

**Green Procurement Guidelines - Attached Document 1Nihon Parkerizing Co., Ltd.  
List of Prohibited Substances and Controlled Substances in Packaging Ver. 1.20**

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Issued by the Manufacturing Dept.  
Nihon Parkerizing Co., Ltd.

This document is a list of “Prohibited and Controlled Substances in Packaging” attached to the Green Procurement Guidelines. Please confirm that none of these substances are contained in materials used for packaging (bags, steel drums, plastic drums, etc.). Other substances may also be prohibited or controlled for specific destinations.

If any of the following substances are contained in the packaging, please consult Nihon Parkerizing in advance.

**1) Prohibited substances**

**(1) Cadmium and its compounds/Hexavalent chromium compounds/Lead and its compounds/Mercury and its compounds**

Scope:

- (a) Applicable when it is intentionally added.
- (b) Applicable when cadmium, hexavalent chromium, lead, or mercury is contained as an impurity in a homogeneous material with a total concentration exceeding 100 ppm by weight.
- (c) Regarding hexavalent chromium, this may be used in the closing bands of drums. In addition, tinfoil and tin-free steel (TFS) may be used, except in parts that come in contact with liquid.

Note: Metal equivalents are applied to the concentration in the scope.

**(2) Dibutyl Phthalate (DBP)**

Scope :

- (a) Applicable when the content exceeds 1,000ppm in homogeneous materials.

**(3) Bis(2-ethylhexyl) phthalate (DEHP)**

Scope :

- (a) Applicable when the content exceeds 1,000ppm in homogeneous materials.

**(4) Butyl benzyl phthalate (BBP)**

Scope :

- (a) Applicable when the content exceeds 1,000ppm in homogeneous materials.

**(5) Diisobutyl phthalate (DIBP)**

Scope :

- (a) Applicable when the content exceeds 1,000ppm in homogeneous materials.

## 2) Controlled substances

### (1) Arsenic compounds

Scope :

- (a) Applicable when it is intentionally added.
- (b) It is contained as an impurity and its content exceeds 1,000ppm in homogeneous materials.

### (2) Cobalt chloride

Scope :

- (a) Applicable when it is intentionally added or when its presence can be confirmed.
- (b) It is contained as an impurity and its content exceeds 1,000ppm in homogeneous materials.

### (3) Dibutyltin compounds (DBT)

Scope :

- (a) Applicable when the content exceeds 1,000ppm in homogeneous materials.
- Note: Metal equivalents are applied to the concentration in the scope.

### (4) Dioctyltin compounds (DOT)

Scope :

- (a) Applicable when the content exceeds 1,000ppm in homogeneous materials.
- Note: Metal equivalents are applied to the concentration in the scope.

### (5) Tri-substituted organostannic compounds

Scope :

- (a) When it is intentionally added.
  - (b) It is contained as an impurity and the content exceeds 1,000ppm in homogeneous materials.
- Note 1): "Tri-substituted organostannic compounds" mean the tin compounds with three organic substituents, such as tributyltin compounds (TBT) or triphenyl tin compounds (TPT).
- Note 2): Metal equivalents are applied to the concentration in the scope.

### (6) Polybrominated biphenyls (PBBs)

Scope :

- (a) When it is intentionally added.
- (b) When the content exceeds 1,000ppm in homogeneous materials.

### (7) Polybrominated diphenyl ethers (PBDEs)

Scope :

- (a) When it is intentionally added.
- (b) When it is contained as an impurity and the content exceeds 1,000ppm in homogeneous materials.

**(8) Polychlorinated terphenyls (PCTs)**

Scope :

(a) Applicable when the content exceeds 50ppm in homogenous materials.

**(9) Perfluorooctanoic acid (PFOA), its salts and esters**

Scope :

(a) When the content exceeds 1,000ppm in homogeneous materials.

**(10) Bromoethane (CAS RN® 74-83-9)**

Scope :

(a) Applicable when it is intentionally added.

**(11) Azo dyes and pigments that produce some aromatic amines**

(Please refer to Attached list 1)

**(12) Dimethyl fumarate (2-Butenedioic acid, dimethylester) (CAS RN® 624-49-7)**

Scope :

(a) Applicable when the content exceeds 0.1ppm in homogeneous materials.

**(13) Perfluorooctane sulfonic acid (PFOS) and its salts**

Scope :

(a) When it is intentionally added.

(b) When the content exceeds 25ppm in homogeneous materials.

**(14) Formaldehyde**

Scope :

(a) Applicable when the content exceeds 75ppm in homogeneous materials. (In the case of Plastic resin. Fibers)

(b) When the content exceeds 0.1ppm in homogenous materials. (Fiber plates, plywood, and other wood products)

**(15) Reaction products of N-phenylbenzeneamine with styrene and 2,4,4-trimethylpentene (BNST)**

Scope :

(a) When it is intentionally added.

**(16) Tris phosphate (TCEP, TCPP, TDCPP)**

Scope :

(a) When it is intentionally added.

(b) When the content exceeds 1,000ppm in homogeneous materials.

**(17) Tri(1-aziridiny)phosphine oxide**

Scope :

(a) When it is intentionally added.

**(18) Perfluorohexanesulfonic acid (PFHxS), its salts and PFHxS-related substances**

Scope :

(a) When it is intentionally added.

**Appendix Table 1: Some aromatic amines formed by the decomposition of one or more azo groups, for packaging**

<b>Some aromatic amines formed by the decomposition of one or more azo groups</b>	
<b>Name of aromatic amine</b>	<b>CAS RN®</b>
4-Aminoazobenzene	60-09-3
o-Anisidine	90-04-0
2-Naphthylamine	91-59-8
3,3'-Dichlorobiphenyl-4,4'-diyldiamine	91-94-1
4-Aminobiphenyl	92-67-1
Benzidine	92-87-5
o-Toluidine	95-53-4
4-Chloro 2-methylaniline	95-69-2
2,4-Diaminotoluene	95-80-7
o-Aminoazotoluene	97-56-3
5-Nitro o-Toluidine	99-55-8
2,2'-Dichloro-4,4'-methylenedianiline	101-14-4
4,4'-Methylenedianiline	101-77-9
4,4'-Diaminodiphenyl Ether	101-80-4
p-Chloroaniline	106-47-8
3,3'-Dimethoxybenzidine	119-90-4
3,3'-Dimethylbenzidine	119-93-7
2-Methoxy 5-methylaniline	120-71-8
2,4,5-Trimethylaniline	137-17-7
4,4' Diaminodiphenylsulfide	139-65-1
2,4-Diaminoanisole	615-05-4
4,4'-Diamino 3,3'-Dimethyldiphenylmethane	838-88-0
<p>Note: This Guideline covers azo dyes and pigments that produce some aromatic amines. This means azo compounds that create the amines listed in Appendix Table 1 by reductive decomposition of the azo groups.</p> <p>In addition, the threshold value of 30 ppm specified in the scope of coverage applies not to azo dyes and pigments, but to amines listed in Appendix Table 1.</p>	

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**March 2021**