of the application process.

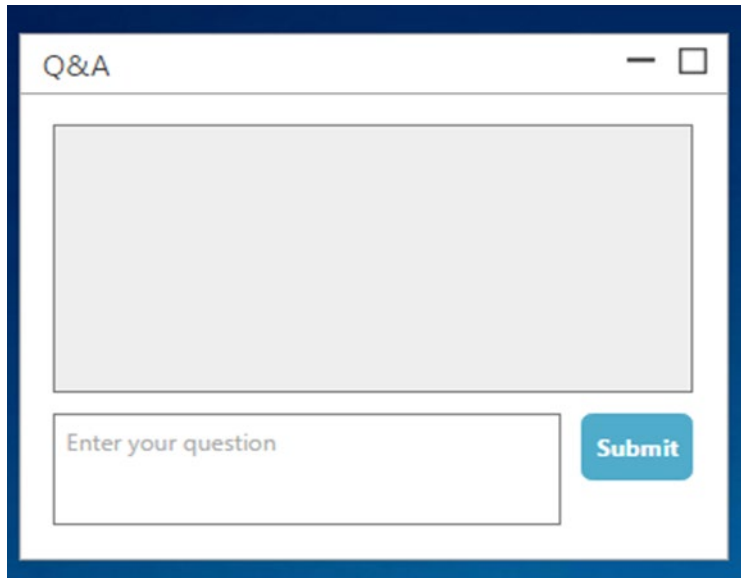
## Global Market Access eBook



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\*\*Or contact your designated Account Executive for more information.

# Q & A



The image shows a screenshot of a web-based Q&A chat interface. The window title is "Q&A". It features a large, empty rectangular area for displaying questions and answers. Below this area is a text input field with the placeholder text "Enter your question" and a blue "Submit" button to its right.

- Please send any questions you may have through the On24 Q&A chat function.
- The session will be recorded and made available for download.



Thank you!

Theresa Glenna  
TUV SUD America

**Questions?**

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**Mehr Wert.  
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**Add value.  
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