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# Packaging Restricted Substances List (PRSL) and Design Requirements (DR)

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Version 2.2

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June 1, 2007

## 1 Introduction to the PRSL and Design Requirements

Dear Suppliers and Manufacturing Partners,

This document represents the updated **Packaging Restricted Substance List and Design Requirements (PRSL/DR)** for Nike, Inc. and its affiliates. This information is intended to give substance details and restriction levels in order to ensure that:

- Nike packaging complies with the strictest global legislation
- Nike products are not contaminated by packaging

This document updates the mandatory standards and restrictions for packaging that Nike rolled out in 2003. Packaging, as defined by the Packaging and Packaging Waste Directive *94/62/EC (as amended by 2004/12/EC<sup>1</sup>)* and the Coalition of Northeastern Governors (CONEG) model legislation, includes but is not limited to:

- Hangtags
- Shoeboxes
- Swifftachs
- Clamshells
- Labels (UPC, case lot and carton)
- Hangers
- Retail, Gift and Specialty Boxes
- Bags and Polybags
- Corrugated Cartons
- Shipping Pallets
- Slip Sheets
- Tissue Paper
- Foam
- Size Strips
- Inserts
- Tape

Compliance with the PRSL/DR is required. We fully expect all Nike contract manufacturers, agents, licensees, nominated packaging vendors, design firms and other suppliers to have been in compliance with Nike requirements upon receipt of the PRSL, initially released December 1, 2003 and Design Requirements, released December 1, 2005, and any subsequent PRSL/DR releases, or from the first date of obligation under the applicable regulations, whichever is earlier.

Nike may perform random testing to monitor and ensure compliance with these standards. Nike requires that our contract manufacturers, agents, licensees, nominated packaging vendors, design firms and other suppliers **conduct whatever testing schedules necessary for each packaging component and retain all relevant supporting documents (including technical files and test result data<sup>2</sup>) to demonstrate compliance to our standards, for at least 10 years.** At this time we **only require you to sign and return the Nike PRSL/DR Acknowledgement Form and Receipt** included in this packet (please note, however, that technical file data will be required to be completed and returned on an ongoing basis, see Section 15 for more information). **Nike reserves the right to request test result data and supporting documentation at any time and it must be made available to Nike within three (3) business days of the request.**

Nike recognizes that the changes required by this PRSL/DR may require changes for some suppliers; therefore, we are committed to providing clear instructions and all reasonable assistance to you.

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<sup>1</sup> EU Directive 94/62/EC (as amended by 2004/12/EC) Defines packaging as “all products made of any materials of any nature to be used for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the user or the consumer. ‘Non-returnable’ items used for the same purposes shall also be considered to constitute packaging.”

<sup>2</sup> Confidentiality between laboratories and all relevant parties must be maintained for all samples for which Nike does not request results.

Please note that as legal or consumer requirements develop and change, Nike will work with Environmental Packaging International (EPI) to update and maintain this PRSL/DR. We are committed to working with you to give you as much advance warning as possible of any new requirements to be incorporated into these standards.

Thank you in advance for your goodwill and cooperation during this process, and for your commitment to helping Nike build the best possible products. We look forward to working with you on this vitally important matter.

Very truly yours,

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Sean Flanagan  
Global Director of Equipment Product Integrity  
Nike Equipment Division

Susanne Walter  
Global Color and Packaging Director  
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## 2 Packaging Restricted Substances, Limits and Test Methods (PRSL)

This section is intended to provide detailed information on the complete list of restricted substances and related testing information applicable to all Nike packaging systems. It is followed by Table 1, which provides an overview of the restricted substances, their limitations, substance testing protocols, the source of these restrictions and supplementary comments.

Where material testing is required, Nike will only accept results from [Nike approved laboratories](#) as outlined in Section 8 of this document and in the Nike Finished Product RSL available on Nike Product Production websites, or on request.

### 2.1 Heavy Metals

All packaging and packaging components must comply, in all respects, to the requirements for heavy metals content as stated in Article 11 of the European Union's Packaging and Packaging Waste Directive [94/62/EC](#) (as amended by [2004/12/EC](#)) and the Coalition of Northeastern Governors (CONEG) model legislation. "Packaging component", for the purposes of the heavy metal requirements listed in A& B below, includes:

Individual assembled parts of a package, including, but not limited to, interior/exterior blocking, bracing, cushioning, weatherproofing, exterior strapping, coatings, closures, dyes, pigments, adhesives, stabilizers, inks, labels, and additives.

Heavy Metal Restrictions include the following:

A. Cadmium, Mercury, Lead and Hexavalent Chromium metals can not be [intentionally introduced](#) in any component in any level.

B. The sum of the **combined incidental concentration** levels of Cadmium, Mercury, Lead and Hexavalent Chromium for each packaging component shall not exceed 100 ppm.

Nike requires each supplier to test for heavy metals using Nike's In-House method outlined in Table 1. Suppliers are also required to maintain a formal certification of compliance which demonstrates compliance with the heavy metals standards consistent with Directive 94/62/EC and CEN/ TR 13695-1:2004. Should Nike request certification of compliance of a supplier, the supplier must be able to submit the certification of compliance to Nike within three (3) business days of the request.

### 2.2 Dangerous Substances (or noxious and other hazardous substances)

Nike requires that you identify and minimize dangerous substances as described below:

#### A. Identify Dangerous Substances

In addition to the substances listed above and in Table 1, Nike requires each supplier to identify (via Safety Data Sheet a.k.a. Material Safety Data Sheet) any constituent identified as "dangerous" (as so classified in Annex I of EC Directive 67/548 and its amendments with the symbol 'N'), which is contained in or added to any packaging component. Additionally, if the concentration of a constituent, identified as dangerous, is  $\geq 1000$  ppm the concentration must be listed in the MSDS sheet.

You can search for a substance to determine if it is classified with the symbol "N" at:

<http://www.kemi.se/nclass>

Pull up the chemical and look for an N in the Annex 1 classification field.

The list can be purchased at:

<http://www.ellispub.com>

Choose products on the left hand menu and then choose CDROM.

## B. Minimize Dangerous Substances

The supplier is also required to minimize the use of any “dangerous substances” as much as possible in accordance with EN 13428: 2004 (the methodology is fully explained in CEN / TR 13695-2:2004). The CEN/TR 13695-2:2004 standard can be purchased in English at either:

<http://www.sfs.fi/en/>

(Type in the number for the standard in the search field).

OR

<http://www.bsonline.bsi-global.com/server/index.jsp>

To purchase a copy of the standard in a language other than English go to:

[http://www.cenorm.be/cenorm/standards\\_drafts/index.asp](http://www.cenorm.be/cenorm/standards_drafts/index.asp)

### 2.3 Formaldehyde and PVC

Nike restricts the use of formaldehyde to 150 mg/kg for all packaging components and prohibits the use of polyvinyl chloride (PVC) in all packaging. Nike requires that all packaging be tested for formaldehyde and that all plastic and paper packaging with a plastic laminate be tested for PVC. The following testing protocols should be used:

#### Formaldehyde

ISO 14184-2 (Modified to **80°C**)

#### PVC

- Beilstein’s test- Burning for the presence of chlorine
- Infrared analysis- Spectroscopy (IR) with or without solvent extraction.

Should Nike request any of these test results from a supplier; the supplier must be able to provide the results to Nike within three (3) business days of the request.

### 2.4 Odor Regulations

Nike requires that each supplier of packaging components for apparel textiles and socks meet the standards outlined in SNV 195651. (See Section 14). In order to meet this testing standard the mean value of the grades for the odor intensity must be a grade < 4.

Nike requires each supplier of packaging components for apparel textiles and socks to test for odor and maintain test results. Should Nike request the test results from a supplier; the supplier must be able to provide the results to Nike within three (3) business days of the request.

***If you have problems meeting any of these requirements listed above, please [contact](#) the designated Nike Product Development contact or Global Packaging Services listed in Section 7 of this document.***

3 Table 1: Packaging Restricted Substances, Limits and Test Methods

Substance Restricted in Packaging and Components	Nike Limit: Maximum Allowable Concentration (per packaging component)	Packaging Type	Testing Protocol Reference	<u>Required Laboratory Reporting Limit</u> Per substance concentration in product	Reason for Restriction and/or Legislative Reference
<b>Heavy Metals</b> Total content (summed): Cadmium Lead Mercury Chromium (VI)	<b>0 mg/kg <u>intentionally introduced</u></b> <b>AND</b> <b>100 mg/kg <u>incidental concentration</u></b> (total combined concentration of all metals)	Paper, paperboard, cardboard, plastic components, and coated paper.	<b>Nike In-house Method as Outlined in Finished Product RSL:</b>  Total element content (microwave digestion with nitric acid/ICPMS) - measure the 4 metals and determine their sum value.  For failed samples containing Cr, an attempt to measure Cr (VI) will be made. Method involves an alkaline digestion and UV-VIS measurement. A small anion exchange column will be used to remove colored organics prior to UV-VIS measurement.  For paper/paperboard, cardboard, plastic components, and coated paper Cr (VI) is unstable and will generally be reduced to Cr (III), which is not restricted. Samples that fail the 100 mg/kg limit for metals and contain Cr (III) will undergo further testing to attempt to measure Cr (VI).	<b>For each metal:</b>  Reporting tolerance +/- 1.0 mg/kg packaging component	EU: European Union’s Packaging and Packaging Waste Directive 94/62/EC (as amended by 2004/12/EC). <a href="http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_047/l_04720040218en00260031.pdf">http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_047/l_04720040218en00260031.pdf</a>  CEN/TR 13695-1: 2000 <a href="http://bsonline.techindex.co.uk">http://bsonline.techindex.co.uk</a>  US: CONEG Model Toxics in Packaging Legislation adopted by 19 states. <a href="http://www.toxicsinpackaging.org/">http://www.toxicsinpackaging.org/</a>
	<b>0 mg/kg <u>intentionally introduced</u></b> <b>AND</b> <b>100 mg/kg <u>incidental concentration</u></b> (total combined concentration of all metals)	Metal components	<b>Nike In-house Method as outlined in Finished Product RSL:</b>  Total element content (microwave digestion with nitric acid/ICPMS) - measure the 3* metals and determine their sum value.  *For metal components, Cr (VI) is unstable and per CEN/TR 13695-2: 2004 will not be present in metal components.	<b>For each metal:</b>  Reporting tolerance +/- 1.0 mg/kg packaging component	

Substance restricted in packaging and components	Nike Limit: Maximum Allowable Concentration (per packaging component)	Packaging Type	Testing Protocol Reference	Required Laboratory Reporting Limit Per substance concentration in product	Reason for Restriction and/or Legislative Reference
<b>Heavy Metals</b> Total content (summed): Cadmium Lead Mercury Chromium (VI)	<b>0 mg/kg intentionally introduced</b>  <b>AND</b> <b>100 mg/kg incidental concentration</b> (total combined concentration of all metals)	Glass components	<b>If analyzed:</b>  For glass components, due to concern over safety of the analytical procedure (specifically the use of hydrofluoric acid (HF), it is recommended that compliance for glass packaging components be done through calculation of the content based on reliable information instead of laboratory analysis.	*The laboratory reporting limit for glass components is only necessary if analyzed.	EU: European Union's Packaging and Packaging Waste Directive <a href="#">94/62/EC</a> (as amended by <a href="#">2004/12/EC</a> ). <a href="http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_047/l_04720040218en00260031.pdf">http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_047/l_04720040218en00260031.pdf</a>  US: CONEG Model Toxics in Packaging Legislation adopted by 19 states. <a href="http://www.toxicsinpackaging.org/">http://www.toxicsinpackaging.org/</a>  CEN/TR 13695-1: 2000 <a href="http://bsonline.techindex.co.uk">http://bsonline.techindex.co.uk</a>
<b>Dangerous Substances</b>  Any constituent identified as "dangerous" (as so classified in Annex I of EC Directive 67/548 and its amendments with the symbol 'N')	<b>Must be identified and the use minimized</b>	All Packaging	Identify dangerous substances of N class classified in Annex I of EC Directive 67/548.  Minimize in accordance with EN 13428: 2004 (the methodology is fully explained in CEN / TR 13695-2:2004).	Reporting for all Dangerous Substances at 0.1% or greater	EU: European Union's Packaging and Packaging Waste Directive <a href="#">94/62/EC</a> (as amended by <a href="#">2004/12/EC</a> ).  <a href="http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_047/l_04720040218en00260031.pdf">http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_047/l_04720040218en00260031.pdf</a>
<b>Formaldehyde</b>	<b>150mg/kg</b>	All packaging	ISO 14184-2 (Modified to <b>80°C</b> ) – Released Formaldehyde.	20 mg/kg	Nike voluntary restriction
<b>PVC</b>	<b>Non detected</b>	All plastic packaging, seals, resin components or composites	<b>Nike In-house Method as outlined in Finished Product RSL</b> - Beilstein's test- Burning for the presence of chlorine - Infrared analysis- Spectroscopy (IR) with or without solvent extraction. (Positive results for both tests indicate PVC): PVC methods are "qualitative"- the 10% limit is estimated sensitivity.	Not detected (Due to complexity of analysis, Nike defines detection limit as 10%)	Nike voluntary restriction
<b>Odor</b>	All packaging for textiles must meet the Textile Determination of Smell test. The mean value of the grades for the odor intensity must be a grade < 4.	All Packaging for apparel textiles and socks	SNV 195651 (See Section 14)  Test reporting threshold: mean value of the grades for the odor intensity must be a grade <4 8	Mean value of the grades for the odor intensity must be a grade < 4.	Chinese Odor Regulations

## 4 Packaging Design Requirements

This section is intended to provide detailed information on Nike's design requirements for packaging. This section is followed by Table 2 which provides a brief overview of the packaging design requirements as well as the pertinent packaging to which these restrictions and requirements apply, and the sources of these requirements.

Nike understands that certain requirements can only be met by those involved in the design, development or conceptualization of the packaging. Therefore, suppliers of packaging components involved in the design are required to address certain design requirements. All other suppliers should be aware of these requirements. Requirements specifically related to the construction or content of packaging will apply to all suppliers.

### 4.1 Minimum Recycled Material Content Requirements

#### 4.1.1 Plastic

All components of rigid plastic containers (see definition below) must contain a minimum of 25% post-consumer materials. Note that some jurisdictions have more specific definitions and/or regulations regarding minimum recycled content.

A Rigid Plastic Packaging Container (RPPC) is defined as a container:

- Capable of holding between 8 fluid oz (237 cubic centimeters) and 5 gallons (18297 cc<sup>3</sup>)
- Made primarily of plastic
- Maintains its shape while holding product

Suppliers must be capable of providing certifiable information regarding compliance with the [post-consumer recycled material](#) content requirements. Should Nike request this information from a supplier; the supplier must be able to provide the results to Nike within three (3) business days of the request.

If any component can not be made using 25% recycled content please contact [Global Packaging Services](#) (GPS).

#### 4.1.2 Paper and Paperboard Products

Nike will give purchasing preference (where price and availability allow) to paper and paperboard containing at least 25% [post-consumer](#) and 50% total [recycled content](#). If higher recycled content percentages have been previously specified, then those percentages must be met. (Note: Nike also has forest resource restrictions for paper products. See below).

### 4.2 Empty Space Requirements and Restriction on Packaging Layers

*This requirement only applies to those involved in the design, development or conceptualization of the packaging.*

#### 4.2.1 Apparel textiles and socks

All sales packaging of apparel items has to meet two standards:

- (i) the package must have less than 10% [empty space](#) and,
- (ii) the package is not to exceed 1 [layer](#) of packaging.

#### 4.2.2 Toys

All sales packaging of toys has to meet two standards:

- (i) the package must have 10% or less empty space and,
- (ii) the package is not to exceed 2 layers.

#### 4.2.3 All Other Products

All other product sales packaging:

- (i) Should not exceed 25% [empty space](#).
- (ii) Cologne, perfume, wallet and belt sales packaging should not exceed 2 layers.

### 4.3 Source Reduction

*This requirement only applies to those involved in the design, development or conceptualization of the packaging:*

The Source Reduction Standard EN 13428 requires that each packaging system constitute minimum adequate packaging. This means that packaging should be made as small and light as possible without compromising the product (i.e. its protection, handling, containment, transportation, marketing and presentation).

Those involved in the design, development or conceptualization of the packaging are required to state the limiting factor when completing the technical file (e.g. user/consumer acceptance, protection of packaging, safety, legislation, etc.) that prevents the further reduction of EACH [packaging component](#). (A drop-down menu listing limiting factors is provided in the attached technical file). A reference will need to be provided to back up a claim of a limiting factor such as a drop test, consumer acceptance study, lab test, etc. Should Nike request documentation of this reference from those involved in the design, development and conceptualization of packaging, it must be provided to Nike within three (3) business days of the request.

### 4.4 Recoverability

All suppliers must be able to certify that their [packaging components](#) meet at least one of three Recovery Routes: material recovery (a.k.a. recycling), energy recovery, or organic recovery (a.k.a. composting) in accordance with the EU Packaging Standards.

#### Material Recovery (a.k.a. recycling) EN 13430

For components to meet the material recovery standard, the standard requires that a supplier identify:

- A. Whether there is an available infrastructure for recycling the component, (see [Recyclability Guide](#)- the component should be recyclable in most or all countries).
- B. What the available recovery stream will be for the component. At the present time;
  - Nike plastic packaging components including LDPE bags, rigid PS constituents, folding boxes, and expanded foam cushioning are not compatible with plastic recycling streams and are not available for material recovery/recycling.
  - Plastic shopping bags are recoverable in the plastic bag material stream in areas where there are retail store recycling programs.
  - Polylactic Acid (PLA) is not available for material recovery and will act as a contaminant in the plastics recycling stream.
  - Corrugated boxes, paper and paperboard are generally recoverable, provided no containments are present that would impede recycling of these materials in the paperboard/corrugate recovery stream. Note, paper labels affixed to an object not made of paper will not be recovered. For example, a paper label affixed to a tin box will not be recovered in a tin recycling stream.
  - Most steel packaging and tin coated steel boxes will meet recovery requirements for steel and tin respectively.
- C. The percent that is available for recycling (automatically calculated in the technical file)

Note- Those involved in the design, development or conceptualization of packaging must determine if the total packaging system meets the recovery standards based on how the packaging components are combined in the final packaging system. In other words, based on how the components are assembled is it realistic to assume the package, as thrown away, will be recyclable. For example, any caps, label materials and adhesives attached to a container or box must be compatible with the recycling stream for the container, box etc. Additionally, the packaging must allow for effective emptying so that the package can be recycled. Furthermore, the design must enable packaging components made of different materials to be easily separated to ensure compatibility with recycling systems.

#### Energy Recovery (i.e. incineration with energy recovery)

For a component to meet the energy recovery route option, the component needs to have a net positive energy value as defined in EN 13431. Anything that is paper, plastic, wood, or organic will automatically meet the standard. This includes textile bags made of polymers and organic materials like cotton. Any component that is at least 50% paper, plastic, wood, or organic material will meet the

standard. Packaging made entirely of steel, aluminum, tin and glass will not meet the standard and need to meet an alternative recovery route. However, thin gauge-aluminum that is 50 microns or less will meet the standard.

Organic Recovery (a.k.a. composting)

A. For a component to meet the organically recoverable standard they must meet the requirements of EN 13432 which defines specific conditions for material breakdown. To purchase a copy of this standard in English go to:

<http://www.sfs.fi/en/>

Type in the number for the standard in the search field.

OR

<http://www.bsonline.bsi-global.com/server/index.jsp>

To purchase a copy of the standard in a language other than English go to:

[http://www.cenorm.be/cenorm/standards\\_drafts/index.asp](http://www.cenorm.be/cenorm/standards_drafts/index.asp)

B. Additionally, (for organically recoverable components only) Nike requires that all packaging and packaging components that are organically recoverable limit the use of the elements below or any compounds containing them to the levels shown below as required in EN 13432.

Material	mg/kg on dry substance		
Arsenic	5.00	Molybdenum	1.00
Cadmium	0.50	Nickel	25.00
Chromium	50.00	Lead	50.00
Copper	50.00	Selenium	0.75
Fluorine	100.00	Zinc	150.00
Mercury	0.50		

Suppliers must be capable of providing certifiable information regarding compliance with EN 13432. Should Nike request this information from a supplier; the supplier must be able to provide the results to Nike within three (3) business days of the request.

Note- Those involved in the design, development or conceptualization of packaging must determine if the total packaging system meets the recovery standards based on how the packaging components are combined in the final packaging system. In other words, based on the how packaging components are assembled, is it realistic that the package will be organically recoverable.

#### 4.5 Reuse

For packaging components that are claimed to be reusable, the supplier(s) must provide written confirmation that the packaging is capable of reuse and meets the nine-point verification procedure for reuse in EN 13429.

Note- reuse refers to a package being reused for the same purpose that it was originally intended, for example a beverage bottle that is cleaned and reused for same product; this is different than long life packaging. A long life package stays with product, and is durable enough to last at least 5 years (e.g. plastic CD case).

To purchase the standard in English go to:

<http://www.sfs.fi/en/>

(type in the number for the standard in the search field).

OR

<http://www.bsonline.bsi-global.com/server/index.jsp>

To purchase a copy of the standard in a language other than English go to:  
[http://www.cenorm.be/cenorm/standards\\_drafts/index.asp](http://www.cenorm.be/cenorm/standards_drafts/index.asp)

Suppliers must be capable of providing certifiable information regarding compliance with EN 13429. Should Nike request this information from a supplier; the supplier must be able to provide the results to Nike within three (3) business days of the request.

#### **4.6 Expanded Polystyrene**

##### Electronics

Nike prohibits the use of foamed polystyrene (EPS) packaging for all electronics appliances and audio-visual appliances when the external volume of the sales packaging is less than 40,000 cm<sup>3</sup>.

##### Toys

The use of expanded polystyrene is banned for use in all sales packaging of toys.

#### **4.7 Forest Resources**

Suppliers are prohibited from using those materials derived from wood or pulp originating in native old growth or frontier forests. Examples of products that may be derived from such wood or pulp include (but are not limited to) paper, paperboard, lumber, furniture, cellophane tape, and acetate.

Nike will give purchasing preference, where price and availability allow, to wood and paper products that originate in forests that have been independently certified as being well managed. Nike will recognize only those certifications issued by organizations accredited by the Forest Stewardship Council (FSC). For more information: [www.fsc.org](http://www.fsc.org). Nike will also give purchasing preferences to paper products containing high percentages of [post-consumer](#) recycled content material.

Suppliers must be capable of providing certifiable information regarding compliance with this requirement. Should Nike request this information from a supplier; the supplier must be able to provide the results to Nike within three (3) business days of the request.

***If you have problems meeting any of the requirements listed above, please [contact](#) the designated Nike Product Development contact or Global Packaging Services listed in Section 7 of this document.***

**5 Table 2: Packaging Design Requirements**

Requirements	Packaging Covered	Nike Requirements	Legislative reference
Minimum Recycled Material Content Requirements	Rigid Plastic Packaging Container components (RPPC)	<p>RPPC components must contain 25% post consumer material.</p> <p>Applies to containers that are 237 to 18,297cubic centimeters in volume.</p>	<p>California public resources code sections 42300 – 42345 and title 14, California code of regulations sections 17942-17949.</p> <p>California: All rigid plastic containers must contain 25% post-consumer recycled material.  <a href="http://www.ciwmb.ca.gov/Plastic/RPPC">www.ciwmb.ca.gov/Plastic/RPPC</a></p>
			<p>Wisconsin Statutes (100.297)</p> <p>Wisconsin: Requires rigid plastic containers to contain at least 10% recycled or re-manufactured material by weight (see industrial scrap) beginning January 1, 1995.</p> <p><a href="http://folio.legis.state.wi.us/cgi-bin/om_isapi.dll?clientID=32499031&amp;infobase=stats.nfo&amp;j1=100.297&amp;jump=100.297&amp;softpage=Browse_Frame_Pg">http://folio.legis.state.wi.us/cgi-bin/om_isapi.dll?clientID=32499031&amp;infobase=stats.nfo&amp;j1=100.297&amp;jump=100.297&amp;softpage=Browse_Frame_Pg</a></p>
			<p>Rigid Plastics Container law (ORS 459A.650-665).</p> <p>Oregon: Requires rigid plastic containers (8oz to 5 gal) sold in the state after January 1st, 1995 to fulfill at least one of the following criteria:</p> <p>Contain 25% post consumer material;  <a href="http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_090.html">http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_090.html</a></p>
	Paper and paperboard packaging	All paper and paperboard packaging should contain at least 50% recycled material with at least 25% being post consumer material unless higher standards have previously been set.	Nike voluntary restriction
Empty Space Requirements & Packaging Layer Limitations	Apparel (retail packaging)	<p>All apparel packaging must <b>contain less than 10%</b> of empty packaging space</p> <p>All apparel packaging items may not exceed 1 layer of packaging</p>	<p>Korean Ministry Of Environment Notification revised March 2006 Decree 202 on The Korean Ordinance of the Standards for Methods and Materials of Product Packaging.</p> <p>Korean Standard KSA1005 MEASURING METHODS FOR SPACE PROPORTION OF CONSUMER PACKAGING</p> <p><a href="http://eng.me.go.kr/docs/common/common_view.html?idix=56&amp;mcode=10&amp;av_pg=1&amp;classno=12">http://eng.me.go.kr/docs/common/common_view.html?idix=56&amp;mcode=10&amp;av_pg=1&amp;classno=12</a></p>
	Toys (retail packaging)	<p>All toy packaging must <b>contain less than 10%</b> of empty packaging space</p> <p>All toy packaging items may not exceed 2 layers of packaging</p>	
	All other product retail packaging	<p>All other Nike packaging must contain less than 25% of empty space</p> <p>Cologne, perfume, wallet and belt packaging should not exceed 2 layers of packaging</p>	
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**Table 2 ADDITIONAL PACKAGING REQUIREMENTS AND RESTRICTIONS**

Requirements	Packaging covered	Nike requirements	Legislative reference
<p><b>Source Reduction</b></p> <p><i>This requirement only applies to those involved in the design, development or conceptualization of the packaging.</i></p>	All packaging	Requires the assessment of all packaging systems to ensure minimum adequate packaging and statement of limiting factor.	<p>EN13428:2004</p> <p><a href="http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/c_044/c_04420050219en00230023.pdf">http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/c_044/c_04420050219en00230023.pdf</a></p> <p>To order detailed standards: <a href="http://bsonline.techindex.co.uk">http://bsonline.techindex.co.uk</a></p>
<p><b>Recoverability Requirements</b></p>	All packaging	<p>All packaging components must meet at least one of the following recovery routes:</p> <ul style="list-style-type: none"> <li>• Material (recycling),</li> <li>• Energy</li> <li>• Organic (composting)</li> </ul>	<p>En 13430:2004 (material recycling)</p> <p>EN 13431:2004 (energy recovery)</p> <p>EN 13432:2000 (organic recovery)</p> <p><a href="http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/c_044/c_04420050219en00230023.pdf">http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/c_044/c_04420050219en00230023.pdf</a></p>
<p><b>Reuse</b></p>	All packaging components that are claimed to be reusable	<p>Must meet the nine-point verification procedure outlines in CEN 13429</p> <p>Reuse refers to a package being reused for same purpose that was originally intended, for example a beverage bottle that is cleaned and reused for same product; this is different than long life packaging. A long life package stays with product, and is durable enough to last at least 5 years (e.g, plastic CD case).</p>	<p>EN 13429:2004</p> <p><a href="http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/c_044/c_04420050219en00230023.pdf">http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/c_044/c_04420050219en00230023.pdf</a></p>
<p><b>Expanded Polystyrene (EPS) Restrictions</b></p>	Buffers (i.e., foamed resin plastic packaging) of electrical, office IT and audio-visual appliances	<p>Nike prohibits the use of foamed polystyrene (EPS) on all electronic appliances and audio-visual appliances when the external volume of the sales packaging is less than 40,000 cm<sup>3</sup>.</p> <p>Nike prohibits the use of foamed polystyrene (EPS) in all sales packaging of toy products.</p>	<p>Korean Ministry Of Environment Notification #2003-92 of May 2003</p>
<p><b>Forest Resources</b></p>	Wood, paper and any products derived from wood or pulp	<p>The use of materials derived from wood or pulp originating in native old growth or frontier forests is prohibited.</p> <p>Nike encourages the sourcing of Forest Stewardship Council (FSC) certified products and products with high post-consumer recycled content.</p>	<p>Nike Voluntary Restriction</p> <p>For more information: <a href="http://www.fsc.org">www.fsc.org</a></p>

## 6 PRSL/DR Implementation Strategy

This section outlines the data collection and maintenance responsibilities of the parties supplying packaging components and those involved in the design, development or conceptualization of the packaging.

As stated in the introduction section of this document, compliance with the PRSL/DR is required. We fully expect all Nike contract manufacturers, agents, licensees, nominated packaging vendors, design firms and other suppliers to have been in compliance with Nike requirements upon receipt of the PRSL, initially released December 1, 2003 and Design Requirements, released December 1, 2005, and any subsequent PRSL/DR releases, or from the first date of obligation under the applicable regulations, whichever is earlier.

**Technical file data is required on a routine basis. Technical file information should be supplied as directed in Appendix Section 15, to support reporting requirements. Additionally, Nike requires that all relevant supporting documents, including test result data and the Technical Files (attached Data Capture Document) that demonstrate compliance to Nike standards are retained for at least 10 years. This data must be maintained for each packaging component and packaging system and made available to Nike within 3 days of a request.**

Nike is not currently requiring Nike contract manufacturers, agents, licensees, design firms, nominated packaging vendors and other suppliers to follow specific testing schedules or protocols for packaging, but Nike expects all parties to conduct whatever testing is necessary to ensure that they comply with these standards. A list of Nike audited and approved laboratories are included in this document. In order to maintain consistent and reliable data, we encourage the use of only Nike approved laboratories. Confidentiality between laboratories and relevant parties must be maintained for all samples for which Nike does not request results.

**Suppliers of packaging components or parts** (examples of components: Hangtags, Swifttags, Shoeboxes, Bags, Labels, Tissue Paper, Cartons, Tape) are required to address and maintain documentation on the following standards and requirements outlined in Sections 2 & 4 above:

- Heavy metals
- Formaldehyde
- PVC
- Dangerous substances
- Odor standards
- Recycled content
- Recovery (on a component or part level)
- Materials restrictions
- Reuse
- Old growth forest restrictions

**Those parties involved in the design, development or conceptualization of the packaging** are required to address and maintain documentation on the following standards and requirements:

- Recovery (on a packaging system level)
- Materials restrictions
- Source reduction
- Empty Space limitations
- Layering restrictions
- Reuse

## 7 Nike Contacts

We require the signature of your company president (or designee) on the “Nike PRSL & Design Requirements Acknowledgement Form & Receipt” in Section 9 of this information packet. Please return the signed original “Nike PRSL & Design Requirements Acknowledgement Form & Receipt” to your appropriate Nike contacts as listed below.

<b><u>Nike Division</u></b>	<b><u>Nike Contact</u></b>
Equipment	<p>PRSL Questions:  Lars Fuchs  Equipment Product Safety Manager  Legal Department  Lars.Fuchs@nike.com  503-532-0236</p> <p>Design Requirements Questions:  Sean Flanagan  Global Director of Equipment Product Integrity  Global Director of Equipment, Product and Integrity  Sean.flanagan@nike.com  503-532-7516</p>
Footwear	<p>PRSL Questions:  Andy Chen  Senior Environmental Chemist  andy.chen2@nike.com  503-532-4755</p> <p>Design Requirements Questions:  Rich Hastings  Strategic Raw Materials Sourcing Manager.  Nike Footwear Materials  Rich.hastings@nike.com  (503) 671-2778</p>
Apparel	<p>PRSL Questions:</p> <p>Design Requirements Questions:  Lisa Larrison  Product Identification Manager  Global Materials Color Lab  Lisa.larrison@nike.com  (503) 671-4784</p> <p>MOC (Master Outer Cartons) Questions  Steve Hill  Apparel Manufacturing &amp; Logistics Manager  Steve.hill@nike.com  503.671.4591</p>
Global Packaging Services	<p>Overall Questions:  Ken Giering  Director Global Packaging Services  Ken.giering@nike.com  (503) 671-5997</p>

## 8 Nike-PRSL Test Laboratory Contact and Shipping Information for All Suppliers

<p>BVCPS – Germany (ECB Online)          Analysentechnik GmbH          Wilh.-Hennemann-Str. 8          D-19061 Schwerin, Germany          Contact: Manfred Mayer, Ph.D., Laboratory Director, or Joerg Ruhkamp, Ph.D, Laboratory Manager          Phone: +49-385-395-37-0          Fax: +49-385-395-37-20          Email: <a href="mailto:mtlgermany@ecbonline.de">mtlgermany@ecbonline.de</a> or <a href="mailto:manfred.mayer@ecbonline.de">manfred.mayer@ecbonline.de</a></p>	<p>BVCPS - Hong Kong          Bureau Veritas Consumer Product Services (H.K.) Ltd          Unit 1519, 15/F, Vanta Ind. Centre          21-33 Tai Lin Pai Road          Kwai Chung, N.T., Hong Kong.          Contact: Nowel Tai Man Wai, Division Manager, or Christopher Tam, Ph.D., Supervisor, Analytical Division          Phone: +852 2494 1123 / +852 24941163          Fax: +852 2429 9572          Email: <a href="mailto:nowel.tai@hk.bureauveritas.com">nowel.tai@hk.bureauveritas.com</a> or <a href="mailto:christopher.tam@hk.bureauveritas.com">christopher.tam@hk.bureauveritas.com</a></p>
	<p>SGS - Taiwan          Kaohsiung Chemical Lab.Unit          208 Chung Hwa 2nd Road,          San Min District, Kaohsiung, Taiwan          Contact: Christina Hsu          SGS Customer Service          Phone: 886-7-3230920 ext. 603          Fax: 886-7-3157484          Email: <a href="mailto:christina.hsu@sgs.com">christina.hsu@sgs.com</a></p> <p>Contact: Andy Tsai          SGS Marketing          Phone: 886-7-3230920 ext. 602          Fax: 886-7-3157484          Email: <a href="mailto:andy.tsai@sgs.com">andy.tsai@sgs.com</a></p>

### Sampling Procedure:

1. A minimum of 10 grams of sample material is required for each packaging component that is tested.
2. Samples must include the glues and each color of ink found on the packaging component.
3. All samples sent for analysis need to be securely wrapped in aluminum foil and then placed in a paper wrapper.
4. Clearly identify each sample by labeling the outside paper wrapper - do not write on the samples.

Samples must be analyzed using the test methods outlined in Table 1 of this document.

**9 Acknowledgement Form and Receipt**

Please detach the Acknowledgement Form and Receipt located below and return the signed original to the Nike PRSL contact specified in the Nike PRSL contacts table in Section 7 of this packet.

**NIKE PACKAGING RESTRICTED  
SUBSTANCES LIST (PRSL) AND DESIGN REQUIREMENTS (DR)  
ACKNOWLEDGEMENT FORM & RECEIPT**

The undersigned has read this Nike PRSL/DR and information packet thoroughly and understands its contents.

The undersigned hereby (i) acknowledges receipt of the NIKE Packaging Restricted Substance List and Packaging Design Requirements (PRSL/DR) List Version 2.2 (the "Manufacturing Standards"), (ii) agrees that the Manufacturing Standards shall be incorporated into, and become part of, any current manufacturing or supply agreement between NIKE, Inc. and the undersigned (the "Manufacturing Agreement"), and (iii) represents and warrants to NIKE, Inc. and its affiliates that all products sold to NIKE, Inc. affiliates or their suppliers shall be manufactured, packaged and delivered in accordance with the Manufacturing Standards and that all required documentation is maintained, including completion of all technical files. This data must be made available to Nike within 3 days of a request from Nike. All products sold to Nike must fully comply with the PRSL released December 1, 2003 and with the Design Requirement released December 1, 2005 and any subsequent PRSL/DR releases, or the date of first obligation under the regulation, whichever is earlier.

**Company Name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Title:** \_\_\_\_\_

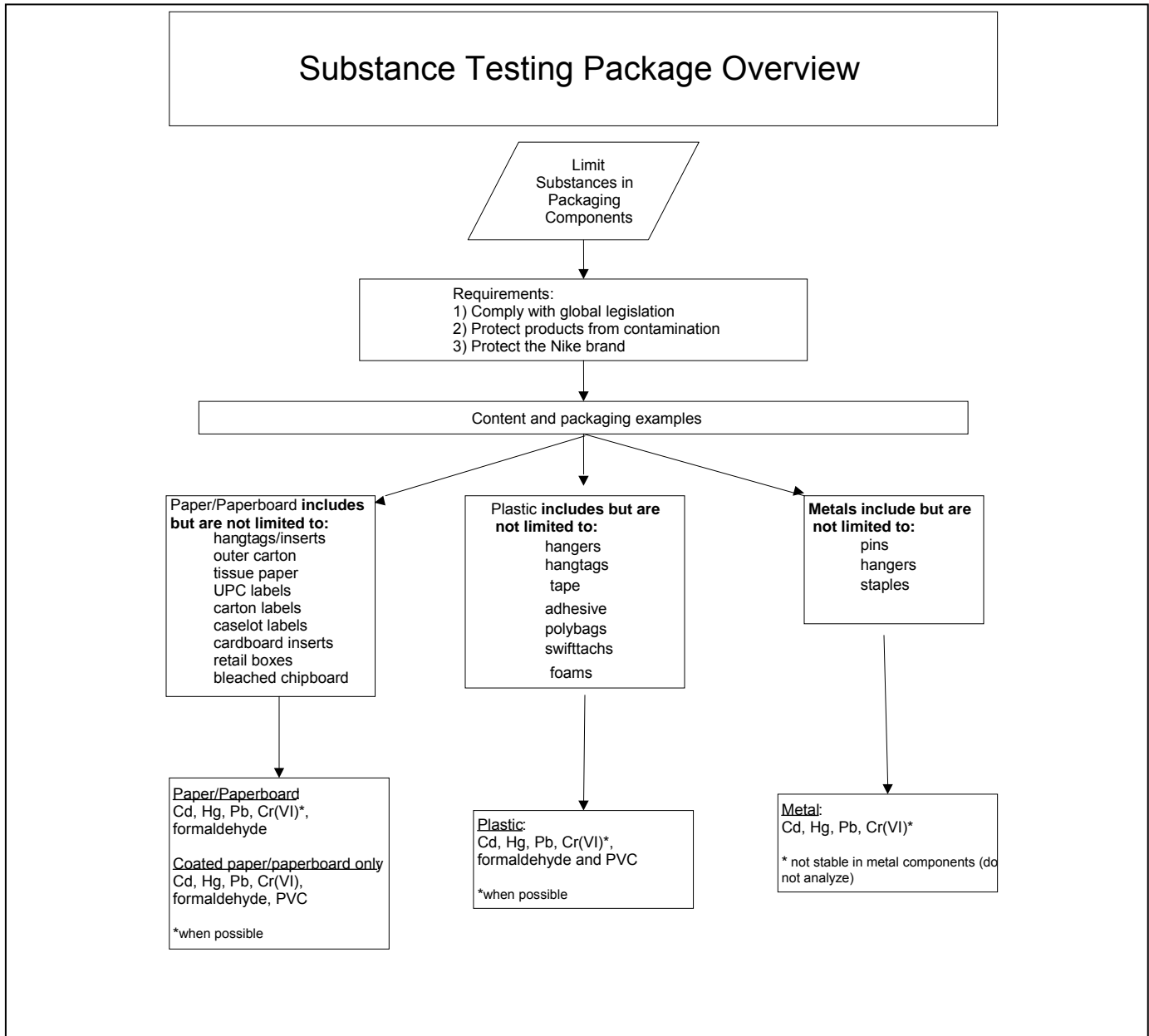
**Date:** \_\_\_\_\_

**PRSL/DR Version #:** \_\_\_\_\_

NOTE: This page must be signed and the original returned to the Nike PRSL/DR contact specified in Section 7 of this document.

**Nike Returned Acknowledgement Reference Number:** \_\_\_\_\_  
(To be completed and returned by Nike Global Packaging Services Department and referenced in completion of packaging technical files)

## 10 Diagram: Packaging Restricted Substances Testing Scheme










## 11 Recyclability Guide

Using the Recyclability Guide (Section 6), assess the basic recyclability of the main material of each functional unit. The Material Recovery Assessment Table below provides EPI's guidance on whether recyclability claims are appropriate.

The recyclability of materials and components can be classified as:

- **Non-recyclable** – Components using these materials will generally not meet the material recovery standard and therefore must meet the energy or organic standard.
- **Contaminant** – These materials are not acceptable and must be modified even if they meet one of the other recovery standards (e.g. blue glass bottles, PVC labels on PET bottles.)
- **New Technologies** – For new technologies, e.g. PET beer bottles, aluminum aerosols, it is required that the expected recycling system and monitoring program for the new technology be outlined.
- **Or an indication of country recyclability in general**, i.e. all countries, most countries, few countries

### Plastic Containers

Resin Type	SPI code	Color and type	Recyclability	*Components that could affect the recyclability
<b>PET</b> (polyethylene terephthalate)		Unpigmented	Most Countries	Labels, caps and sleeve
		Transparent, green tinted	Most Countries	
		Other transparent tinted or opaque	Few Countries	
		Folding cartons (Unpigmented)	Few Countries	
<b>HDPE</b> (high density polyethylene)		Unpigmented, homopolymer	All Countries	Labels, caps and sleeve
		Pigmented, homopolymer	Most Countries	
		Multipolymer	Non-Recyclable, (can be a contaminant)	
<b>PVC</b> (Polyvinyl chloride)	 v (PVC in the EU)	All types	Non-Recyclable, (can be a contaminant)	Labels, caps and sleeve PVC is disfavored in bottles for products that are also packaged in bottles made of PET. PVC is subject to Material Bans (see Section 5.4.1)
<b>LDPE</b> (Low Density Polyethylene)		All types (limited use as a bottle material by itself)	Few Countries	Labels, caps and sleeve
<b>PP</b> (polypropylene)		Unpigmented	Few Countries	Labels, caps and sleeve
		Pigmented	Few Countries (less valuable than Unpigmented)	
<b>PS</b> (polystyrene)		All types (limited use as a bottle material by itself)	Few Countries	Labels, caps and sleeve
<b>Other</b>		All types	Non-Recyclable (can be contaminant)	Labels, caps and sleeve

\*If the component is thrown away with the container, the component should be made of a resin or other material that will not impede recovery of the container. For example, a PVC cap will contaminate a PET recycling stream, however a polypropylene cap will not. Labels should be easy to separate during the separating/pulping process (i.e. the adhesive should be soluble).

## Plastic Films

Type	Color	Recyclability	*Components that could affect the recyclability
<b>Laminates</b>		Non-Recyclable	
<b>LDPE (bags, liners, bubble wrap)</b>	Unpigmented	Few Countries (for industrial); non-recyclable for (residential)	Labels, tape, staples, printing
<b>LDPE (carrier sheet, camel back, color sheets)</b>	Pigmented	Few Countries	Labels, tape, staples, printing
	Unpigmented	Few Countries (for industrial); non-recyclable for (residential)	Labels, tape, staples, printing
<b>LLDPE</b>	Pigmented	Few Countries	Labels, tape, staples, printing
<b>MDPE (can be coded as LDPE)</b>	Unpigmented	Few Countries (for industrial); non-recyclable for (residential)	Labels, tape, staples, printing
	Pigmented	Few Countries	Labels, tape, staples, printing
<b>HDPE</b>	Unpigmented	Few Countries (for industrial); non-recyclable for (residential)	Labels, tape, staples, printing
	Pigmented	Few Countries	Labels, tape, staples, printing
<b>PP (Woven)</b>		Non-Recyclable	Labels, tape, staples, printing
<b>OPP (Oriented PP)</b>		Non-Recyclable	Labels, tape, staples, printing
<b>Co-extruded (HDPE/LDPE)</b>		Non-Recyclable	Labels, tape, staples, printing
<b>Cross-linked PE</b>		Non-Recyclable	
<b>PVC</b>		Contaminant	
<b>PVDC (Polyvinyladene)</b>		Contaminant	
<b>Nylon Web and Cast Nylon Films</b>		Non-Recyclable	
<b>Cast PS Films</b>		Non-Recyclable	

\*If the component is thrown away with the film, the component should be made of a resin or material that will not impede recovery of the film. For example, a PVC label adhering to an LDPE film will give off toxins if incinerated. Labels should be easy to separate during the separating/pulping process (i.e. the adhesive should be soluble). Any coloring or inking that does not wash off will reduce recyclability. Staples should be made to come out easily, otherwise recyclability can be reduced.

## Other Plastics

Type	Recyclability	Components that could affect the recyclability
<b>PET Folding Boxes or Trays</b>	Few Countries	Any coloring or pigmenting will reduce recyclability
<b>PP Folding Boxes or Trays</b>	Non-Recyclable	Any coloring or pigmenting will reduce recyclability
<b>PS Boxes or Trays</b>	Non-Recyclable	Any coloring or pigmenting will reduce recyclability
<b>PVC Folding Boxes or Trays</b>	Non-Recyclable (can be a contaminant)	Will contaminate PET recycling stream
<b>Expanded PS</b>	Non-Recyclable	EPS is subject to Material Bans in Korea

Type	Recyclability	Components that could affect the recyclability
Expanded PE	Non-Recyclable	
Polylactic Acid (PLA)	Non-Recyclable	While compostable under certain conditions, it is a contaminant in many existing plastic recycling streams.

## Glass

Type	Recyclability	Components that could affect the recyclability
Flint or clear	All Countries	
Green	Most Countries	
Brown – Amber	Most Countries	
Frosted	Very Few Countries	
Other Colors	Non-Recyclable (can be contaminant)	
Flint w/colored Film	Most Countries	Film or coating type should be evaluated for compatibility with recycling stream.
Ceramic	Contaminant	
Non-Container	Non-Recyclable	

## Paper

Type	Recyclability	Components that could affect the recyclability
Corrugated	All Countries	Staples, some types of tape, Glued EPS or plastic trays can be contaminants
Linerboard	Most Countries	Glued EPS or plastic trays can be contaminants Wet-strength additives and mylar coatings can also be contaminants
Molded Pulp	Most Countries	
Newspaper	All Countries	

## Metal

Type	Recyclability	Components that could affect the recyclability
Aluminum (can and boxes)	All Countries	
Steel or tinplate (can and boxes)	All Countries	
Bi-metal (Steel top and Aluminum bottom)	Contaminant	
Aerosols containers (Steel or Tinplate)	Few Countries	Inner bladders can be contaminants
Aerosols containers (Aluminum)	New technologies (recycling availability would need to be determined)	Inner bladders can be contaminants
Aerosols containers (Bi-metal)	Contaminant	Inner bladders can be contaminants
Other Metals	Non-Recyclable (can be contaminant)	

## 12 Glossary of Terms

Term	Technical definition	Source	Basic Definition and/or Examples
<b><u>Dangerous Substances</u></b>	Any substances classified as dangerous to the environment according to Directive 67/548/EC (and its amendments) and classified with the symbol 'N' and the corresponding indication of danger (with exception of lead, cadmium, mercury and chromium (VI) and their compounds already considered in CR-13695-1.	CEN/TR 13695-2:2004	
<b><u>Empty Space Requirements and Layering</u></b>	<p>The Korean Empty Space Requirement sets a limit on the amount of empty packaging space that a consumer package can have.</p> <p>The Korean layering regulation sets a limit on the number of layers a consumer product packaging can have.</p>	Korean Ministry of Environment Notice, April 2003, Decree No. 137 Ordinance of the Standards for Methods and Materials, Etc. of Product Packaging	<p><b>Empty Space Requirements:</b></p> <p>Packaging space ratio refers to the ratio of packaging space capacity to packaging capacity. The interior volume of the package container is used to determine the Package Capacity. If the thickness of the packaging container is in excess of 10mm, the excess shall be included as Packaging Capacity. Package Space Capacity is the capacity remaining after subtracting Product Volume and Required Space Volume from the Package capacity. Product Volume is the volume of the smallest cube that surrounds the product. Required Space Volume is the space required to protect or fasten the product. The Package Space Ratio is the summation of the space ratio for both the first and second layers of packaging.</p> <p>The Packaging Space Ratio should be calculated to one-tenth of a percent.</p> <p>Example: In a gift pack the total volume of the outer package may not exceed the size of its contents by more than 25%.</p> <p><b>Layering:</b></p> <p>This refers to the number of distinct layers of packaging that envelope a product. For example a watch in a plastic clamshell constitutes the first layer of packaging. If the watch is then held in a paperboard container, this constitutes the second layer.</p>

<b>Term</b>	<b>Technical definition</b>	<b>Source</b>	<b>Basic Definition and/or Examples</b>
<b><u>Forest Stewardship Council (FSC)</u></b>	FSC is an international non-profit organization founded in 1993 to support environmentally appropriate, socially beneficial, and economically viable management of the world's forests. The FSC certification ensures fibers originate from well-managed forests.	Nike Definition	
<b><u>Functional Unit</u></b>	A set of components that will get thrown away together and will not be separated (e.g. a polybag with a paper label is a functional unit.) that will be placed in the same material recycling stream (which in this example would be plastics.)		
<b><u>Incidental Presence</u></b> (applicable to heavy metals requirement)	The presence of one or more of these regulated metals as an unintended or undesired component of a package or packaging component.		
<b><u>Intentional Introduction</u></b> (applicable to heavy metals requirement)	The act of deliberately utilizing a regulated metal in the formation of a package or packaging component where its continued presence is desired in the final package or packaging component to provide a specific characteristic, appearance, or quality.		
<b><u>Material Safety Data sheet (MSDS)</u></b>	See Safety Data Sheet		
<b><u>Old Growth Forests</u></b>	An uncut, natural forest that has been subjected to very little human-caused disturbances, and is characterized by 1) multi-canopy layers of forest cover that promotes the development of rich and varied habitat, 2) living trees of varying ages and sizes, as well as dead standing trees, downed logs, and coarse woody debris, 3) a developed understory, and 4) large dominant trees within the stand averaging at least 200 years of age in relatively contiguous stands of at least 100 acres in extent. While the age of the dominant trees in an old-growth forest can range from 60 years for aspen trees in the Upper Lake States to several hundred years for Douglas Firs in the Pacific Northwest to several thousand-year-old Bristlecone Pines, Nike's area of concern is for old growth forests with a minimum age of approximately 200 years.	Nike Definition	

Term	Technical definition	Source	Basic Definition and/or Examples
<b><u>Packaging</u></b>	'Packaging' shall mean all products made of any materials of any nature to be used for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the user or the consumer. 'Non-returnable' items used for the same purposes shall also be considered to constitute packaging. 'Packaging' consists only of: (a) sales packaging or primary packaging, i. e. packaging conceived so as to constitute a sales unit to the final user or consumer at the point of purchase; (b) grouped packaging or secondary packaging, i. e. packaging conceived so as to constitute at the point of purchase a grouping of a certain number of sales units whether the latter is sold as such to the final user or consumer or whether it serves only as a means to replenish the shelves at the point of sale; it can be removed from the product without affecting its characteristics; (c) transport packaging or tertiary packaging, i. e. packaging conceived so as to facilitate handling and transport of a number of sales units or grouped packaging in order to prevent physical handling and transport damage. Transport packaging does not include road, rail, ship and air containers".	Packaging and Packaging Waste Directive <u>94/62/EC</u> (as amended by <u>2004/12/EC</u> ) and the CONEG model legislation	Material used for protecting, transporting, and presenting products. This includes material used at every stage of the supply chain (manufacturing through retail).
<b><u>Packaging component</u></b> (this definition is not applicable to heavy metals)	"any part of packaging that can be separated by hand or by using simple physical means."	The CEN/TR 13695-2: 2004 report on Packaging	All pieces of the packaging that can be taken apart by hand or with simple tools.
<b><u>Packaging Constituent</u></b>	"the smallest part from which packaging or its components are made and which cannot be separated by hand or by using simple physical means"	CEN/TR 13695-2: 2004	The pieces of the packaging that cannot be taken apart by hand or simple tools. The packaging <i>components</i> are made up of the <i>constituents</i> .  1. For the component "shoebox" constituents would be fiber; filler; printing ink; glue;  2. For the component "printed label" constituents would be – unprinted label; printing ink; solvents.

<b>Term</b>	<b>Technical definition</b>	<b>Source</b>	<b>Basic Definition and/or Examples</b>
<b><u>Recycled Content:</u></b>  <b>Total</b>	Total Recycled Content is the combination of Pre and Post Consumer material. Industrial Scrap is not included in the definition.		
<b><u>Recycled Content:</u></b>  <b>Post-consumer</b>	Materials generated by consumer, business, or institutional sources that have served their intended use or completed their lifecycle and would be destined for disposal had they not been diverted from the waste stream for reuse or recycling.		Used polypropylene bottles recycled, pelletized and used in the manufacturing of fleece garments.
<b><u>Recycled Materials:</u></b>  <b>Pre-consumer</b>	Materials and manufacturing by-products directed towards reuse or recycling rather than the waste stream. Pre-consumer material does not include materials and by-products generated by and reused in the original manufacturing process (see Industrial Scrap).		Sawdust sold by a lumberyard to a fiberboard manufacturer.  Paper trimmings left over during manufacturing that are sold to another manufacturer for use in their paper products.
<b><u>Recycled Materials:</u></b>  <b>Industrial Scrap</b>	Materials and manufacturing by-products reused within a company's manufacturing process.		Polypropylene bottles that are rejected at the end of the manufacturing process are then redirected back to the beginning of the manufacturing process, rather than being disposed of or diverted to another company. <i>In most jurisdictions, this material is not considered recycled material.</i>
<b><u>Recoverability:</u></b>  <b>Energy Recovery</b>	Conversion of waste to energy, generally through the combustion of processed or raw refuse.	EN 13431:2004	By regulation, packaging containing at least 50% (by weight) organic material (i.e. wood, cardboard, paper and other organic fibers, starch or plastics) meets the energy standard. However, a packaging component comprised of less than 50% organic material will meet the energy standard if it has a calorific gain of at least 5MJ/Kg.
<b><u>Recoverability:</u></b>  <b>Material Recovery</b>	A process of waste handling that separates from the waste stream reusable and recyclable materials such as plastics, metals, glass and certain grades of paper for the purpose of beneficial reuse.	EN 13430:2004	The "unit of recovery" must be made of a single material or a material combination that is recyclable in known, relevant and industrially available recycling systems.  The packaging must allow for effective emptying so that the package can be recycled.  The design must enable packaging components made of different materials to be easily separated to

Term	Technical definition	Source	Basic Definition and/or Examples
			ensure compatibility with recycling systems.
<b><u>Recoverability:</u></b>  <b>Organic Recovery</b>	The recovery of the organic content of packaging materials by aerobic composting or anaerobic biogasification.	EN 13432:2000	The packaging material must break down under defined conditions, and the resultant compost must meet the quality standards for subsequent use.
<b><u>Safety Data Sheet</u></b>	Documentation detailing specific information relating to dangerous preparations	Directive 91/155/EEC	The safety data sheet should contain the following obligatory headings: <ol style="list-style-type: none"> <li>1. identification of the substance/preparation and of the company/undertaking;</li> <li>2. composition/information on ingredients;</li> <li>3. hazards identification;</li> <li>4. first-aid measures;</li> <li>5. fire-fighting measures;</li> <li>6. accidental release measures;</li> <li>7. handling and storage;</li> <li>8. exposure controls/personal protection;</li> <li>9. physical and chemical properties;</li> <li>10. stability and reactivity;</li> <li>11. toxicological information;</li> <li>12. ecological information;</li> <li>13. disposal considerations;</li> <li>14. transport information;</li> <li>15. regulatory information;</li> <li>16. other information.</li> </ol>
<b><u>SPI</u></b>	Society of the Plastics Industry Resin Identification Code		<a href="http://www.plasticsindustry.org/outreach/recycling/2124.htm">http://www.plasticsindustry.org/outreach/recycling/2124.htm</a>
<b><u>Required test reporting threshold</u></b>	Refers to the level of accuracy of the test. A test must be able to report to the level of accuracy indicated. For examples, if the threshold is 1ppm, the test must be able to detect at least 1ppm of the substance.		

## **13 Frequently Asked Questions**

### **13.1 DEVELOPMENT AND COMPLIANCE**

#### **1. How were the substances and requirements selected for the PRSL/DR?**

Global legislation is constantly being researched and tracked as it applies to Nike packaging. The PRSL/DR is the result of the strictest legislation found in the world to date.

#### **2. Why has Nike set a non-detect limit for PVC in packaging?**

Nike considered a broad range of scientific information from its own consultants, industry sources, government agencies and independent monitoring groups. Many of these findings indicate that PVC may pose a risk of harm to living systems, particularly if it is manufactured or disposed of improperly. Based on this information, Nike's corporate policy is to ban the use of PVC.

#### **3. Why has Nike set a limit of 150 mg/kg for formaldehyde in packaging?**

There is no legislation for formaldehyde in packaging; however legislation in several countries restricts its use in consumer products. Formaldehyde is capable of migrating from the packaging to the product during storage and shipping. This can result in contamination of the products.

#### **4. How were the test methods selected?**

Some methods were legislated. Others were chosen based on global laboratory surveys and anticipated performance and reliability.

#### **5. Why is Nike requiring ISO 14184-2 released formaldehyde test method to be executed at 80° C rather than the standard 49° C?**

The test method has been modified from 49°C to 80°C as the higher temperature better reflects the conditions that have been observed in shipping containers. A Nike benchmark study revealed that the levels of formaldehyde off-gassing increased at higher temperatures.

#### **6. How often will this list be updated?**

Our target is to update the PRSL/DR every two years. However, please note that as legal or consumer requirements develop and change, the standards themselves will develop and will be continually updated. We are committed to working with our factories and suppliers to give them as much advance warning as possible of any new requirements to be incorporated into these standards.

#### **7. How quickly will suppliers be expected to comply with new or updated requirements?**

Suppliers are expected to fully comply with Nike specific requirements upon receipt of the PRSL, initially released December 1, 2003 and Design Requirements, initially released December 1, 2005, or from the first date of obligation under the applicable regulations, whichever is earlier.

### **13.2 PRODUCTION AND PERFORMANCE ISSUES**

#### **1. If we can't use these substances, will Nike provide a list of acceptable alternatives?**

Wherever possible, Nike will provide information on alternative substances and materials. However, factory and suppliers should not expect that Nike will be able to provide alternatives and should work directly with their upstream suppliers.

## **2. What if performance suffers with exclusion of these substances and adherence to these design requirements?**

We fully expect packaging materials to meet Nike requirements for performance and substance content. If a factory or supplier suspects a performance issue, they must contact their appropriate Nike contact.

## **3. What if the price increases with use of approved alternatives?**

Nike expects all packaging products to remain cost-competitive. Again, if a factory or vendor anticipates a cost issue, they must contact their appropriate Nike contact.

### **13.3 LEGAL AND FINANCIAL OBLIGATIONS**

#### **1. Who pays for testing?**

Nike will pay for the testing we choose to conduct for benchmarking or verification purposes. Nike contract manufacturers, agents, licensees, design firms and other suppliers pay for all other testing to ensure compliance with Nike's PRSL and Design Requirements.

#### **2. What if we fail to meet the PRSL/DR? What are our legal and financial obligations?**

Nike's product health and safety standards, including the Packaging Restricted Substances List and Design Requirements, are incorporated into Nike's specifications. Failure to comply with these requirements/specifications will be breaches of our agreements and may lead to legal and financial consequences to the manufacturers in accordance with those agreements.

#### **3. What happens if the packaging fails the PRSL/DR? Who is responsible financially and for any delays, the packaging supplier or the factory?**

The factory is ultimately responsible for the consequences of any production delay as well as for any financial implications from the delay. Factories must proactively request test reports from all packaging suppliers (or do the tests themselves) so that if any issues are found, they can be corrected prior to the use of the packaging.

#### **4. Who is financially responsible for product recalls if they are required?**

The ultimate financial responsibility will depend upon the nature of the breach (violation), the party responsible for the breach, and other circumstances which will need to be evaluated on a case-by-case basis.

### **13.4 DATA MANAGEMENT**

#### **1. Why does Nike require that each contract manufacturer, agent, licensee, design firm, nominated packaging supplier, and other suppliers retain all relevant supporting documents that demonstrate compliance to our standards for ten years?**

It is conceivable that a packaging item can be in the market place for several years before it is tested by a non-profit organization, governmental agency, consumer group or retailer. In addition, many local laws and jurisdictions require this documentation to be retained and produced upon request. Applicable fees and taxes are based on technical information; therefore, these files become part of the financial record which may have jurisdictional retention up to ten years.

#### **2. Can I see data from other companies?**

No. All data is proprietary to each company. Trend analysis may be available (generic – no vendor information will be shared).

## **13.5 LABORATORIES AND TESTING**

### **1. If the packaging suppliers are willing to provide the factories with certificates that their packaging meets Nike PRSL/DR, do the factories still have to test the packaging?**

The factory should perform testing so that if any issues are found, they can be corrected prior to use of the packaging. The factory is ultimately responsible for the consequences of any production delay as well as for any financial implications from the delay.

### **2. If individual components of packaging all pass the PRSL by themselves, is it possible that the combination of items on the packaging system could create a failure?**

It would be unlikely that the packaging system would fail if all the components of the packaging meet restricted substances limits. If this happens, there may be several reasons:

- Components are prepared or analyzed differently than the complete packaging unit.
- There are differences in components and final packaging unit contents.

However, if all components of a packaging system met design requirement the packaging system could still create a failure (e.g. a component could impede recoverability of the system or together components could create a system that is too large for the product which could cause the system to fail to meet source reduction requirements).

### **3. Does Nike require testing? If so, how often?**

Nike is not currently requiring Nike contract manufacturers, agents, licensees, design firms, nominated packaging vendors and other suppliers to follow specific testing schedules or protocols for packaging, but Nike expects all parties to conduct whatever testing is necessary to ensure that they comply with these standards. Nike requires that each party retain all relevant supporting documents that demonstrate compliance to our standards for at least ten years and make them available for inspection as requested.

### **4. Will Nike also be testing and, if so, would they be willing to share the testing data they find?**

Nike will perform benchmark and random production testing. We would be willing to share a supplier's test results with that supplier. Suppliers should not rely on Nike for testing to ensure compliance. We view this as a vendor's responsibility. Note that Nike will be testing at the end of the process when corrective action may be very costly. Suppliers should be aware of their packaging compliance prior to products being shipped to distribution centers.

### **5. Where do I send my packaging material for testing?**

Please refer to the list of labs in the PRSL/DR Implementation Strategy in Section 8 of this document.

### **6. How much material or product do I need to send to the labs for testing?**

This will vary with the tests performed. The approved lab list includes this information.

### **7. Why do I need to use a Nike approved laboratory?**

In an effort to increase data reliability, Nike has audited laboratories to evaluate their ability and capacity to perform testing. Because testing and reporting accuracy is so critical, Nike will only accept results from those laboratories that have demonstrated a strong quality assurance program and the ability to test against required methods. A supplier may request that a local laboratory be added to the Nike approved list. These requests will be addressed on a case-by-case basis. Approval of a supplier's local laboratory may require a laboratory audit. The cost of this would be passed on to the supplier.

**8. How long will it take to have my packaging materials tested?**

This will vary with test packages and workload within the laboratory. Typical laboratory turn around is several days for the simpler analyses (e.g. formaldehyde) and 2-3 weeks for the more labor-intensive analyses (those involving extractions like heavy metals).

**9. At what point in the development and production cycle should I be testing my packaging?**

Testing should be performed on packaging early enough in the cycle to ensure compliance of all packaging used to ship products to the marketplace.

**10. Will data from other laboratories be accepted as proof?**

No. Due to reliability issues, it is unlikely we will accept data from non-approved laboratories.

**11. Will alternative methods be accepted as proof of compliance?**

No. Again, due to reliability and comparability issues, it is unlikely Nike will accept data from alternative methods.

**12. Am I allowed to use my in-house testing facility?**

Possibly. This should be addressed on a case-by-case basis. Typically a supplier's laboratory is not set up with instrumentation or the personnel to perform testing. Those suppliers with these resources would be expected to strictly comply with the methods described in the PRSL/DR documentation. Approval to use an internal laboratory may require a laboratory audit.

**13. Can Nike certify my in-house testing facility?**

An audit can be requested and paid for by the supplier. Approval of the in-house laboratory is not guaranteed by this audit.

**14 Textile - Determination of the Smell (SNV 195651 (mod.))/ 12/24/04  
BUREAU VERITAS HONG KONG LTD Analytical Division**

**1. SCOPE**

This method describes the procedures of determining the smell in textile materials.

**2. REFERENCE**

SNV 195651

**3. CHEMICALS AND REAGENTS**

All standards and reagents are at least of analytical grade purity.

3.1 Sodium hydrogen phosphate

**4. APPARATUS**

4.1 2L air sealed desiccator.

**5. PROCEDURES**

5.1 Cut 1 piece of sample with size 12 cm x 12 cm;

5.2 Put the sample into a 2L desiccator and sealed with vaseline for 15 hours at 37°C 50 % RH;

5.3 Open the desiccator and let the test person assess the intensity of the odour;

*Remark: The intensity of the odour is graded of a scale from 1 (no odour formation) to 5 (very strong odour formation)*

5.4 Repeat Step 5.3 for at least 7 times with different test persons;

5.5 The statistical Q-test is used to eliminate the outlier result and the mean rating is reported;

**6. CALCULATIONS**

6.1 Outlier analysis – Q test

$$Q = \frac{\text{Questionable value} - \text{Nearest value}}{\text{Largest value} - \text{Smallest value}}$$

If  $Q > Q_{\text{crit}}$ , questionable value rejected, and vice versa.

Remark:  $Q_{\text{crit}}$  at 95% confidence interval, when  $n = 7$  is 0.57

**7. QUALITY CONTROL**

7.1 The method and sample blank shall be run in each batch of analysis.

< END >

## **15 Technical File Completion Procedure**

In accordance with technical file packaging data maintenance requirements outlined in Essential Requirements of the EU Directive on Packaging and Packaging Waste and other regulatory responsibilities, and in order to support Nike packaging management requirements, Nike is gathering bill of material and other related technical information for all packaging components.

Formal long term responsibilities, processes and formats are being further refined for communications in the near future.

In the mean time, the Global Packaging Services team, is working with Nike product design and development teams, packaging manufacturers and suppliers to gather further detail in augmenting current technical file information. Every effort should be made to provide requested information and documentation as quickly and completely as possible.