Nidec Copal Group
Green Procurement Standards

(First Edition)

January 5, 2010

Nidec Copal Corporation

Environment Control Office

INTRODUCTION

The 21st century is said to be the century of environment. Nidec Copal Corporation (Nidec Copal Corporation and Nidec Copal Precision Parts Corporation, hereinafter collectively called “Nidec Copal Group”) positions the slogan “Global Environmental Protection is the most important task common to all humankind” to be among the most critical subjects for the business management today. Keeping that in mind, we have been promoting the business activities from design and development stage to the production and sales of the products following the laws and regulations and also the demands of our customers.

It is becoming increasingly important that such activities are even more effectively carried out. For this reason, it is essential that the cooperation between our partner companies who give us strong support in daily procurement activities and ourselves becomes further strengthened. Especially, for the promotion of the environment-friendliness parts and components procurement, we must continue to make efforts to reduce environmental burden through comprehensive approach with our partner companies.

In addition, as the market of green products continues to grow, our customers (manufacturers) demand us to investigate environmental burden materials. Therefore, it is becoming vital to prepare and establish structure to effectively search and report the environment related information of the parts, components and products and to promptly and sincerely respond to such needs of our customers.

In this light, we created “Green Procurement Standards” which shall indicate the matters that Nidec Copal Group would like our partner companies to work with us to promote the idea of green procurement.

Such activities have no chance of functioning properly without the good understanding of our partner companies. Nidec Copal Group would like to ask our partner companies to please work closely with us on the subject knowing the critical nature of the global environmental issues.

Nidec Copal Corporation
Masashi Igarashi
Manager, Environment Control Office

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1 Environment Charter by Nidec Copal Corporation

Environmental Philosophy

With the understanding that preservation of the environment benefits the prosperity and happiness of the humankind, we devote every effort to harmonize the economic development with the environment in mind through all aspects of manufacturing activities and also accelerating the creating of recycling society which will last.

Basic Policy

(1) In every aspect of business activities, we shall reduce the waste and the environmental load to the very minimum in order to preserve the environment.

(2) At each stage of products planning, research and development and products designing, we shall create products with consideration to natural resources, saving energy and recycling.

(3) We shall comply with the environmental related laws and regulations and shall make an effort to preserve the environment for the harmonious coexistence with the global environment in mind.

(4) We shall comply with the laws and ordinances for the atmosphere, water and soil. We shall grow and maintain a green environment to preserve clean environment of the earth.

(5) We shall set our own standards and make constant efforts to improve and maintain environmental conditions.

(6) We shall proceed with the environmental preservation activities through the life cycle of our products from development, designing, production, sale and disposal. We also shall contribute to stop global warming through business activities. We will try to avoid using harmful substances as much as possible and will conduct green procurement for purchased materials.

(7) To improve the awareness of each employee on environmental preservation, we shall promote educational and awareness campaign at the total corporate scale.

Shigeru Izawa

President

Nidec Copal Corporation

2 Green Procurement Standards

2.1 Purpose

This Green Procurement Standards clarify banned substances for the environmental load substances contained in the products, parts or indirect materials based on the laws and regulations and the requirement of our customers.

The Standards describe the requirement on environmental load substances that we ask our partner companies and our internal members to follow.

We will work with our partner companies to improve the environmental quality of the products.

We will also make our best efforts to preserve global environment by sharing the information related to the preservation of global environment and by helping each other.

2.2 Scope

The Standards apply on materials, components, parts and products that Nidec Copal Group procures to use for the products to be manufactured by Nidec Copal Group.

Therefore, materials, parts, components, products and indirect materials (such as lubricant, adhesive, ink and lead-free solder) delivered to Nidec Copal Corporation must meet the requirement of the Standards.

2.3 Green procurement activities

By Green Procurement Activities, Nidec Copal Group will purchase Green Parts from Green Partners according to Green Procurement Standards on a preferential basis.

2.3.1 Green Partners

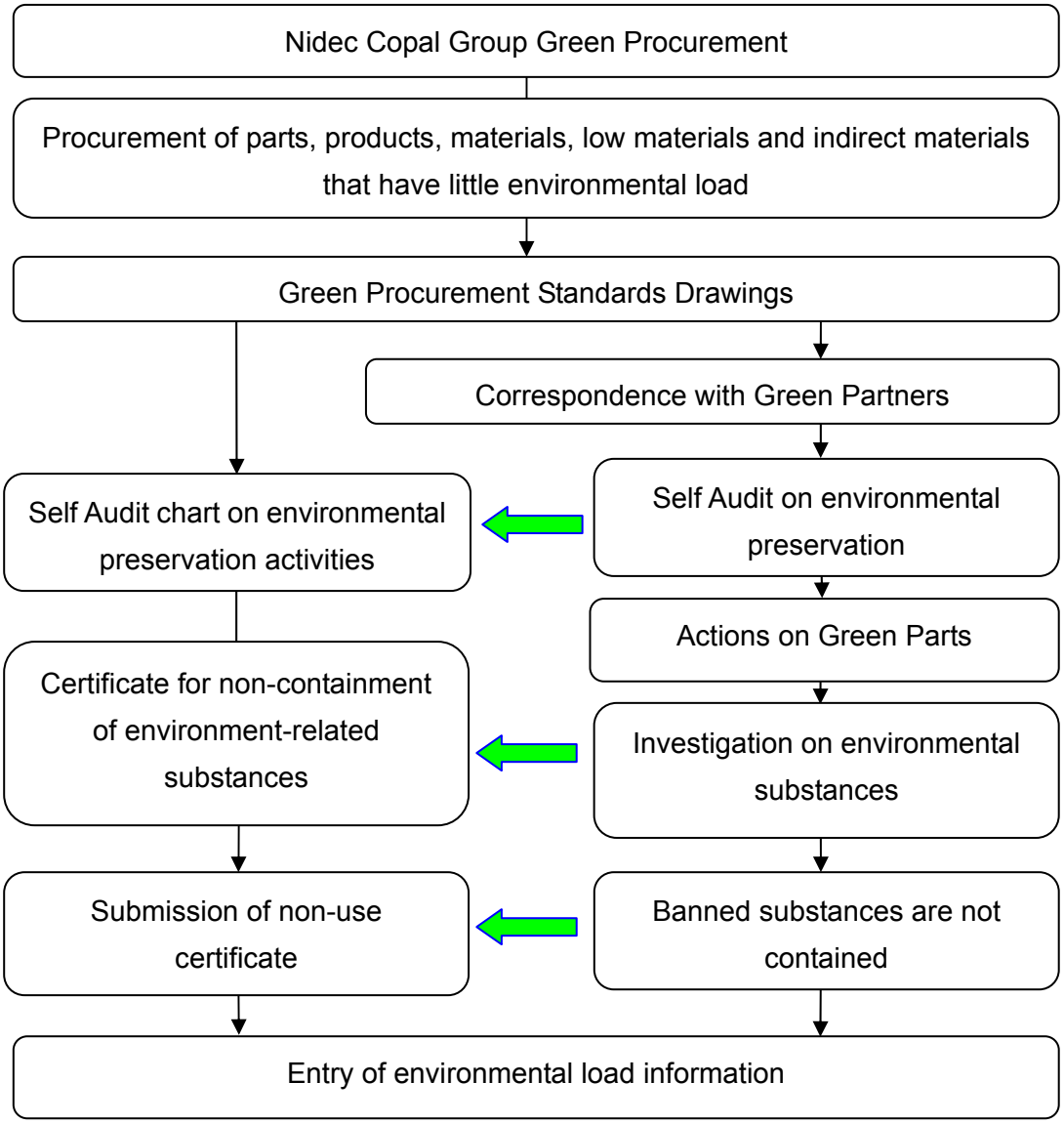
Green Partner means the partner companies who are working with the environmental control activities such as ECOSTAGE or EcoAction, or partner companies who establishes environment management system and obtains certification based on ISO14001.

2.3.2 Green Parts

Green Parts mean materials, parts, indirect materials and products that have little environmental load.

2.4 Positioning of Green Procurement Standards

How Green Procurement Standards are positioned in our system is indicated below.



2.5 Definitions

2.5.1 Environment-related substances

Environment-related substances mean the substances that Nidec Copal Group concludes to be having significant negative impact on global environment or on human body among the substances contained in parts, products or indirect parts.

2.5.2 Control level

Each Control Level is described as follow:

Level 1

The substance and its application must be banned immediately.

Level 2

The substance and its application may be allowed within a certain period of time. After expiring the term indicated on the chart, the substance shall be controlled as Level 1.

Level 3
Neither the term nor the target for reduction is set forth at the moment; however, it shall be the aim to reduce the amount contained in parts/products. The application of it is restricted as specified.

Exemption
Exempted by laws and regulations, or substance and its application for which there is no alternative technology at the moment.

Control substance
Substance that its use is not restricted but it is necessary to keep track of the usage and its concentration level.

When it becomes necessary to control the substances that are not defined by the Standards or when there is a unique requirement, information such as the substance name and its allowable concentration will be noted on the drawings.

2.5.3 Contain

The word "Contain" in this document means the intentional addition or use of the substance in a material to achieve or to improve intended performance or function of the material regardless of the amount of substance contained in the material.

2.5.4 Impure substance

Impure substances mean substances that are contained in the natural material and cannot be completely removed technically during the refinement process to create industrial materials, or substances that may be generated during the production process and cannot be technically removed.

2.5.5 Permissive concentration

Permissive concentration means the concentration level that may be allowed if environment control substance is contained in parts/products as impure substance. However, if concentration level exceeds the level specified, it will be considered as "Contain".

2.5.6 Environmental substance control target

Environmental substance control target indicates the target substances to be controlled by environmental laws and regulations or requirement of customers on environmental related substances. To achieve a complete control, the words such as “Environmental substance control target” will be stamped or printed on drawings, specification and other documents of the applicable parts/products.

2.5.7 Halogen substances

Chlorine and its chemical compound, Bromine and its chemical compound, antimonous oxide, red phosphorus and phthalic ester are collectively called Halogen substances.
In case Halogen substances need to be specifically controlled, the words "Halogen Free" will be stamped or printed on the drawings, specification or other documents of the applicable parts/products (refer to 3.3.24 Halogen substance at Page 20).

2.5.8 Homogeneous substances

Homogeneous substances mean the substances that are homogeneous in whole and cannot be physically dissolved.
Example: Parts made with nickel plating: It is made of homogeneous substance between the material and the nickel plated coat.

2.5.9 ICP measurement data

ICP measurement data is the data measured by either Inductively-coupled plasma emission spectroscopy analyzer (ICP-AES, ICP-OES) or Inductively-coupled plasma mass spectrometer (ICP-MS).

In addition, analysis data of environment-related substances also including the data measured by atomic absorption spectrometer (AAS) and ion chromatography analysis are collectively called ICP measured data.

2.5.10 Plastic

Plastic herein means substances formed by organic synthesis high-molecular substance. Examples are plastic, rubber, adhesive, paint, ink, lubricant, tape, fiber and film.

2.5.11 Indirect materials

Indirect materials mean items such as lubricant, adhesive, ink, lead-free solder, adhesive tape used for parts and products.

2.6 Documents to be submitted

2.6.1 Documents to be submitted during the development stage or at the time of 1st production lot of the new parts:

Please submit Certificate for non-containment of environment-related substances, ICP data and MSDS or Table of ingredients at the time of first production lot in order to guarantee that environment-related substances for parts, products and indirect materials are controlled and that delivered products meet Green Procurement Standards.

2.6.1.1 Please enter part number, description, material and surface treatment and also corresponding MSDS and ICP data control number on Certificate for non-containment of environment-related substances. Please make sure that control numbers for MSDS and ICP data can be referenced to each data (please refer to “CERTIFICATE FOR NON-CONTAINMENT OF ENVIRONMENT-RELATED SUBSTANCES” and the “Example of fill in the form”).

2.6.1.2 If the delivered products are made of multiple parts, please enter each material name (homogeneous substances) and follow instruction of 2.6.1.1 above.

2.6.1.3 As it is not possible to physically dissolve between material and processed layer for processes such as chemical conversion coating, alumite and nitriding treatment, please submit data for material and process for MSDS and data for material itself and material+coated layer for ICP data.

2.6.1.4 For items such as plating, paint and adhesive, please submit ICP data for the final condition, in other words, as coated condition.

2.6.1.5 Effective term for ICP data is one year.

2.6.1.6 Please enter weight of the parts (If there are parts with surface treatment, enter weight for each homogeneous substance).

2.6.1.7 If there is any change in 4M (men, machines, materials or methods), please submit MSDS/ICP data as well as 4M change application.

2.6.1.8 Only for free-cutting brass bar (such as C3602 and C3604), please also submit mil sheet (to determine if materials comply with RoHS by analyzing the value of cadmium).

2.6.1.9 If the drawing restricts the use of a particular hazardous substance, please submit ICP data and non-use certificate of the hazardous substance.

Note: Please enter following items on ICP data report.

- Description: Enter the same description as for MSDS

- Pretreatment method: Describe "Complete dissolution" if applicable.
- Measuring method, name of measuring device
- Name of the person who performed the measurement, name of the supervisor, name of the institution performing the measurement.
- Date of the measurement
- Measured results: If the measured result is below detection limit (ND), determination limit value should be entered.
- Flow chart for the measurement procedure

2.6.2 Documents to be submitted by new suppliers when starting the business:
2.6.2.1 Nonuse Certificate
2.6.2.2 Self auditing chart for environmental conservation activities
2.6.2.3 Chemical substances investigation report

2.7 Procedures

2.7.1 Green Partners (Self Audit)

The general requirement of the environmental management system is to obtain certificate of a third party, such as ISO14001, Ecostage or EcoAction. However, if the partner company establishes its own environmental preservation system, such partner company may be considered to be in conformity to the requirement.

Conformity: If the partner company has a certificate of a third party such as ISO14001, 30 point will be given.

Quasi Conformity: Even without a certificate of a third party accreditation organization, if the following requirements are met, the partner company may be considered to be in conformity to the requirement.

(a) Environmental policy is clearly established and all employees are well informed of the policy.
(b) There exists a reduction plan of materials, energy or waste.
(c) The partner company agrees with the Green Procurement Standards of Copal Group and its self evaluation point is 50 or higher from the self auditing of the environmental management.

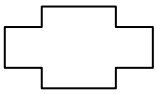
2.7.2 Green Parts (Investigation of environment-related substances)

Components, products and materials having a low level of the environmental load

We will purchase from partner companies who have systems to avoid accidental deliveries of components, products and materials that may include banned substances such as by the use of the list of environment-related substances.

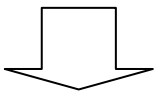
Green Partner
Purchase from partner companies who are promoting environmental preservation activities in a positive manner (self audit).

Nidec Copal Group promotes purchasing from the partner company who establishes a system which enables a continuous improvement in environmental preservation activities (Example: Environmental Management System)



Green Components
Purchase of materials, components and indirect materials having a low level of the environmental load and without harmful substances (investigation on environment-related substances)

Nidec Copal Group promotes purchasing from the partner company who is able to deliver materials, components or indirect materials that do not contain harmful substances (such as 6 substances restricted by RoHS) set forth by this procurement standards on a preferential basis.



Conform to the Green Procurement Standards of Nidec Copal Group

3 List of environment-related substances

Substances that need to be controlled as environment-related substances are listed below.

3.1 List of environment-related substances

Classification	Substances
Heavy metals	Cadmium and cadmium compounds
	Lead and lead compounds
	Mercury and mercury compounds
	Hexavalent chromium compounds
Chlorinated organic compounds	Polychlorinated biphenyls (PCB)
	Polychlorinated naphthalenes (PCN)
	Polychlorinated terphenyls (PCT)
	Short-chain chlorinated paraffins (SCCP)
	Other chlorinated organic compounds
Brominated organic compounds	Polybrominated biphenyls (PBB)
	Polybrominated diphenylethers (PBDE) (including decabromodiphenyl ether [DecaBDE])
	Other brominated organic compounds
Organotin Compounds	Tributyltin compounds (TBT), Triphenyltin compounds (TPT)
Asbestos	
Specific azo compounds	
Formaldehyde	
Polyvinylchloride (PVC) and PVC blends	
Beryllium oxide Beryllium copper	
Specific phthalates (DEHP, DBP, BBP, DINP, DID, DNOP, DNHP)	
Hydrofluorocarbon (HFC), Perfluorocarbon (PFC)	
Perfluorooctane sulfonates (PFOS)	
Specific benzotriazole	
Ozone depleting substances (ODS)	
Cobalt dichloride	
Halogen substance	
Substances controlled by REACH	

3.2 Each material and list of data to be submitted

	Material	ICP data (note 1)			MSDS or table of ingredients	Mill sheet
		Four substances	Six substances	Halogen substances		
Inorganic material	Metal	√	-	-	√	√(Note 2)
	Glass, Ceramic, etc.	√	-	-	√	-
	Plating, Alumite, Chemical oxidation	√	-	-	√	-
	Lead-free solder	√	-	√(Note 3)	√	-
	Others	√	-	-	√	-
Organic material	Plastic	-	√	√	√	-
	Rubber	-	√	√	√	-
	Lubricant	-	√	√	√	-
	Adhesive	-	√	√	√	-
	Paint	-	√	√	√	-
	Ink	-	√	√	√	-
	Tape and adhesive tape	-	√	√	√	-
	Oil barrier	-	√	√	√	-
	Others	-	√	√	√	-

Note 1
- 4 substances: Four harmful substances (Pb, Cd, Hg, Cr+6) defined by RoHS
- 6 substances: Six harmful substances (Pb, Cd, Hg, Cr+6) defined by RoHS
- Halogen substances: Data of chlorine and bromine by ion chromatography analysis

Note 2
- Please submit Mill sheet only for free-cutting brass bar (such as C3602,C3604).

Note 3
- Flux in the Pb free solder is the target.

Remark
- Submit data as indicated by the check marks.

3.3 Major targets and their schedules to be banned

3.3.1 Cadmium and cadmium compounds

Substances: Cadmium and cadmium compounds (all substances that contain cadmium element are targets including metal, alloy, inorganic compound and organic compound)		Schedule to ban delivery
Level 1	Packaging components and materials (please refer to 4: Additional items related to packing materials) The stabilizers, pigments, or dyes used for plastics (including rubber) materials (such as the insulators of electrical wiring, remote control key, cable tie, outer plastic resins of electrical parts, cabinet and label) Paint and ink Photographic film Surface treatment (such as plating) and coating (plating used for electrical contact requiring high reliability and without any alternative solution is exempted)	Immediately
	Electrical contact such as for DC motor, switch, relay and breaker Glass and pigments as well as dyes of glass paint (pigments and dyes used for glass and paints for glass) Solder (having cadmium concentration of more than 20 ppm) CdS-photocells, resistor elements (such as glass frit) Zinc die-cast free-cutting brass bar (note 1) Hot dip galvanizing Optical glass, filter glass	
Exemption	Plating used for highly reliable electrical contact for which there is no alternative solution	

Allowable concentration: 5 ppm or less for Plastic (including rubber), paint, and ink

75 ppm or less for other materials

(Note 1): For free-cutting brass bar, use only the material which the manufacturer guarantees Cd concentration of 75 ppm or less and which is in conformity with RoHS.

Measurement method

(1) Preparation of sample

There are following four typically used preparation methods.

1. Incineration under the existence of sulfuric acid.
2. A pressurized acid decomposition method in a sealed container (including microwave decomposition method (such as EN 13346:2000 or EPA3052:1996))
3. An acid decomposition method under the existence of nitric acid, hydrogen-peroxide water and hydrochloric acid (such as EPA3050B Rev.2:1996)
4. A wet decomposition method under the existence of sulfuric acid, nitric acid, and hydrogen-peroxide water (such as BS EN1122 :2001)

・ If precipitates (insoluble matters) are caused at any of above, such precipitates must be completely dissolved by some technical means (such as by alkali fusion).

（2） Measurement method

There are following three measurement methods typically applied.

1. Inductively Coupled Plasma-Atomic (Optical) Emission Spectroscopy (ICP-AES, ICP-OES): e.g. EN ISO11885:1998
2. Atomic Absorption spectroscopy (AAS); e.g. EN ISO 5961:1995
3. Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)

・ If a combination of a sample preparation method and a measurement method can guarantee that the limit of quantification for cadmium is less than 5 ppm, such combination is considered acceptable. Both cadmium and lead can be simultaneously analyzed by each of the measurement methods described above except for AAS.

Note: The extraction methods including EN71-3:1994, ASTM F963-96a, ASTM F963-03, ASTM, ASTM D5517, ISO 8124-3 are not suitable as sample preparation method.

JIS K0102-55, a testing method of industrial waste water, is only a measurement method, therefore it is necessary to describe the sample preparation method if this method is performed.

3.3.2 Lead and lead compounds

<table>
<tr><td colspan="2">Substances: Lead and lead compounds（All substances that contain lead element are targets including metal, alloy, inorganic compound and organic compound）</td><td>Schedule to ban</td></tr>
<tr><td rowspan="3">Level 1</td><td>・Packaging components and materials (Refer to Additional items for packaging materials)
・Paints, pigments and inks containing lead that are used for PWBs.</td><td rowspan="3">Immediate</td></tr>
<tr><td>・Surface coating and plating for external electrodes, lead wires and other areas of parts: Leaded solder plating (such as electronic components/semiconductor device/heat sink)
・Stabilizers, pigments and dyes contained in plastic (including rubber) used for power cords, connection cords and outer exposed areas of the remote controller devices
・Paints and inks used for outer and exposed areas of devices</td></tr>
<tr><td>All applications except for the exempted items
・Surface coating and plating for external electrodes, lead wires and other areas of parts that are integrated into devices such as AC adaptor, remote control unit and semiconductor devices.
・Lead solder having both less than 85wt% of lead content and 1000 ppm or more of lead content.
・All kinds of alloys (including solder materials) whose lead concentration is at the allowable concentration level or higher(*1).
・Stabilizers, pigments and dyes contained in the plastic (including rubber) materials that are used for areas other than outer and exposed areas of AC adaptor, power cords, connection cords, remote control units and mouse devices.
・Paints and inks used for areas other than the outer and exposed areas of devices.
・Optical glass, filter glass
・Electroless plating films such as electroless nickel plating and electroless gold plating whose lead content is more than 1000ppm</td></tr>
<tr><td>Level 3</td><td>・Electroless plating films such as electroless nickel plating and elecroless gold plating whose lead content is 1,000ppm or less (*2)</td><td></td></tr>
<tr><td rowspan="2">Exemptions</td><td>・High melting temperature type solder (lead based alloys containing 85wt% or more)
・Electronic ceramic parts (such as piezoelectric devices, dielectric materials and magnetic materials (such as ferrite)
・Glass materials used for cathode ray tubes, electronic components and fluorescent tubes (glass materials used for electronic components include sealing materials, resistor elements, conductive pastes, adhesives, and glass frit)
・Solder to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages
Allowable lead concentration (*1)
<table>
<tr><td>Type of alloy</td><td>Allowable lead concentration</td></tr>
<tr><td>Steel</td><td>Up to 0.35 wt%</td></tr>
<tr><td>Aluminum alloy</td><td>Up to 0.4 wt%</td></tr>
<tr><td>Cupper alloy</td><td>Up to 4.0 wt%</td></tr>
<tr><td>Leadless solder (*3)</td><td>Up to 1000 ppm</td></tr>
</table>
Allowable concentration of lead contained in conductive materials of solder for anisotropic conductive film (ACF) and anisotropic conductive paste (ACP) should be less than allowable concentration (*3)</td><td rowspan="2"></td></tr>
</table>

Allowable concentration:

100ppm or less; Plastic (including rubber), paints and inks.

1000ppm or less; Materials other than above mentioned items requiring 100ppm or less and materials noted as *1 in above chart.

(Note *2) When the drawing indicates “lead-free”, use lead-free electroless plating solution. Measurement standards and measurement methods are the same as for cadmium.

3.3.3 Mercury and mercury compounds

Substances: Mercury and mercury compounds (All substances that contain mercury element are targets including metal, alloy, inorganic compound and organic compound）		Schedule to ban
Level 1	・Packaging materials (Refer to 4. Additional items for packaging materials) ・Pigments, paints and inks ・Conditioners for plastic ・Compact size fluorescent lamps (such as for LCD backlight) ・Mercury or its compounds mixed in plastic	Immediate
	・All applications except for those specified as exemptions	
Exemption	・ Lamps other than compact size fluorescent lamps and straight-tube fluorescent lamps (such as high pressure mercury lamps) Compact size fluorescent lamps and straight-tube fluorescent lamps having mercury content of less than 5mg	

Allowable concentration: 1000 ppm or less

3.3.4 Hexavalent chromium compounds

Substances: Hexavalent chromium compounds All substances that contain hexavalent chromium element including inorganic compound and organic compound are targets. Metal chromium, chromium included in alloy, and chromium plating are excluded from targets.		Schedule to ban
Level 1	Packaging materials (refer to 4. Additional items for packaging materials)	Immediate
	Chromate treatment of zinc plating and zinc plated steel plate. Chemical conversion coating of aluminum alloy. Chromate treatment of nickel plating, iron black oxide finish, copper alloy (*2). Substances contained in paint or ink as pigment component. All applications such as leather tanning agent.	

Allowable concentration: 1000ppm or less

Note *1: For chromate plating using trivalent chrome plating liquid, there will be instruction noted on drawing.

Note *2: For alternate chromate treatment agent, CN-3S by Nihon Kagaku Sangyo Co., Ltd is recommended.

3.3.5 Polychlorinated biphenyls (PCB), polychlorinated naphthalenes (PCN), polychlorinated terphenyls (PCT)

Substances: Polychlorinated biphenyls (PCB), polychlorinated naphthalenes (PCN), polychlorinated terphenyls (PCT)		Schedule to ban
Level 1	All applications such as transformers containing oil, capacitors, insulating oils, lubricants, and flame retardants in plastics.	Immediate

3.3.6 Short-chain chlorinated paraffins (SCCP)

Substances: Short-chain chlorinated paraffins (SCCP) Short-chain chlorinated paraffins with carbon chain length of 10-13 are targets.		Schedule to ban
Level 1	Cabinets of products including accessories and PWBs. All applications except above.	Immediate

3.3.7 Other chlorinated organic compounds

Substances: Other chlorinated organic compounds		Schedule to ban
Level 3	Flame retardants and plasticizers contained in plastics, and flame retardants used for PWBs.	

3.3.8 Polybrominated biphenyls (PBB)

Substances: Polybrominated biphenyls (PBB)		Schedule to ban
Level 1	All applications such as flame retardants contained in plastics.	Immediate

Allowable concentration: 1000ppm or less

3.3.9 Polybrominated diphenylethers (PBDE) including decabromodiphenyl ether (DecaBDE)

Substances: Polybrominated diphenylethers (PBDE) including decabromodiphenyl ether (DecaBDE)		Schedule to ban
Level 1	All applications including flame retardants contained in plastics.	Immediate
	Applicable for parts manufactured using molding dies that were made in or before December 2002 (limited to TV and display bodies for regions other than Europe). Use of PBDE is prohibited for parts whose molding dies were made in or after January 2003.	

Allowable concentration: 1000ppm or less

3.3.10 Other brominated organic compounds

Substances: Other brominated organic compounds		Schedule to ban
Level 3	Flame retardants contained in such as plastics and PWBs.	

3.3.11 Tributyltin compounds (TBT) and triphenyltin compounds (TPT)

Substances: Tributyltin compounds (TBT) and triphenyltin compounds (TPT)		Schedule to ban
Level 1	All applications including paints, inks, preservatives and fungicides.	Immediate

3.3.12 Asbestos

Substances: Asbestos		Schedule to ban
Level 1	All applications including insulators and fillers.	Immediate

3.3.13 Specific azo compounds

(13) Substances: Specific azo compounds		Schedule to ban
Level 1	Azo compounds that may cause below listed amine compounds when dissolved by the decomposition method of German regulations of commodity items. Substances that are used in parts or articles that may come into direct and prolonged contact with the human skin (such as ear phones, head phones, belts and straps).	Immediate
Level 3	Parts and articles that do not come into continuous contact with human skin (such as remote control commander devices, cushions and mouse devices).	

List of specific amine compounds

Ref.	Amine compounds	CAS No.
1	4-aminodiphenyl	92-67-1
2	Benzidine	92-87-5
3	4-chloro-o-toluidine	95-69-2
4	2-naphthylamine	91-59-8
5	0-aminoazotoluene	97-56-3
6	2-amino-4-nitrotoluene	99-55-8
7	p-chloroanline	106-47-8
8	2, 4-diaminoanisole	615-05-4
9	4,4’-diaminodiphenylmethane	101-77-9
10	3,3’-dichlorobenzidine	91-94-1
11	3,3’-dimethozybenzidine	119-90-4
12	3,3’-dimethylbenzidine	119-93-7
13	4,4’-methylene-bis-(2-chloroailene)	101-14-4
14	p-cresidine	120-71-8
15	3.3’-dimethyl-4,4’-diaminodiphenylmethane	838-88-0
16	4,4’-thiodianline	139-65-1
17	4,4’-oxideaniline	101-80-4
18	o-toluidine	95-53-4
19	2,4-toluylenediamine	95-80-7
20	2,4,5-trimethylaniline	137-17-7
21	0-anisidine	90-04-0
22	4-ainoazobenzee	60-09-3

3.3.14 Formaldehyde

Substances: Formaldehyde		Schedule to ban
Level 1	Wooden products such as speakers and racks made from fiberboard, particleboard or plywood for Europe	Immediate
	Wooden products such as speakers and racks made from fiberboard, particleboard or plywood for countries other than Europe	

3.3.15 Polyvinyl chloride (PVC) and PVC blends

Substances: Polyvinyl chloride (PVC) ad PVC blends		Schedule to ban
Level 1	Cable ties Packaging materials and packaging sheets (such as air cushions, blister packs, cushion materials and protection bags)	Immediate
	Heat shrink tubes Insulating plates, decorative panels, labels, sheets and laminates Flexible flat cables (FFC)	
Level 3	Insulating boards, insulating tubes and insulating caps used both at outside and inside of devices Connecting cord Polyvinyl wires Harnesses and processing wires (such as coaxial cables, flat wires, double insulation wires and shielded wires) Insulation caps for capacitors, power supply switches and fuses	
Exempted	Binder for resins Polyvinyl electrical wires for high voltage Insulating tapes Ultrafine wires of AWG36 or more Parts that are not classified as level 1 and level 3, and are composed of vinyl chloride copolymers or blends of PVC and other polymers	

3.3.16 Beryllium oxide

Substances: Beryllium oxide		Schedule to ban
Level 1	All applications except those specified as Level 3.	Immediate
Level 3	Special purposes for which there is no alternative material	

3.3.17 Beryllium copper

Substances: Beryllium copper		Schedule to ban
Level 3	All applications	

3.3.18 Specific phthalates (DEHP, DBP, BBP, DINP, DIDP, DNOP, DMHP)

Substances: Specific phthalates (DEHP, DBP, BBP, DINP, DIDP, DNOP, DMHP) See note		Schedule to ban
Level 3	Plasticizer such as in polyvinyl chloride resin	

Note

Abbreviation	Description	CAS No.
DEHP	Di (2-ethylhexyl) phthalate	117-81-7
DBP	Di-n-butyl phthalate	84-74-2
BBP	Butyl benzyl phthalate	85-68-7
DINP	Diisononyl phthalate (technical mixture)	28553-12-0, 68515-48-0
DIDP	Diisodecyl phthalate (technical mixture)	26761-40, 68515-49-1
DNOP	Di-n-octyl phthalate	117-84-0
DNHP	Di-n-hexyl phthalate	84-75-3

3.3.19 Hydrofluorocarbon (HFC), Perfluorocarbon (PFC)

Substances: Hydrofluorocarbon (HFC), Perfluorocarbon (PFC)		Schedule to ban
Level 1	All applications for refrigerant, insulation and other products	Immediate

3.3.20 Specific benzotriazole

Substances: Specific benzotriazole		Schedule to ban
Level 1	Ultraviolet protectants and ultraviolet absorbers applied to decorative laminate, developing papers and molded plastic parts	Immediate

3.3.21 Perfluorooctane sulfonates (PFOS)

Substances: Perfluorooctane sulfonates (PFOS)		Schedule to ban
Level 1	Materials whose PFOS concentration is 0.1 wt% or more Textiles or other coated materials whose amount of PFOS is 1μg/m^2 or more of the coated material Examples: Plating, paint, colorant, dye, materials coated with water repellant agent, oil repellant agent, antifouling agent (such as textile, film and paper), fluoropolymer coating, adhesive and sealant	Immediate
Exempted	Photographic coatings applied to films, papers or printing plates Photoresists or anti reflective coatings for photolithography processes	

3.3.22 Ozone depleting substances (ODS)

Substances: Ozone depleting substances (ODS) Note 1		Schedule to ban
Level 1	Components and materials processed with ODS during cleaning, forming and other processes	Immediate

Note: For Ozone depleting substances such as HCFC (such as AK-225), requirement is subject to the requirements of the customers.

Note 1: CFC-11, CFC-12, CFC-13, CFC-111, CFC-112, CFC-113, CFC-114, CFC-115, CFC-211, CFC-212, CFC-213, CFC-214, CFC-215, CFC-216, CFC-217, Halon-1211, Halon-1301, Haron-2402, 1,1,1-Trichloroethane and Carbon tetrachioride

3.3.23 Cobalt dichloride

Substances: Cobalt dichloride		Schedule to ban
Level 1	Moisture indicator used for a desiccant agent (such as silica gel)	Immediate
Level 2	Humidity indicator card which is impregnated with cobalt dichloride	From April 1, 2011

3.3.24 Halogen substances

Substances: Halogen substances (Note 1)		
Target substances (note 2)	Allowable concentration (note 2)	
Bromine and its compounds	900ppm or less	If both bromine and chlorine are contained, 1,500ppm or less
Chlorine and its compounds	900ppm or less	
Antimonous oxide	1,000ppm or less	
Red phosphorus	1,000ppm or less	
Phthalate ester	1,000ppm or less	

Note 1: For applicable parts, drawings shall indicate”Halogen-free”.

Note 2: When target substances and their allowable concentrations are different from above, target substances and their allowable concentrations will be indicated on the drawings.

3.3.25 Substances restricted or controlled by REACH

Substances: Substances restricted or controlled by REACH Note 1	
Target substances	Carcinogen, mutagenic substances, reprotoxic substances, persistence substances, highly residual substances, highly bioaccumulative substances For the details of the target substances, refer to website of JAMP (Note 2) http: //www.jamp-info.com/

Note 1: Registration, Evaluation, Authorization and restriction of Chemicals (issued on June 1, 2008)

Note 2: On October 28, 2008, 15 substances were announced as Substances of Very High Concern. It is expected that target substances will continued to be added.

4 Additional items for packaging materials

Substances: Heavy metals (mercury, cadmium, hexavalent chromium and lead)		Schedule to ban
Level 1	All packaging components and materials, Items used for packaging for parts transportation (such as handles, wooden frames, foils, trays, reels, magazine sticks, bags, cushions, staples, sheets, wraps, cardboards, paints, inks, tapes, bands, labels)	Immediate
Exempted	Cartons for returnable boxes used for delivery of parts	
Allowable concentrations Allowable total concentration of mercury, cadmium, hexavalent chromium and lead combined is less than 100 ppm for each part of component, ink and paint which compose the packaging. In addition, the regulations on “Cadmium and cadmium compounds” and “Lead and lead compounds” for cadmium and lead contained in plastics (including rubber), paints and inks must be met. (Major plastic parts include handle, polyvinyl bags, cushions, wraps, foils, trays, reels, tapes, magazine sticks and bands)		

- For hexavalent chromium, analyze total chromium content first and make sure that total concentration of four elements combined is less than 100ppm. In this case, the sample preparation may be at the same time as for cadmium and lead.
- If the total concentration of four elements combined is 100ppm or more, check to see if the total concentration of cadmium, lead and mercury combined is less than 100ppm. If total concentration of cadmium, lead and mercury combined is less than 100ppm, analyze hexavalent chromium and make sure that hexavalent chromium is not detected at the end.

4.1 Measurement standard

Sample preparation

- For cadmium, lead and total chromium, follow the instruction for the measurement of cadmium contained in plastic.
- For mercury, the measuring method is the same as for cadmium contained in plastic. However, if the mercury concentration is expected to be low, a reduction-evaporation atom-absorption method, ICP-AES(ICP-OES) method with hydride-generation apparatus or ICP-MS method with a hydride-generation apparatus is recommended.

4.2 Detection of hexavalent chromium

(A method to detect hexavalent chromium when total concentration of cadmium, lead, mercury and total chromium combined is measured to be 100ppm or more on packaging materials)

4.2.1 Detection method

4.2.1.1 Sample preparation: Extraction methods (boiling water extraction method)

4.2.1.2 Measurement method: Ultraviolet-Visible Spectroscopy

Under this measurement standard, if limits of quantification are guaranteed as a combination of sample preparation method and measurement method to be 5ppm for mercury, 5ppm for cadmium, 5ppm for total chromium and 30ppm for lead, it is judged to

be acceptable. Cadmium, lead and total chromium may be simultaneously analyzed by each of the measurement methods except AAS.

For inquiry, please contact,
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Nidec Copal Corporation
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CERTIFICATE FOR NON-CONTAINMENT OF ENVIRONMENT-RELATED SUBSTANCES

Control Number:_____

Date:_____/_____/_____(yy/mm/dd)

To Nidec Copal Corporation

- We hereby certify that the products including components, units, materials and indirect materials that we deliver to you do not contain any environmental control substances you specify to be Level 1 or the substances that your drawings specify not to use. We also certify that we do not use any of the harmful substances classified as Level 1 by you or the substances your drawings specify not to use during our manufacturing processes.
- While we deliver our products to you, we will note the Control number shown above in the outgoing inspection report to make sure that the environmental control substances are closely monitored.
- Products to be delivered:

Part No.	Description	Materials/Surface treatment (components)	ICP Data		MSDS or table of ingredients Ref No.	Weight
			Ref No.	Date		

Remarks:

Please find separate data for ICP

Please find separate data for MSDS (table of ingredients)

Only for free-cutting brass bars, we will submit “Mil sheet”

ICP data is effective for one year. We will submit the new data after new measurement before the data becomes invalid.

Company Name:

Valid until:

By:_____

Name:

Title:

Contact person:

※If you need a Word sheet , please click right button. Word

CERTIFICATE FOR NON-CONTAINMENT OF ENVIRONMENT-RELATED SUBSTANCES

HOW TO FILL IN THE FORM

Enter this number in the outgoing inspection sheet as a proof of certificate for non-containment

Control Number: 2009-0010

Date: / / (yy/mm/dd)

To Nidec Copal Corporation

- We hereby certify that the products including components, units, materials and indirect materials that we deliver to you do not contain any environmental control substances you specify to be Level 1 or the substances that your drawings specify not to use. We also certify that we do not use any of the harmful substances classified as Level 1 by you or the substances your drawings specify not to use during our manufacturing processes.

- [illegible] to you, we will note the Control number shown above in [illegible] to make sure that the environmental control substances

Enter Copal part number and part description

Weight of material + nitriding treatment

Weight of paint film

MSDS for material

MSDS for nitriding treatment

MSDS for paint

ICP data for material

- Products to be delivered:

Part No.	Description	Mate[illegible] tr[illegible] (components)			MSDS or table of ingredients Ref No.	Weight
	Main Mirror shaft	SUM24L	I-1234	2009/10/1	M-1234	0.04 g
		Nitriding treatment	I-4567	2009/10/1	M-4567	
		Paint (SOX-5)	I-7890	2009/10/1	M-7890	0.02mg
A4-42370	York A	SUYP-1	I-2345	2009/10/1	M-2345	0.56g
		Nonelectrolytic nickel plating	I-6789	2009/10/1	M-6789	5.3mg

ICP data for material with nitriding treatment

ICP data for paint film

This part is made of three elements, material, nitriding treatment and paint. Although ICP data is required for each homogeneous substance, nitriding treated surface cannot be separated from the material. Therefore, the ICP data here is for the nitriding treated material.

ICP data for material

ICP data for plating

Weight of the part per piece before plating

Weight of the plating (Weight after plating – weight before plating)

Remarks:

Please find separate data for ICP
Please find separate data for MSDS (table of ingredients)
Only for free-cutting brass bars, we will submit "Mil sheet"
ICP data is effective for one year. We will submit the new data after new measurement before the data becomes invalid.

Company Name:

Valid until: September 2010

By:________________________

Name:

Title:

Contact person: