

## SUMMARY/ABSTRACT OF NESTLE STANDARDS ON MATERIALS IN CONTACT WITH FOOD

This document **must be shared with packaging/ food contact material (FCM) vendors.**

These STANDARDS outline the Nestlé requirements, which are **mandatory** for packaging/ food contact materials (FCM) of finished products.

The following rules also apply:

- Legal requirements must be followed for food contact materials. When no local regulations exist, then the Nestlé standards must be followed.
- When there is an overlap of legal requirements and the Nestlé standards, whichever is more stringent must be followed.

These requirements apply equally to Auxiliary Items (ice cream sticks, scoops, etc.) and FCM of Beverage Dispensing Machines, including having a DoC/CoC.

#	Standard/ Substance of Concern	Packaging part	Restriction / Requirement
1	Active and Intelligent packaging	All food contact packaging	- The use of antimicrobial (e.g. anti-fungal) additives in packaging is not allowed.
			- Active packaging components that are intended to migrate into the food product must not be used. Exemption when specifically allowed by local regulations.
2	Bisphenol A	Bisphenol A (BPA, 80-05-7) in epoxy coatings for metal packaging, polycarbonate plastic, and additives of packaging material components including inks, adhesives, stabilizers, etc.	- The use of Bisphenol A based materials is not allowed where suitable alternatives exist.
			- Exemption for processing equipment where migration is <2ppb into food.
			- Follow local regulations if there are exceptions, prohibitions or more stringent requirements.
3	Perfluoro-based compounds	Perfluoro compounds for greaseproofing of paperboard:	
		- C8 and higher (PFOA and related)	- must not be used where suitable alternatives exist. Follow regulations where banned completely.
		- C6 and C2 perfluoro compounds	- Are allowed to be used but alternatives must be actively sought.
4	Heavy/Toxic metals	- Cadmium (Cd), Chromium VI (Cr <sup>6+</sup> ), Lead (Pb), Mercury (Hg) in all packaging and FCM	- Must not be intentionally used in packaging materials especially in inks and pigments/ colorants of plastic components (e.g. caps).
			- Total limit of 100 mg/kg in materials <b>or lower if local regulations are more stringent.</b> (Exception possible for recycled glass if local legislation allows.)
		- Other Metals (Nickel, etc.) in all packaging and FCM	- Follow local legislations
5	Azodicarbonamide (ADC)	- Metal closure gasket for glass jars	- Must not be used as blowing agent for the gasket.

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#	Standard/ Substance of Concern	Packaging part	Restriction / Requirement
6	High temperature end-use applications (e.g. ovenable materials, microwaveable, cook-in bag packages)	- Packaging materials	- CoC/DoC must specify high temperature conditions of use.
		- Printed materials	- Allowed only if the temperature of the printed layer does not exceed 100 °C.
		- Direct food contact ink printing	- Must not be used in high temperature applications.
		- Polystyrene	- Must not be used in oven and microwave applications.
		- Recycled plastics for ovenable/ microwaveable applications	- Must not be used for ovenable/ microwave applications. - Exceptions when explicitly allowed by local regulations <u>and</u> a safety assessment of the process and material, conducted by the vendor, is reviewed and approved by Nestec/FCM-S&C
		- Antimony trioxide in PET resin for High Temperature Applications	- As low as possible with a target maximum: 250 mg/kg (expressed as Sb) <b>or lower if regulations are more stringent.</b>
7	Natural rubber latex	- Latex in cold seals for flexible packaging	- Only allowed when applied to the sealing areas, i.e. must not contact the food. Allergen concern
8	Outer Printing	- Government legislation on packaging inks (e.g. Swiss Inks Ordinance <sup>a</sup> , Japan Exclusion list <sup>b</sup> )	- Must comply with applicable local legislation.
		- Nestlé Guidance Note on packaging Inks <sup>c</sup>	- Must comply with, exception when in conflict with local legislation, must follow legislation.
		- Virgin Paper/board	- Must use low migration inks <sup>d</sup> .
9	Direct Food Contact (DFC) Printing	- Printed inks directly touching food (inkjet and traditional printing)	- Must only be used when allowed by local regulations (EU, US-FDA) made in GMP facilities. - Maximum ink coverage 5% for chocolate products and 30% for other food products. - Must only use DFC from manufacturers approved by Nestec/FCM-S&C
10	<i>ortho</i> -Phthalates	- <i>ortho</i> -Phthalates (aka Phthalates) in plastics, adhesives and inks.	- Must not be used as plasticisers and additives in packaging materials.
11	Polyacrylonitrile (PAN)	- Polyacrylonitrile in rigid plastic articles	- Must not be used in contact with infant foods or for baby feeding spoons.
			- Not allowed by some regulations
12	Polyethylene terephthalate (PET)	- Oligomers in PET resin for rigid bottles used for fatty food applications	- Must not exceed 1%.
		- Acetaldehyde (75-07-0): for bottled water	- Must be controlled with level based on legal requirements and local/regional preferences, whichever is more stringent.

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13	Paper & board	- Recycled paper /solid board and recycled corrugated board	- Must not be used in direct contact with food.
		- Recycled solid board	- Allowed for packaging applications which have a functional barrier as primary packaging around the food.
			- Allowed for indirect contact only for frozen food applications.
			- Must not be used for high temperature applications.
			- Virgin solid board must be used for all other solid board applications.
		- Mineral Oil Hydrocarbons (MOH) (C16 to C24) in recycled solid board	- As low as possible with allowed average level of 600±150 mg/kg MOH in the unprinted solid board
- Virgin Paper/board	- Must use low migration inks <sup>e</sup>		
	- SB-Latex binders in clay-coating of paperboard	SB latex can cause odor issues with energy cured printing inks/ coatings/ varnishes. - When using energy cured inks, must ensure structure does not give off-odor.	
14	Recycled plastics	- Recycled plastic in food contact application	- Only allowed if recycling process approved by legislation (e.g. EU, FDA.) for conditions of use.
			- Approval for Nestle Waters plastic packaging applications from Nestle Waters NPTC Vittel.
15	Residual solvents from printed packaging with solvent-based inks	- Total amount	- Max. 20 mg/m <sup>2</sup> material <b>or lower if local regulations are more stringent.</b>
		- Total amount of combined ketones and acetates	- Max. 7 mg/m <sup>2</sup> material <b>or lower if local regulations are more stringent.</b>
		- Toluene (108-88-3)	- Must not be intentionally used as solvent in ink formulation (cross-contamination limit: 2 mg/m <sup>2</sup> <b>or lower if local regulations are more stringent.</b> ).
			- Cross-contamination from lamination adhesive limit: 2 mg/m <sup>2</sup> <b>or lower if local regulations are more stringent.</b>
16	Shrink sleeves	Full length plastic shrink sleeves (that cover the body and neck) of a glass bottle or jar	- Must not be used for glass containers of products that are spoon-fed or drunk directly from the bottle or jar.
			- Not applicable for carbonated beverages in glass containers.
17	Substances of Very High Concern (SVHC)	- SVHC (lists available from ECHA website <sup>d</sup> ) in all packaging materials	- Must not be intentionally used as additives of food contact material where suitable alternatives exist.
			- Must not intentionally use substances which break-down into SVHCs (e.g. TNPP breaks down to give 4-NP) where suitable alternatives exist.

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**Additional General Requirements:**

Standard/ Requirement		Restriction
Odour	Packaging materials where odour testing required	Results are acceptable - according to Sniff Test, e.g. ISO-13302 standard
Wooden Pallets	Bromo- and chloro- phenol chemical treatments as wood preservatives	Must not be used for wooden shipping pallets of Nestlé packaging due to risk of off-odour and tainting.

<sup>a</sup> Swiss Ordinance On Packaging Inks: Annex 10:

<https://www.blv.admin.ch/dam/blv/en/dokumente/lebensmittel-und-ernaehrung/rechts-und-vollzugsgrundlagen/lebensmittelrecht2017/anhang10-verordnung-materialien-kontakt-lm-gg.pdf.download.pdf/Annex-10-ordinance-fdha-materials-and-articles-intended-to-come-into-contact-with-food-stuffs.pdf> (English)

<sup>b</sup> Exclusion list for printing inks and related products, EUPIA, 3<sup>rd</sup> edition, November 2016: [http://www.eupia.org/uploads/tx\\_edm/2016-11-17\\_Exclusion\\_Policy\\_for\\_Printing\\_Inks\\_and\\_Related\\_Products\\_3rd\\_ed.pdf](http://www.eupia.org/uploads/tx_edm/2016-11-17_Exclusion_Policy_for_Printing_Inks_and_Related_Products_3rd_ed.pdf)  
Voluntary regulation concerning printing inks for food packaging materials, Japan Printing Ink Makers Association, May 2006.

<sup>c</sup> Guidance Note on Packaging Inks available from Nestlé **(must be shared with vendors)**.

<sup>d</sup> Low migration inks are inks for food packaging applications which are formulated to reduce potential migration of compounds of concern<sup>f</sup> to levels below regulatory limits where migration can occur through the substrate or via set-off<sup>e</sup> from the printed outer side to the food contact surface in the stack or the reel.

<sup>e</sup> Functional barriers are defined as one or more layers of food contact materials which ensure that compounds of concern<sup>f</sup> do not migrate into the food above regulatory limits during the shelf-life of the product.

Note: set-off migration is not prevented by functional barriers and should be evaluated for all packaging materials which is in stack or reel format during or after its conversion.

<sup>f</sup> Compounds of concern can:

- (a) endanger human health;
- (b) bring about an unacceptable change in the composition of the food
- (c) bring about deterioration in the organoleptic characteristics thereof.

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