





## Health & Safety Department



(Registration & Permits Section)

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## 1. Introduction

Dubai Municipality, Health & Safety Department prepared this guideline based on Local Order No. 11, 2003 & on the Cabinet Resolution No. 20, 2015.

The Food contact materials cover a vast range of products which are used daily by consumers. It is vital to establish the safety of these products since they pose risks to human health due to their contact with food.



The principle underlying this guideline is that any material or article intended to come into contact with food must be sufficiently inert to preclude substances from being transferred to food in quantities large enough to endanger human health, or to bring about an unacceptable change in the composition of the food or a deterioration in its organoleptic properties.

## 2. Purpose

The purpose of this guideline is to ensure the effective functioning of the internal market in relation to the placing on the market in the community of materials and articles intended to come into contact with food, whilst providing the basis for securing a high level of protection of human health and the interests of consumers.



Any material or article intended to come into contact with food which is placed on the market should comply with the requirements of this Regulation. Nevertheless, materials and articles supplied as antiques should be excluded as they are available in restricted quantities and their contact with food is therefore limited.

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### 3. Definitions

Definition	Meaning
<b>Food Contact Materials</b>	<p>Material and articles, including active and intelligent food contact materials and articles, (hereinafter referred to as materials and articles) which in their finished state:</p> <p>a) Are intended to be brought into contact with food; or</p> <p>b) Are already in contact with food and were intended for that purpose; or</p> <p>c) Can reasonably be expected to be brought into contact with food or to transfer their constituents to food under normal or foreseeable conditions or use.</p>
<b>Active food contact materials and articles</b> (Hereinafter referred to as active materials and articles)	<p>Material and articles that are intended to extend the shelf-life or to maintain or improve the condition of packaged food. They are designed to deliberately incorporate components that would release or absorb substances into or from the packaged food or the environment surrounding the food</p>
<b>Business</b>	<p>Any undertaking, whether for profit or not and whether public or private, carrying out any of the activities related to any stage of manufacture, processing and distribution of materials and articles</p>
<b>Business operator</b>	<p>The natural or legal persons responsible for ensuring that the requirements of this regulation are met within the business under their control.</p>
<b>Traceability</b>	<p>The ability to trace and follow a material or article through all stages of manufacture, processing, and distribution;</p>
<b>Placing on the market</b>	<p>The holding of materials and articles for the purpose of sale, including offering for sale or any other form of transfer, whether free of charge or not, and the sale, distribution, and other forms of transfer themselves;</p>

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## 4. Scope & Product Types

### 4.1 Product types/groups (within the scope of this guideline)



This guideline issued by Dubai Municipality applies to the below groups:

- Active and intelligent materials and articles
- Adhesives
- Ceramics
- Cork
- Rubbers
- Glass
- Ion-exchange resins
- Metals and alloys  
stainless steel
- Paper and board
- Plastics
- Printing inks
- Regenerated cellulose
- Silicones
- Textiles
- Varnishes and coatings
- Waxes
- Wood

### 4.2 Product types/groups (out of the scope of this guideline)

- Materials and articles which are supplied as antiques.
- Covering or coating materials, such as the materials covering cheese rinds, prepared meat products or fruits, which form part of the food and may be consumed together with this food.
- Fixed public or private water supply equipment.
- Secondary packaging materials that do not come into contact with food directly.
- Materials that are used in the production lines and sterilization materials.

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## 5. General Safety Requirements

Without prejudice to the packaging requirements stated in the GSO standards on food products, the following general requirements for all kinds of food packaging materials shall be met:

- All materials used in fabrication, forming, or treatment of packages shall be of the food grade materials and in compliance with the relevant GSO standards.
- They shall be clean, and in such a condition that does not allow any Contamination of the packaged material.
- They shall maintain the properties of the packaged material, and protect it from gaining undesirable odors, flavors, and tastes.
- They shall offer protection to the food product against contamination with micro-organisms, insects, rodents, and dirt in the case of products where such protection is required.
- They shall be impermeable to moisture in the case of food products wherever this is required.
- They shall be impermeable to light and oxygen in the case of products wherever this is required.
- They shall not affect the contents as a result of migration of some of their constituents that may react or be mixed with the food stuff.
- They shall offer necessary protection against environmental conditions and mechanical hazards such as impacts, vibrations, static stresses, and they shall keep an intact appearance during handling.
- The following shall be considered in the design of packages:  
GSO STANDARD GSO 839/2017
  - Enough area shall be reserved on the outer surface to allow for writing of label information according to the GSO standard.
  - Ease of transportation, storage, and distribution operations.
  - Ease of opening and reclosing shall be met in their design.
  - To be designed in such a way that is not misleading to the consumer.
  - Not have a form that implied falsehood, erroneous impression,
  - deception or any form that may lead to the wrong impression for the consumer.
- The package size shall be proportional to the size or quantity of the packaged contained material.
- Packages shall be used only once, unless they are originally fabricated to stand washing, sterilization, and refilling operations, such as multi usage glass bottles.
- The package shall not present any hazards to the consumer when used.



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- In case boxes are used for packaging fresh fruits and vegetables, they shall comply with the requirements stated in the GSO standard mentioned in 2.2.
- In case of using food packages made of aluminum foil, they shall comply with the GSO standard mentioned in 2.3.
- In case of using food packages made of plastic, they shall comply with the GSO standard mentioned in 2.4.
- In case of using three-piece steel round cans used for canning food stuffs, they shall comply with the GSO standard mentioned in 2.5.
- In case of using two-piece steel round cans used for canning food stuffs, they shall comply with the GSO standard mentioned in 2.6.
- The following shall be met during transportation, storage, and handling of packages:
  - They shall remain tightly closed to avoid exposure to any contamination till they are used.
  - They shall be transported in suitable means of transportation so as to protect them from mechanical damage and contamination.
  - They shall be stored in suitable places to protect them from mechanical damage and contamination.
  - Ease to dispose of or reuse of such packages shall be considered.

GSO STANDARD GSO 839/2017 2
- If plastic or other non-food items are used in a food product package, for example: gifts, pictures, active and intelligent packaging materials, etc the following item shall be considered:
  - The phrase "contains gift or contains material to absorb moisture or oxygen " shall be written on the label of the product package according to the purpose Which it placed for it in the packaging of the product in a clear line that is easy to read and difficult to remove.
  - The phrase "do not eat" must be written clearly on the gift or other materials and in both Arabic and English languages.
  - The gift or other non-food items should not be ruptured by possible exposure or by hand.
  - The size of the gift or other non-food items Should be suitable and clear within the product to avoid eaten by mistake and determine the number on packing of product.
  - The inks and materials used in the manufacture of the gift ...etc shall be a food grade.
  - Using oxygen absorbent capsules in acidic foods and liquid food products is forbidden.



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### Other Safety Requirements:

- Materials and articles, including active and intelligent materials and articles, shall be manufactured in compliance with good manufacturing practice (or any food safety system or quality management that is acceptable to Dubai Municipality) so that, under normal or foreseeable conditions of use, they do not transfer their constituents to food in quantities which could:
  - endanger human health; or
  - bring about an unacceptable change in the composition of the food; or
  - bring about a deterioration in the organoleptic characteristics thereof.
- Active materials and articles shall not bring about changes in the composition or organoleptic characteristics of food, for instance by masking the spoilage of food, which could mislead consumers.
- Intelligent materials and articles shall not give information about the condition of the food which could mislead consumers.
- Active and intelligent materials and articles already brought into contact with food shall be adequately labelled to allow identification by the consumer of non-edible parts.
- Active and intelligent materials and articles shall be adequately labelled to indicate that the materials or articles are active and/or intelligent.
- The Specific measures for groups of materials and articles shall be apply:
  - For the groups of materials and articles listed in Annex I and, where appropriate, combinations of those materials and articles or recycled materials and articles used in the manufacture of those materials and articles, specific measures may be maintaining or adopted by Gulf standard or national provisions provided they comply with the rules of the Treaty.
- Those specific measures may include:
  - a) a list of substances authorized for use in the manufacturing of materials and articles.
  - b) list(s) of authorized substances incorporated in active or intelligent food contact materials and articles, or list(s) of active or intelligent materials and articles and, when necessary, special conditions of use for these substances and/or the materials and articles in which they are incorporated.
  - c) purity standards for substances referred to in (a);
  - d) special conditions of use for substances referred to in (a) and/or the materials and articles in which they are used.
  - e) specific limits on the migration of certain constituents or groups of constituents into or on to food, taking due account of other possible sources of exposure to those constituents.

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- f) an overall limit on the migration of constituents into or on to food.
- g) provisions aimed at protecting human health against hazards arising from oral contact with materials and articles.
- h) other rules to ensure compliance with these general requirements.
- i) basic rules for checking compliance with points (a) to (h);
- j) rules concerning the collection of samples and the methods of analysis to check compliance with points (a) to (h);
- k) specific provisions for ensuring the traceability of materials and articles including provisions regarding the duration for retention of records or provisions to allow, if necessary, for derogations from the requirements of Article 5.

## 6. Typical Applications of the Various Stainless-Steel Types

### Food Grade Types of Stainless Steel



#### 6.1 SAE 200 Series

- Austenitic crystalline structure, chromium-nickel-manganese alloy
- Contain a maximum of 0.15% carbon, a minimum of 16% chromium.
- 200 Series stainless steels replace most of their nickel content with manganese to reduce cost but results in weaker corrosion resistance.

#### 6.2 SAE 300 Series

- Austenitic crystalline structure, chromium-nickel alloy
- Contain a maximum of 0.15% carbon, a minimum of 16% chromium.
- Tend to be the more expensive of the 3 SAE Series but the higher nickel content gives them the best corrosion resistance out of the 3
- The most widely used austenite steel is the SAE 304 SS (also known as A2 Stainless or 18/8 for its composition of 18% chromium and 8% nickel)
- The second most common austenite steel is the SAE 316 SS (also Known as A4 Stainless or 18/10 for its composition of 18% chromium and 10% nickel)



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### 6.3 SAE 400 Series

- Ferritic and Martensitic crystalline structures, chromium alloys
- Some of the alloys in this group fall below the required 16% chromium and therefore will not be FCS (i.e. most of the martensitic alloys as they tend to have a chromium content of 12–14%)
- The ferritic stainless steels generally have better engineering properties than austenitic grades but have reduced corrosion resistance due to lower chromium and nickel content but are usually less expensive due to that.
- The ferritic stainless steel contains between 10.5% and 27% chromium with very little nickel, if any, but some types can contain lead. However, the only the alloys with 16%+ chromium will be considered FCS
- These ferritic alloys can be degraded by the presence of chromium, an intermetallic phase which can precipitate upon welding.

Types	Typical Applications
420, (martensitic)	Cooks and professional knives, spatulas etc
430, (ferritic)	Table surfaces, equipment cladding, panel, (i.e. components requiring little formability or weldability). Used for moderately corrosive environments, (e.g. vegetables, fruits, drinks, dry foods, etc).
304, (austenitic)	Vats, bowls, pipework, machinery parts, (i.e. components requiring some formability or weldability). Corrosion resistance superior to 430.
316, (austenitic)	Components used with more corrosive foods, (e.g. meat/blood, foods with moderate salt contents), which are frequently cleaned, with no stationary solids and not under excessive stress.
1.4539, (austenitic)	Used with corrosive foods, (e.g. hot brine with solids that act as crevice forms, stagnant and slow moving salty foods).
1.4462 (duplex)	Used with corrosive foods, (e.g. hot brine with solids, stagnant and slow moving salty foods). Higher strength than austenitic. Good resistance to stress corrosion cracking in salt solutions at elevated temperatures.
6%Mo. types (austenitic)	Used with corrosive foods, (e.g. hot brine with solids, which act as crevice formers, stagnant and slow moving salty foods). Good resistance to stress corrosion cracking in salt solutions at elevated temperatures. Used in steam heating and hot work circuits, hot water boilers, etc.

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## 7. Label Requirements:

- Materials and articles, which are not yet in contact with food when placed on the market, shall be accompanied by the words “for food contact” or the fork and glass symbol (see figure”1”).

Figure”1”: fork and glass symbol



Figure”1”: fork and glass symbol

- If necessary, special instructions to be observed for safe and appropriate use. .
- The name or trade name and the contact details of the manufacturer, processor, or seller responsible for placing on the market.
- Adequate labeling or identification to ensure traceability.
- In case of active material and articles, information on the permitted use(s) and name and quantity of the substances released by the active component.

The information required above shall be clearly legible and indelible. The retail trade of materials and articles shall be prohibited if the information provided to the purchasers is not given in a language easily understood by them.



1. At the marketing stages other than the retail stage, the information required above shall be displayed on:

- the accompanying documents “declaration of compliance” OR
- the labels or the packaging OR
- the materials and articles themselves.

2. At the retail stage, the information required above shall be displayed on:

- the materials or articles or on their packaging,

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- labels fixed to them or
- a notice in the immediate vicinity of the materials or articles.

Additional rules on labeling shall be considered for the active and intelligent materials and articles including the released active substances to allow identification by the consumer of non-edible parts, active and intelligent materials and articles or parts thereof should be labeled with appropriate words “DO NOT EAT” or accompanied, where technically possible, by a symbol, (Figure”2”) whenever materials and articles or parts of them are perceived as edible:



(Figure”2”) Good practice



Manufacturers must print the type of plastic material on the packaging preferably on the bottom of the package (either name or abbreviation).

## 8. Market Compliance & Enforcement

### 8.1 Product Recall

The product recall is promptly and efficiently retrieving Batch/ Bar Code of the product that does not comply with safety requirements, or that may have an undesirable effect on consumers. Recalls can be initiated at the request of the Dubai Municipality, or other relevant authorities to recall the product.

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## 8.2 Traceability

- The traceability of materials and articles shall be ensured at all stages to facilitate control, the recall of defective products, consumer information and the attribution of responsibility.
- With due regard to technological feasibility, business operators shall have in place systems and procedures to allow identification of the businesses from which and to which materials or articles and, where appropriate, substances or products covered by this Standard and its implementing measures used in their manufacture are supplied. That information shall be made available to the competent authorities on demand.
- The materials and articles which are placed on the market shall be identifiable by an appropriate system which allows their traceability by means of labelling or relevant documentation or information.

## 8.3 Penalty

Individuals who contravene any of the provisions of the guidelines and regulations will be charged as violated by Local Order No. 11 / 2003.

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## 9. References

- Local Order No. (11) of 2003 concerning public health and safety of society in the Emirate of Dubai & the Cabinet Resolution No. 20, 2015.
- <http://www.esma.gov.ae/en-us/Services/Pages/Products/Issuance-of-conformity-certificate-for--Food-Contact-Materials.aspx>
- [https://ec.europa.eu/food/safety/chemical\\_safety/food\\_contact\\_materials\\_en](https://ec.europa.eu/food/safety/chemical_safety/food_contact_materials_en)
- GSO standard 2231

For (suggestions, comments, and complaints)	For further information
<ul style="list-style-type: none"> <li>▪ Unified interactive platform that connects Dubai Government and its customers: The 04 Platform <a href="https://04.gov.ae/">https://04.gov.ae/</a></li> <li>▪ ☎ Dubai Municipality - Call Center (24/7): 800900</li> </ul>	<ul style="list-style-type: none"> <li>▪ ✉ <a href="mailto:montaji-fcm@dm.gov.ae">montaji-fcm@dm.gov.ae</a></li> <li>▪ ☎ Dubai Municipality - Call Center (24/7): 800900</li> </ul>