Nichicon Group

Green Procurement Guideline

Version 14

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Nichicon Corporation

Contents

1. Purpose

With the ever-increasing global environmental issues that are now confronting society, greater attention must be paid to solving these challenges and it must become the responsibility for all of us, It is against this background that CSR (Corporate Social Responsibility) is a mandatory requirement of any company using phrases such as: “Marketing environmentally-friendly products,” “Procurement from environmentally conscious companies,” and “Recycling or energy-saving design out of concern for the environment.”

This is typified by the EU’s RoHS directive and the REACH regulation, which are increasingly tightening regulations that are now in place in many regions and countries of the world for the chemicals contained in products. To comply with such regulations, it would be necessary for us to be fully informed of, and in control of the chemicals contained in any of the raw materials used.
To achieve this goal, Nichicon Group will set its criteria as this guideline for controlling the substances regarded as environmental loads, and cooperate with our suppliers to provide green procurement, thus helping contribute to a sustainable society.

2. Scope

This Green Procurement Guideline applies to the materials, components, sub-materials (wrapping and packaging materials), unit parts, office equipment and office supplies that constitute Nichicon’s products or that are used in any of Nichicon’s facilities.

3. Definitions and Explanations

(1) Definitions and explanations of terms

① “Materials” means:

Materials, components, components, sub-materials (wrapping/packaging materials) that constitute Nichicon’s products.

② “Sub-materials” (packaging materials etc.) means:

Packaging materials are defined as products made from any materials of any nature to be used for the containment, protection, shipment, delivery and indication of goods, from raw materials to processed goods from the producer to the user or consumer.

Cardboard, reels, embossed tapes, sealing tapes, sheets, adhesive tapes, labels, cushions, staplers, ink for indication, adhesives, plastic bags, driers etc. used for packaging and transporting products.

③ “Environmental load substances” means:

Substances specified as subject to control by Nichicon Group which takes into consideration the adverse effect their use would have on the environment, ecosystem, regulations, and the way our industry is going. These are grouped into banned substances, reduction substances, and control substances. For detailed information, see Sheet-2 “List of environmental load substances designated by Nichicon Group”.

(a) “Banned substances” means:〔Table-3〕

- Substances not allowed to be intentionally used or contained in materials delivered to Nichicon.
- Concentration of impurities shall not exceed the guarantee level. The detailed information is in item3(1)⑧.

- RoHS directive has the exclusion of application in specific use. However, China RoHS does not have the exclusion of application. Please notify us if there are any subject products.
- Please notify us in case the substitution of the environmental load substances listed in〔Table-3〕is difficult. We shall adjust it separately as needed.

(b) “Reduction substances” means:〔Table-4〕

- Such substances used or contained should be understood and reduced to the lowest possible level.

(c) “Control substances” means:〔Table-5〕

- Such substances used or contained should be understood and controlled.
- Such substances contained should be understood since there is a high possibility to become the reduction substances or the banned substances in the future.

④ “Others. Substances that require information transmission” means:

REACH regulation requires the article suppliers to provide the information so that the customer and buyer can handle the article safely. It is required to transmit the information of the substances contained accurately and speedily in the supply chain in order to comply with the law. In our company, the investigation shall be promoted with the forms (chemSHERPA-AI/CI) issued by JAMP (Joint Article Management Promotion-consortium).*The explanations of details are in item 3(2). Moreover, the additional investigation may be carried out to meet the movement of the industry and the law at home and abroad.

⑤ “Contained” means:

Whether intentionally or not, any substance added, adhered to the materials, or the materials are filled or contaminated with any substance, such substances are said to be “contained”.

⑥ “Impurities” means:

Substances contained cannot be removed from industrial materials in the refining process or those resulting from synthetic reactions and cannot be technically removed completely.

⑦ “Homogeneous materials” means:

- The smallest unit of materials which are mechanically indivisible into any other materials.
- For example, the tin-plating contained in lead frame is considered as a separate material from the lead frame.
- The plating of plural layer indicates the condition of every single layer.

⑧ “Guarantee concentration” means:

The upper limit of the allowable amounts of contained concentration of impurities, and the concentration shall be divided by the homogeneous materials. Guarantee concentration and Control concentration are shown in [Table-3] No.1~No.10 and some substances in the "Major reference laws and regulations, customer requirements, etc." column.

⑨ “Control concentration” means:

- The contained concentration which isn’t exceeded without intentionally using and mixing, is a standard concentration of the daily control to ensure the guarantee concentration in our company and customers.
- Please contact us regarding the material whose contained concentration exceeds the control concentration. We shall consult and determine the countermeasure. (If it is proved to be lower than the guarantee concentration, we shall consider acceptance as a material higher than the contained concentration.)
- In case our suppliers (customers) / consumers require a more severe control concentration, we may ask for individual support after consultation, so we ask for your cooperation.

(2) REACH Regulation system

① REACH Regulation

The general law of registration, evaluation, authorization, and restriction for the chemical substances in EU was issued in June, 2007.

【Characteristic】

- Phase in chemical substances shall be evaluated and registered just like new chemical substances.
- Risk evaluation shall be the obligation of the producer/importer.
- Reinforce the adequate transaction of information on safety and management of chemical substance through the supply chain in both of upstream users and downstream users.
- Understanding of information on existence (concentration) or nonexistence of chemicals in the Article and its use.

② SVHC (Substances of Very High Concern)

It is a synonym for “candidate substances targeted for authorization” and “substances listed in the candidate list”. It applies to the criteria in Article 57 of the REACH regulation, and “Notification” and “Information Transmission” are obligated under the certain conditions. The substances targeted for authorization are determined from these substances. SVHC candidate substance list is changed / updated twice per year. The latest list is available at the below HP of ECHA (European Chemicals Agency).

https://echa.europa.eu/web/guest/candidate-list-table

③ JAMP (Joint Article Management Promotion-consortium)

The activity promotion organization crossing the industry which was established in September, 2006 in order to control the information of contained substance in the article accurately, make and familiarize the system for smooth demonstration and transmission in the supply chain, and improve the industrial competition in Japan.

④ Information transmission

When the SVHC is included with concentration of over 0.1wt% in the product (article), the supplier of the product is obligated to transmit the information to downstream users so that the subject article is used safely. We shall transmit the SVHC contained information by using the JAMP system and the tools (chemSHERPA-AI/CI). Please obtain the latest

version JAMP tool from the website of JAMP, and provide the SVHC contained information after investigating all the substances targeted for investigation through the supply chain.

An outline and the utilization of chemSHERPA are available at the below HP.

【JAMP　chemSHERPA】 https://chemsherpa.net/

4. Evaluation criteria for newly approved products and specifically changed products

To judge adoption after evaluation based on the following criteria for each category.

(1) Materials

- No banned substances shall be contained. (not exceeding the guarantee concentration if the guarantee concentration is set for the substances. However, the denominator of concentration calculation should be a homogeneous materials unit.)
- Contained reduction substance or control substance shall be controlled, and the required measure shall be systematized.
- Evaluation score for environmental management activities (Form-1) shall be 80 points or more.

(2) Office supplies and office equipment

- Environment-conscious products such as ECO-marked products shall be used unless otherwise there is alternative but any other choice.
- Evaluation score for environmental management activities(Form-1)shall be 80 points or more.

5. Management of recycling materials

Recycling materials which were used outside your company have a risk of being contaminated by banned substances.

Closed recycle: Use the recycled material for our products.

Open recycle: Not use the recycled material for our products.

(1) In case of using any recycling materials, please report to us.(Form-2)

(2) Please confirm how these are actually used and managed in your suppliers by conducting a periodic audit etc.

(3) Please submit analysis data upon our request.

6. Submitting the information and data

To prove that the concentration of any banned substance contained in any material or homogenous materials are less than guarantee concentration, please submit documents described in Table-1. In addition, this survey should be completed by a personnel authorized by the respondent company.

Our factory may request other form.

(1) Required document

［Table-1］ Required document Yes: Required No: Not required

	Required document	Material/Sub-material	Office supplies/ Office equipment
1)	Evaluation response for environmental management activities (Form-1) (*1)	Yes	Yes
2)	Survey table for environmental load substances (Form-2) (*1)	Yes	No
3)	Ingredient information (Form-3) (*1)	Yes	No
4)	Certificate of non-inclusion of chemicals contained in the products (Form-4) (*1)	Yes	No
5)	Survey table for supply chain (Form-5) (*1)	Yes	No
6)	Safety Data Sheet (SDS)	Yes	No
7)	Measurement data of RoHS 10 substances (Data measured by the high precision measuring instrument) (Cadmium, lead, mercury, hexavalent chromium, PBB, PBDE,DEHP,BBP,DBP,DIBP)	Yes	No
8)	・ JAMP chemSHERPA-AI (Articles) ・ JAMP chemSHERPA-CI (Chemicals)	Yes	No
9)	"Annex E & Check Sheet latest version" (excel version) of "JAMP Guideline for chemical management in products"	Yes	No

(*1) Please use the excel files for Form 1 -5. Please download the form the next link.

https://www.nichicon.co.jp/english/eco/eco_green.html

(2) Remark

① Evaluation response for environmental management activities (Form-1)

- Evaluation will be made before entering into a new business relationship with a supplier, and on regular basis (approximately once every 2 years) after that.
- Self-evaluation should be made using "Evaluation score table for environmental management activities" (Form-1) to complete and submit after filled.
- If no environmental load substances are involved in your operation with no likelihood of any banned substance being contained in any material to be delivered to Nichicon, give select points to every question from 16) to 23).
- Nichicon may visit your premises, if necessary, to inspect the way environmental management is conducted. If you have such a request from Nichicon, you are required to help with this inspection.
- If you want to make a change to any of your responses made in the survey, please notify us of such a change in writing.

② chemSHERPA-AI/CI

- When JAMP determines the new SVHC which is not on the subject of chemSHERPA-AI/CI investigation, it is supposed to upgrade soon. We shall carry out the investigation in this case, so please cooperate with us.
- As SCIP information, please submit data with both component information and legal compliance judgement information contained.

③ Other documents

- Please prepare one sheet for each product for Form-2, 3, and 4.
- Concentration should be given in ppm. To work it out, the quantity is divided by the quantity of the material in which it is used.
- In “Reason for inclusion”, state the purpose of the contained substance if contained intentionally, or impurities if they are impurities.
- SDS does not always cover all the information on trace amounts of chemicals required for inspection for green procurement. Therefore, if you refer to your SDS, you might leave out the information on the substances subject to the inspection. That’s why you should ask the supplier so that you can prevent omissions.
- We may require measurement data for each shipping lot for the specific materials. In this case, please cooperate with our requirement.
- Phthalate esters added to the prohibited substances under the RoHS Directive is known to be transferred by contact between substances. Please control the pollution control of phthalate esters by transferring from contacting materials during the production, storage and transportation of the parts we deliver to our company.
- Then, please submit documents (form 1~form 4) on the chemical substances contained in the product, including the packaging materials and packaging materials, for the products to be delivered to us.

(3) Measurement procedures of the measurement data:

Please submit the data measured according to the following procedures for RoHS 10（No.1～No.10） substances, whose guarantee concentrations of the impurity are specified in Table-3.

- Please measure the quantities of the banned substances contained in accordance with the measurement method “IEC62321” as mentioned in Sheet-1.

Regarding Phthalate esters (DEHP, BBP, DBP, DIBP), please submit data of 4 types phthalate esters at the next data update except for metal material.

- Regarding the banned substances where guaranteed concentrations are not specified, it is not required to carry out the analysis for confirming non-inclusion of the subject substances if you confirm that these are not intentionally used from the investigation tracing back to the supply chain. However, please inform us immediately if any phenomenon of impurity inclusion was confirmed.
- Measurement should be made for each material or homogeneous substance.
- The measuring instrument should be guaranteed to have its lowest limit of quantitative analysis lower than the guarantee concentration.
- The measurement data should include the information for the pre-treatment method, measuring method, name of the person who conducts the measurement, name of the person responsible for the measurement, description of the measuring instrument, date of measurement, measurement flow-chart, and photo of the sample.

- “Spot test”, which has low accuracy due to its high determination limit, is not allowed for the measurement of Hexavalent chromium.
- Measurement of hexavalent chromium in packing materials

  ①Hexavalent chromium is the subject of regulation for chromium, and metallic chromium and trivalent chromium are not subject to regulation

  ②First measure total chromium.

  ③Confirm Cd + Pb + Hg + Cr <100 ppm considering total chromium content as hexavalent chromium

  In this case there is no need to analyze to identify hexavalent chromium

  ④In the case of Cd + Pb + Hg + Cr ≧ 100 ppm, an analysis for specifying hexavalent chromium content is carried out Check Cd + Pb + Hg + Cr^{6+} <100 ppm.
- If the result of the measurement is filled out ND (No Detection or Not Detected), state the lower limit of quantitative analysis.
- If any precipitate (insoluble) is deposited during pre-treatment, please make sure it is completely dissolved.
- At the column for “Pre-treatment”, state “Completely dissolved”.
- The measurement data shall be valid for one year from the measurement date.
  Therefore, it is necessary for you to renew and submit the data within one year as long as the relevant product continues to be delivered to us.

  Specified laboratory is SGS. The data need to be prepared in English.

(4) Survey for supply chain

①What is supply chain?

A series of business processes that include development, procurement, manufacturing, delivery, and sales, thus linking the suppliers to the consumers. Material makers, original component makers, parts makers, set makers, retailers and consumers are involved in each process, but we need to be well informed about those makers deeply involved in making decisions on the material ingredients in order to realize the green procurement.

②Survey for supply chain

We ask you to complete Survey for supply chain (Form-5) by filling in the information not only about the suppliers or makers of the raw materials, components, or parts that make up our products, but also about the makers of pigments, stabilizers, coloring agents, and other additives, about the plating or soldering sub-contractors, about the dealers involved with the ingredients, and about whoever you outsource to. We ask you to be sure that your business partners build their control system to prevent any banned substance from being contained, upgrade their incoming inspection, process inspection, and shipping inspection system, and keep in good working order the network to be used to inform everyone involved of any detection of contained banned substances.

(5) When to submit the documents

①Newly applied products

To apply for approval of a new material or any material we do not have a material code set for, submit Forms 1 – 5 and SDS, measurement data, chemSHERPA-AI/CI and " AnnexE & Check Sheet latest version" (excel version) of "JAMP Guideline for chemical management in products" at the time of application.

【File resource】https://chemsherpa.net/

②Existing approved material

For the material you have already delivered to us, or material we have a material code set for, submit measurement data ((7) of ［Table-1］) on a regular basis (within one year). Regarding the documents which you submitted to us, please submit every time at the time of changing any of the contents.

③Specification changed products etc.

If the specifications such as ingredients, production site, or manufacturing method are expected to change, apply for the approval of the planned specification change by submitting our document for new (changed) materials/components procedure "New (Changed) Materials/Components Application and Approval Form" with Forms 1 – 5 attached to this guideline, SDS and measurement data in advance.

(6) Action to take if a higher concentration of any banned substance over the guarantee concentration is contained:

- New material asking for a new approval will not be adopted.
- If products and materials currently being delivered to us continuously are found to contain a higher concentration of any of the banned substances than guarantee concentration, immediately contact our green procurement section shown below.

  Inform immediately　the purchasing division and Quality Assurance division of the our factory, and complete the instructions.

(7) For SVHC information

If you would like to correct SVHC information, which you had informed to us before, please immediately contact us.

(8) For chemSHERPA-AI/CI

We deem that the materials do not contain the specific substances, which you have not submitted chemSHERPA-AI/CI.

7. Individual consultation

If it is difficult to respond to this guideline or if any doubt arise, we will discuss and resolve it individually.

8. Inquiry on Green procurement

Nichicon Corporation
Quality and Production Innovation Headquarters
Headquarters TEL +81 (0) 75-241-5409　FAX +81 (0) 75-253-2187
E-MAIL : kankyou@nichicon.com

Nichicon Corporation website
http ://www.nichicon.co.jp/top.html
https://www.nichicon.co.jp/english/eco/eco_green.html

Sheet-1

[Table-2] List of measuring methods for banned substances

Measurement method: IEC62321 is specified.

Substance	Metal material	Polymer material (other than metal materials)
lead/ cadmium	IEC62321-5 ICP-OES、ICP-MS、AAS、AFS	
mercury	IEC62321-4 ICP-OES、ICP-MS、AAS、AFS	
Hexavalent chromium	IEC62321-7-1 hot-water extraction method / Colorimetric method	IEC62321-7-2 alkaline extraction / Colorimetric method
PBB、PBDE	IEC62321-6 GC-MS	
DIBP、DBP、BBP、DEHP	Not covered	IEC62321-8 GC-MS

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List of environmental load substances designated by Nichicon Group

[Table-3] Banned substances [Exemption： material allowed to intentionally use]

No.	Substance	Use	Guarantee concentration (ppm)	Control concentration (ppm)	Main reference laws and regulations, customer's requirement etc.	CAS No.
1	Cadmium and its compounds	All materials	100	75	REACH Regulation AnnexXVII EU･RoHS Directive (2011/65/EU) EU･ELV Directive The EU Directive on Packaging and Packaging Waste(94/62/EC)	—
2	Lead and its compounds	Plastic (including rubber), paint, ink	100	100	California state SB-20/50	—
		Plating	1000	800	REACH Regulation AnnexXVII EU･RoHS Directive (2011/65/EU) EU･ELV Directive	
		Other materials Solder, alloy etc.		500		
		Sub-materials*1	100	90	The EU Directive on Packaging and Packaging Waste(94/62/EC)	
3	Mercury and its compounds	Plastic(including rubber), paint, ink	1000	100	REACH Regulation AnnexXVII, EU･ELV Directive	—
		Other materials		500	EU･RoHS Directive (2011/65/EU)	
		Sub-materials*1	100	90	The EU Directive on Packaging and Packaging Waste(94/62/EC)	
4	Hexavalent chromium	Metal material	1000	100	EU･RoHS Directive (2011/65/EU) EU･ELV Directive	—
		Other materials		100	REACH Regulation AnnexXVII、TSCA	
		Sub-materials*1	100	90	The EU Directive on Packaging and Packaging Waste(94/62/EC)	
5	Polybrominated biphenyls (PBBs)	All materials	1000	100	REACH Regulation AnnexXVII EU･RoHS Directive (2011/65/EU)	—
6	Polybrominated diphenyl ethers (PBDEs) including Deca BDE	All materials	500	100	REACH Regulation AnnexXVII、TSCA EU･RoHS Directive (2011/65/EU) PIC Regulation AnnexV	—
7	Di(2-ethylhexyl)phthalate (DEHP)	Plastic (including rubber), paint, ink	1000	500	REACH Regulation AnnexXVII, EU Directive(2005/84/EC) RoHS Directive (2015/863 /EU)	117-81-7
8	Butyl benzyl phthalate(BBP)	Plastic (including rubber), paint, ink	1000	500	REACH Regulation AnnexXVII EU Directive(2005/84/EC) RoHS Directive (2015/863/ EU)	85-68-7
9	Dibutyl phthalate(DBP)	Plastic (including rubber), paint, ink	1000	500	REACH Regulation AnnexXVII EU Directive(2005/84/EC) RoHS Directive (2015/863 /EU)	84-74-2
10	Diisobutyl Phthalate (DIBP)	Plastic (including rubber), paint, ink	1000	500	REACH Regulation AnnexXVII EU Directive(2005/84/EC) RoHS Directive (2015/863/ EU)	84-69-5

[Table-3] Banned substances [Exemption： material allowed to intentionally use]

No.	Substance	Main reference laws and regulations, customer's requirement etc.	CAS No.
11	1-tert-Butyl-3,5-dimethyl-2,4,6-trinitrobenzene Musk xylene	REACH Regulation AnnexXIV	81-15-2
12	Diarsenic pentoxide, Diarsenic trioxide	REACH Regulation AnnexXVII	1303-28-2 1327-53-3
13	Hexabromocyclododecane (HBCDD) and all major diastereoisomers	REACH Regulation AnnexXIV, EU POPsRegulation, JCSCL	—
14	Benzene	REACH Regulation AnnexXVII	71-43-2
15	1,1,2-trichloroethane	REACH Regulation AnnexXVII	79-00-5
16	Perfluorooctane Sulfonate(PFOS) (including salt)	REACH Regulation AnnexXVII, EU POPsRegulation,GADSL	—
17	Cobalt Chloride and Cobalt Sulfate	REACH Regulation AnnexXVII	—
18	Polychlorinated biphenyl(PCBs) and Polychlorinated terphenyls(PCTs)	REACH Regulation AnnexXVII, EU POPsRegulation,TSCA,JCSCL	—
19	Specific phthalate esters		—
	Diisononyl phthalate(DINP)	REACH Regulation AnnexXVII, EU Directive(2005/84/EC)	28553-12-0 68515-48-0
	Diisodecyl phthalate (DIDP)	REACH Regulation AnnexXVII, EU Directive(2005/84/EC)	26761-40-0 68515-49-1
	Di-n-octyl phthalate (DNOP)	REACH Regulation AnnexXVII, EU Directive(2005/84/EC)	117-84-0
20	Short-chain chlorinated paraffins(C10～C13)	REACH Regulation AnnexXIV,XVII, JCSCL	85535-84-8
21	Azocolourants and azodyes which form certain aromatic amines	REACH Regulation AnnexXVII, LMBG	—
22	Tris(2-chloroethyl)phosphate (TCEP)	REACH Regulation AnnexXIV, EU Directive (2014/79/EU)	115-96-8
23	Tris(1-chloro-2-propyl) phosphate(TCPP)	Vermont state regulation, EU Directive (2014/79/EU)	13674-84-5
24	Tris(1,3-dichloro-2-propyl) Phosphate (TDCPP)	Vermont state regulation, EU Directive (2014/79/EU)	13674-87-8
25	Dimethyl fumarate (DMF)	REACH Regulation AnnexXVII, EU Directive (2009/251/EC)	624-49-7
26	Tri-substituted organostannic compounds including TBTO, TBT and TPT	EU Directive (2009/425/EC), JCSCL, REACH Regulation AnnexXVII	—
27	Dibutyltin (DBT) compounds	EU Directive (2009/425/EC),REACH Regulation AnnexXVII,	—
28	Dioctyltin (DOT) compounds	EU Directive (2009/425/EC), REACH Regulation AnnexXVII,	—
29	Beryllium oxide	REACH Regulation AnnexXVII, Guidance of DIGITALEUROPE	1304-56-9
30	PAHs (Polycyclic aromatic hydrocarbons) Benzo[def]chrysene etc.	REACH Regulation AnnexXVII, ProdSG Law(GS mark certificate)	—
31	Hexachlorobenzene	JCSCL, Stockholm Convention on Persistent Organic Pollutants, EU POPsRegulation	118-74-1
32	Formaldehyde (as regulated by law)	California state CARB regulation Austria Formaldehyde regulation	50-00-0
33	Perchlorates	California state DTSC regulation	—
34	Ozone-Depleting Substances	Montreal Protocol, Ozone Layer Protection Law	—
35	Perfluorooctanoic acid (PFOA) ,its salts and PFOA-related substances	EU POPsRegulation Guaranteed concentration: 25ppb, 2010/2015 PFOA Stewardship Program, Norway regulation	—
36	Asbestos	REACH Regulation AnnexXVII, Air Pollution Control Law, Industrial Safety and Health Law, TSCA	—
37	Pentachlorophenol and its salts and esters	REACH Regulation AnnexXVII, Industrial Safety and Health Law, JCSCL	—
38	Fluorinated greenhouse Gases(HFC,SF6,PFC etc.)	Law Concerning the Promotion of Measures to Cope with Global Warming; Law Concerning the Promotion of the Measures to Cope with Global Warming Regulation(EC) No.842/2006 on certain fluorinated greenhouse	—
39	Refractory Ceramic Fiber	Industrial Safety and Health Law Specified chemical substances second category	142844-00-6
40	Radioactive substances	Nuclear Reactor Regulation Law	—
41	Chlordecone	JCSCL, EU POPsRegulation	143-50-0
42	Lindane (γ-hexachlorocyclohexane)	JCSCL, EU POPsRegulation	58-89-9
43	α-hexachlorocyclohexane	JCSCL, EU POPsRegulation	319-84-6
44	β-hexachlorocyclohexane	JCSCL, EU POPsRegulation	319-85-7
45	Perfluorooctane sulfonyl fluoride (PFOSF)	JCSCL, EU POPsRegulation	307-35-7
46	Pentachlorobenzene	JCSCL, EU POPsRegulation	608-93-5
47	Polychloronaphthalene (PCN) (The number of chlorine is 3 or more.)	JCSCL, EU POPsRegulation,Customer's requirement	—
48	2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-tert-butylphenol(Specified benzotriazole)	JCSCL,REACH Regulation AnnexXIV	3846-71-7
49	N-Phenyl-benzenamine	Customer's requirement	122-39-4
50	Styrene	Customer's requirement	100-42-5
51	Polyvinyl chloride (PVC) and PVC blends	Customer's requirement	—
52	Cyanide compounds	Customer's requirement	—
53	Natural rubber	Customer's requirement	—
54	Red phosphorus	Customer's requirement	7723-14-0
55	N-Phenylbenzenamine, styrene and Reaction products with 2,4,4-trimethylpentene(BNST)	Customer's requirement	68921-45-9

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[Table-3] Banned substances [Exemption： material allowed to intentionally use] (Continued)

56	Indium phosphide	REACH Regulation AnnexXIV	22398-80-7
57	N,N'-ditryl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine or N,N'-dixylyl-p-phenylenediamine	JCSCL	27417-40-9, 28726-30-9, 620-91-7, 70290-05-0, 15017-02-4
58	2,4,6-Tri-tert-butylphenol	JCSCL, TSCA	732-26-3
59	Isopropylated phenol phosphate (3:1)	TSCA	68937-41-7
60	Hexachlorobutadiene (HCBD)	TSCA	87-68-3
61	Pentachlorothiophenol (PCTP)	TSCA	133-49-3
62	Cyclohexane	REACH Regulation AnnexXVII	110-82-7
63	Inorganic ammonium salts	REACH Regulation AnnexXVII	—
64	1,4-dioxane	TSCA	123-91-1
65	Pigment Violet 29	TSCA	81-33-4
66	Perfluorohexane sulfonic acid (pfhxs) its salts and pfhxs-related compounds	Customer's requirement,(Scheduled in Switzerland Chemical Law, EU POPs Regulation in future) Guaranteed concentration:25ppb	—
67	Long-Chain Perfluoroalkyl Carboxylate(LCPFAC) and Perfluoroalkyl Sulfonate Chemical Substances	Customer's requirement,TSCA	—
68	Mineral oil mineral oil saturated hydrocarbons (MOSH) mineral oil aromatic hydrocarbons (MOAH) Target purpose: packing material	Customer's requirement, French Mineral Oil Restrict Article 112 French Law n° 2020-105 relating to the fight against waste and the circular economy – Art 112.	—
69	Long-chain(C9-C21) perfluorocarboxylic acids (PFCAs), their salts and related compounds	Customer's requirement((Scheduled in TSCA, EU POPs Regulation in future) Guaranteed concentration:25ppb	—
70	Medium-chain chlorinated paraffins(C14～C17)	Customer's requirement(Scheduled to be regulated by EU POPs regulations)	—
71	2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol(UV-328)	Customer's requirement(Scheduled to be regulated by EU POPs regulations)	25973-55-1
72	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene (Dechlorane Plus)	Customer's requirement(Scheduled to be regulated by EU POPs regulations)	13560-89-9 135821-74-8 135821-03-3
73	O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate (Chlorpyrifos)	Customer's requirement(Scheduled to be regulated by EU POPs regulations)	2921-88-2
74	1,1,1-Trichloro-2,2-bis (4-methoxyphenyl) ethane (Methoxychlor)	Customer's requirement(Scheduled to be regulated by EU POPs regulations)	72-43-5
75	2,4-Dinitrotoluene	Customer's requirement(Scheduled to be regulated by EU POPs regulations)	121-14-2
76	2-Methoxyethanol	Canada Prohibition of Certain Hazardous Substances Regulations 2012	109-86-4
77	N,N-Dimethylformamide (DMF)	REACH Regulation AnnexXVII	68-12-2
78	Restricted substances under REACH Regulation AnnexXVII (Limited to regulatory use)	Customer's requirement, REACH Regulation AnnexXVII	—

(*1) Total concentration of heavy metals in sub-materials (Cd, Pb, Hg and Cr(VI)).

[Table-4] Reduction substances

No.	Substances	Main reference laws and regulations, customer's requirement, etc.	CAS No.
1	Bisphenol A	Customer's requirement, EU Directive(2014/81/EU)	80-05-7
2	Chlorine and its compounds	Customer's requirement	—
3	Bromine and its compounds	Customer's requirement	—
4	Fluorine and its compounds	Customer's requirement	—
5	Per- and polyfluoroalkyl substances (PFAS)	Customer's requirement	—

[Table-5] Control substances

No.	Substances	Main reference laws and regulations, customer's requirement etc.	CAS No.
1	Nickel and its compounds	REACH Regulation AnnexXVII	－
2	Selenium and its compounds	Customer's requirement	－
3	Arsenic and its compounds other than Diarsenic pentoxide, Diarsenic trioxide	Customer's requirement REACH Regulation AnnexXVII	－
4	Beryllium and its compounds other than beryllium oxide	Customer's requirement	－
5	Bismuth and its compounds	Customer's requirement	－
6	Formaldehyde (As regulated by law)	Customer's requirement	－
7	Phthalates other than banned substances	Customer's requirement REACH Regulation AnnexXVII	－
8	Antimony and its compounds	Customer's requirement	－
9	-		
10	Perfluorohexanoic acid (PFHxA), its salts and related substances	Customer's requirement	－
11	-		
12	Decabromodiphenylethane(DBDPE)	Canadian Environmental Protection Act	84852-53-9
13	REACH Regulation SVHC	REACH Regulation AnnexXIV	－
14	The first 10 risk assessments substances of TSCA〔Table－6〕	Customer's requirement, Toxic Substances Control Act(TSCA)	－
15	20 High Priority Substances Undergoing TSCA's Risk Assessment Process〔Table－7〕	Customer's requirement, Toxic Substances Control Act(TSCA)	－

[Table-6] The first 10 risk assessments substances of TSCA

No.	Substances	Main reference laws and regulations, customer's requirement etc.	CAS No.
1	asbestos	〔Table-3〕Banned substances No.36, Toxic Substances Control Act(TSCA)	1332-21-4
2	bromopropane (1-BP)	REACH Regulation AnnexXIV, AnnexXVII	106-94-5
3	carbon tetrachloride	－	56-23-5
4	pigment violet 29	〔Table-3〕Banned substances No.65	81-33-4
5	cyclic aliphatic bromide cluster (HBCD)	〔Table-3〕Banned substances No.13, REACH Regulation AnnexXIV,JCSCL, EU POPs Regulation	25637-99-4 3194-55-6 3194-57-8
6	1,4-dioxane	〔Table-3〕Banned substances No.64, REACH Regulation AnnexXIV,AnnexXVII	123-91-1
7	methylene chloride	Toxic Substances Control Act(TSCA), REACH RegulationAnnexXVII	75-09-2
8	n-methylpyrrolidone (NMP)	REACH Regulation AnnexXIV, AnnexXVII	872-50-4
9	tetrachloroethylene (perc)	－	127-18-4
10	trichloroethylene (TCE)	REACH Regulation AnnexXIV, AnnexXVII	79-01-6

[Table-7] High Priority Substances Undergoing TSCA's Risk Assessment Process

No.	Substances	Main reference laws and regulations, customer's requirement etc.	CAS No.
1	1,4-Dichlorobenzene	REACH Regulation AnnexXVII	106-46-7
2	1,2-Dichloroethane	REACH Regulation AnnexXVII	107-06-2
3	Trans-1,2-Dichloroethylene	－	156-60-5
4	1，2-Dichlorobenzene	－	95-50-1
5	1,1,2-Trichloroethane	〔Table-3〕Banned substances No.15, REACH Regulation AnnexXVII	79-00-5
6	1,2-Dichloropropane	REACH Regulation AnnexXVII	78-87-5
7	1,1-Dichloroethane	－	75-34-3
8	Dibutyl phthalate(DBP)	〔Table-3〕Banned substances No.9, REACH Regulation AnnexXVII	84-74-2
9	Butyl benzyl phthalate(BBP)	〔Table-3〕Banned substances No.8, REACH Regulation AnnexXVII	85-68-7
10	Di(2-ethylhexyl)phthalate (DEHP)	〔Table-3〕Banned substances No.7, REACH Regulation AnnexXVII	117-81-7
11	Diisobutyl Phthalate (DIBP)	〔Table-3〕Banned substances No.10, REACH Regulation AnnexXVII	84-69-5
12	Dicyclohexyl phthalate	REACH Regulation AnnexXVII	84-61-7
13	3,3,5,5-Tetrabromobisphenol A(TBBPA)	－	79-94-7
14	Tris(2-chloroethyl) Phosphate(TCEP)	〔Table-3〕BannedBanned substances No.22, REACH Regulation AnnexXVII	115-96-8
15	Triphenyl phosphate(TPP)	－	115-86-6
16	1,2-Dibromoethane	REACH Regulation AnnexXVII	106-93-4
17	1,3-butadiene	REACH Regulation AnnexXVII	106-99-0
18	1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta[g]-2-benzopyran(HHCB)	－	1222-05-5
19	Formaldehyde	〔Table-3〕Banned substances No.32, REACH Regulation AnnexXVII	50-00-0
20	Phthalic anhydride	－	85-44-9

Note.1) There is a lot of inquiries about inclusion from customers of our company, which is accelerating the flow of halogen free. As of now, there is no plan to set allowable concentration and change to a prohibited substance, but if it is intentionally contained or knowledge contained in the material has been obtained, Please reply content information. Also, please submit when high accuracy analysis data of halogen is acquired.

Form-1(1/2)

Evaluation score table for environmental management activities

Nichicon Corporation

Information on the respondent

Date of response			
Company name			
Address			
TEL №			
E-MAIL Address		FAX	
Respondent's Name			
Person's Name in charge			

System	
Certification body	
Certification date or target date	
Certification No.	

※ If you choose ① or ② for the question No.1, you can skip to No.16.

No.	Question	Answer	point
1)	Is any environmental management system (such as ISO14001, EMAS, KES)implemented?		
2)	Do you have any principle or policy on environmental management?		
3)	Do you have any plan or target related to promoting energy-saving efforts?		
4)	Do you have any plan or target related to reduction of industrial waste?		
5)	Do you have any plan or target related to prevention against environmental pollution?		
6)	Do you have a specific program developed to achieve the target and acting on it?		
7)	Do you have a specific program developed to achieve the target and acting on it?		
8)	Do you have an organization to promote environmental management?		
9)	Does your management participate in environmental management activities?		
10)	Does your management participate in environmental management activities?		
11)	Do you have any of your business units that have an access to the latest environmental regulations and have control on such information?		
12)	Do you have control on what you discharge into the atmosphere and comply with laws and regulations in order to prevent atmospheric pollution? (for the past 3 years)		
13)	Do you have control on what you discharge into water, and comply with laws and regulations in order to prevent water pollution? (for the past 3 years)		
14)	Do you have control on noises and vibrations, and comply with laws and regulations in order to prevent them? (for the past 3 years)		
15)	Do you dispose of your waste properly in accordance with the industrial waste disposal law?		

Please use Excel file to reply.
You may answer by selecting an option from pull down list.

Form-1(2/2)

Evaluation score table for environmental management activities （Continued）

Nichicon Corporation

No.	Question	Answer	point
16)	Do you dispose of your waste properly in accordance with the industrial waste disposal law?		
17)	Do you use any material that contains any banned substance?		
18)	Can any department of your organization be designated as accountable for matters on environmental load substances?		
19)	Do you have any specific program with a view to total ban on or reduction of environmental load substances?		
20)	Do you have any arrangement or mechanism to check to be sure that no environmental load substance is contained in any of the materials related to production (such as materials or components, wrapping or packaging materials, or production equipment)?		
21)	Do you demand of your suppliers of your materials to ban totally or reduce the environmental load substances?		
22)	Does any of your suppliers of your materials use any of the banned substances?		
23)	Do you have anything defined that requires you to contact our receiving unit immediately if a product that may contain any banned substance has been delivered to us?		
24)	Do you have any mechanism in place to minimize the damage to the environment should an accident occur or emergency arise?		
25)	Do you have any mechanism in place that allows you to continue your delivery to us should an accident occur or emergency arise?		
26)	Do you educate or enlighten all of your employees concerning the environment?		
27)	Do you provide your environmental activity personnel with necessary education and training ?		
28)	Do you make your relevant employees fully aware of the requirements we have of you?		
		Score (Under one hundred perfect score)	

Form-2（1/3）

Survey table for environmental load substances

Nichicon Corporation

Information on the respondent

Date of response					
Company name					
Address					
TEL №					
E-MAIL Address		FAX			
Respondent's Name					
Person's Name in charge					
Information on delivered goods					
Product name/Type No.					
Nichicon Material Code		Component Weight		g	
Use of recycling materials		Quality of recycling materials			
Recycling form		Part used			

	1. Banned substances	Contained Yes/No	Where it is contained	Concentration (ppm)	Reason for inclusion	Special notes
1	**Cadmium and its compounds**					
2	**Lead and its compounds**					
3	**Mercury and its compounds**					
4	**Hexavalent chromium**					
5	**Polybrominated biphenyls (PBBs)**					
6	**Polybrominated diphenyl ethers (PBDEs)**					
7	**Di(2-ethylhexyl) phthalate(DEHP)**					
8	**Butyl benzyl phthalate(BBP)**					
9	**Dibutyl phthalate(DBP)**					
10	**Diisobutyl Phthalate(DIBP)**					
11	1-tert-Butyl-3,5-dimethyl-2,4,6-trinitrobenzene Musk xylene					
12	Diarsenic pentoxide, Diarsenic trioxide					
13	Hexabromocyclododecane (HBCDD) and all major diastereoisomers					
14	Benzene					
15	1,1,2-trichloroethane					
16	Perfluorooctane Sulfonate(PFOS) (including salt)					
17	Cobalt Chloride and Cobalt Sulfate					
18	Polychlorinated biphenyl(PCBs) and Polychlorinated terphenyls(PCTs)					
19	Specific phthalate esters					
	Diisononyl phthalate(DINP)					
	Diisodecyl phthalate (DIDP)					
	Di-n-octyl phthalate (DNOP)					
20	Short-chain chlorinated paraffins(C10～C13)					
21	Azocolourants and azodyes which form certain aromatic amines					
22	Tris(2-chloroethyl) phosphate (TCEP)					
23	Tris(1-chloro-2-propyl) phosphate(TCPP)					
24	Tris(1,3-dichloro-2-propyl)Phosphate(TDCPP)					
25	Dimethyl fumarate (DMF)					
26	Tri-substituted organostannic compoundsincluding TBTO, TBT and TPT					
27	Dibutyltin (DBT) compounds					
28	Dioctyltin (DOT) compounds					
29	Beryllium oxide					
30	PAHs (Polycyclic aromatic hydrocarbons),Benzo[def]chrysene etc.					
31	Hexachlorobenzene					
32	Formaldehyde(as regulated by lawy)					
33	Perchlorates					
34	Ozone Depleting Substances					
35	Perfluorooctanoic acid (PFOA),its salts and PFOA-related substances					
36	Asbestos					
37	Pentachlorophenol and its salts and esters					
38	Fluorinated greenhouse Gases(HFC,SF6,PFC etc.)					
39	Refractory Ceramic Fiber					
40	Radioactive substances					

'Form-2(2/3)

	1. Banned substances	Contained Yes/No	Where it is contained	Concentration (ppm)	Reason for inclusion	Special notes
41	Chlordecone					
42	Lindane (γ-hexachlorocyclohexane)					
43	α-hexachlorocyclohexane					
44	β-hexachlorocyclohexane					
45	Perfluorooctane sulfonyl fluoride (PFOSF)					
46	Pentachlorobenzene					
47	Polychloronaphthalene (PCN) (The number of chlorine is 1 or more.)					
48	2-benzotriazol-2-yl-4,6-di-tert-butylphenol(Specified benzotriazole)					
49	N-Phenyl-benzenamine					
50	Styrene					
51	Polyvinyl chloride (PVC) and PVC blends					
52	Cyanide compounds					
53	Natural rubber					
54	Red phosphorus					
55	N-Phenylbenzenamine, styrene and reaction products with 2,4,4-trimethylpentene(BNST)					
56	Indium phosphide					
57	N,N'-ditryl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine or N,N'-dixylyl-p-phenylenediamine					
58	2,4,6-Tri-tert-butylphenol					
59	Isopropylated phenol phosphate (3:1)					
60	Hexachlorobutadiene（HCBD）					
61	Pentachlorothiophenol（PCTP）					
62	cyclohexane					
63	Inorganic ammonium salts					
64	1,4-dioxane					
65	Pigment Violet 29					
66	perfluorohexane sulfonic acid (pfhxs) its salts and pfhxs-related compounds					
67	Long-Chain Perfluoroalkyl Carboxylate(LCPFAC) and Perfluoroalkyl Sulfonate Chemical Substances					
68	Mineral oil mineral oil saturated hydrocarbons (MOSH) mineral oil aromatic hydrocarbons (MOAH) Target purpose: packing material					
69	Long-chain(C9-C21) perfluorocarboxylic acids (PFCAs), their salts and related compounds					
70	Medium-chain chlorinated paraffins(C14～C17)					
71	2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol(UV-328)					
72	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene (Dechlorane Plus)					
73	O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate（Chlorpyrifos）					
74	1,1,1-Trichloro-2,2-bis (4-methoxyphenyl) ethane (Methoxychlor)					
75	2,4-Dinitrotoluene					
76	2-Methoxyethanol					
77	N,N-Dimethylformamide（DMF）					
78	Restricted substances under REACH Regulation　AnnexXVII					

Infromation about Restricted substances under REACH Regulation　AnnexXVII

	1-2.　Restricted substances under REACH Regulation AnnexXVII(Banned substances)	Contained Yes/No	Where it is contained	Concentration (ppm)	Reason for inclusion	Special notes
1						
2						
3						

If there are exempted uses, please describe them in the special notes column.

	2. Reduction substance	Contained Yes/No	Where it is contained	Concentration (ppm)	Reason for inclusion	Special notes
1	Bisphenol A					
2	Chlorine and its compounds					
3	Bromine and its compounds					
4	Fluorine and its compounds					
5	Per- and polyfluoroalkyl substances (PFAS)					

'Form-2(3/3)

	3-1. Control substance	Contained Yes/No	Where it is contained	Concentration (ppm)	Reason for inclusion	Special notes
1	Nickel and its compounds					
2	Selenium and its compounds					
3	Arsenic and its compounds other than diarsenic pentoxide, diarsenic trioxide					
4	Beryllium and its compounds other than beryllium oxide					
5	Bismuth and its compounds					
6	Formaldehyde (for use not described in JIG)					
7	Phthalates not designated as criteria R (regulated) in JIG					
8	Antimony and its compounds					
9	-					
10	Undecafluorohexanoic acid (PFHxA), its salts and related substances					
11	-					
12	Decabromodiphenylethane（DBDPE）					
13	REACH Regulation SVHC					
14	The first 10 risk assessments substances of TSCA〔Table－6〕					
15	20 High Priority Substances Undergoing TSCA's Risk Assessment Process〔Table－7〕					

Please fill in the following information on SVHC of the REACH regulation.

	3-2. SVHC（Control substance）	Contained Yes/No	Where it is contained	Concentration (ppm)	Reason for inclusion	Special notes
1						
2						
3						

If there are exempted uses, please describe them in the special notes column.

Please fill in the following information on The first 10 risk assessments substances of TSCA.

	3-3. The first 10 risk assessments substances of TSCA (Control substance)	Contained Yes/No	Where it is contained	Concentration (ppm)	Reason for inclusion	Special notes
1						
2						
3						

If there are exempted uses, please describe them in the special notes column.

Please fill in the following information on 20 High Priority Substances Undergoing TSCA's Risk Assessment Process.

	3-4. 20 High Priority Substances Undergoing TSCA's Risk Assessment Process (Control substance)	Contained Yes/No	Where it is contained	Concentration (ppm)	Reason for inclusion	Special notes
1						
2						
3						

If there are exempted uses, please describe them in the special notes column.

Form-3

Ingredient information

Nichicon Corporation

Date of Response		Company Name	
Product Name		Respondent's Name	
Type No		Department Name	
Nichicon Material Code		TEL No	
Product Weight	g	E-MAIL	

No.	Part	Material's Name	material standard	Material Manufacturer	Material Weight g	Subustance Name	CAS No.	Substance Weight g	Content(%)	Note
EX	Case	Epoxy resins		ABC		***				
						***				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
	Total				0			0	0	

※ Please add the lines to the table when required

Form-4

To:Nichicon Corporation

Date

Certificate of non-inclusion of chemicals contained in the products

～Nichicon Group Green Procurement Guideline Version 13～

Company Name: Seal

We hereby certify that none of the following chemicals (including the chemicals that are under the regulated value) are contained in any one of the products and components (including accessories, wrapping/packing materials and anything shipped with any one of the products) that are directly or indirectly through a third party delivered to Nichicon Corporation, including its subsidiaries and affiliates.

Products/Unit parts		Factory for the production	
Component number of your company		Nichicon Code	

Please fill in another sheet when there are a lot of substances.

Description

If your product intentionally contains following substance, please delete the subject substances with double line and seal by the person in charge.

	Name		Name
1)	Cadmium and its compounds	37)	Pentachlorophenol and its salts and esters
2)	Lead and its compounds	38)	Fluorinated greenhouse Gases(HFC,SF6,PFC etc.)
3)	Mercury and its compounds	39)	Refractory Ceramic Fiber
4)	Hexavalent chromium	40)	Radioactive substances
5)	Polybrominated biphenyls (PBBs)	41)	Chlordecone
6)	Polybrominated diphenyl ethers (PBDEs)	42)	Lindane (γ-hexachlorocyclohexane)
7)	Di(2-ethylhexyl) phthalate(DEHP)	43)	α-hexachlorocyclohexane
8)	Butyl benzyl phthalate(BBP)	44)	β-hexachlorocyclohexane
9)	Dibutyl phthalate(DBP)	45)	Perfluorooctane sulfonyl fluoride (PFOSF)
10)	Diisobutyl Phthalate(DIBP)	46)	Pentachlorobenzene
11)	1-tert-Butyl-3,5-dimethyl-2,4,6-trinitrobenzene Musk xylene	47)	Polychloronaphthalene (PCN)
12)	Diarsenic pentoxide, Diarsenic trioxide	48)	2-benzotriazol-2-yl-4,6-di-tert-butylphenol(Specified benzotriazole)
13)	Hexabromocyclododecane (HBCDD) and all major diastereoisomers	49)	N-Phenyl-benzenamine
		50)	Styrene
14)	Benzene	51)	Polyvinyl chloride (PVC) and PVC blends
15)	1,1,2-trichloroethane	52)	Cyanide compounds
16)	Perfluorooctane Sulfonate(PFOS) (including salt)	53)	Natural rubber
17)	Cobalt Chloride and Cobalt Sulfate	54)	Red phosphorus
18)	Polychlorinated biphenyl(PCBs) and	55)	N-Phenylbenzenamine, styrene and reaction products with 2,4,4-trimethylpentene(BNST)
	Polychlorinated terphenyls(PCTs)	56)	Indium phosphide
19)	Specific phthalate esters	57)	N,N'-ditryl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine or N,N'-dixylyl-p-phenylenediamine
	Diisononyl phthalate(DINP)	58)	2,4,6-Tri-tert-butylphenol
	Diisodecyl phthalate (DIDP)	59)	Isopropylated phenol phosphate (3:1)
	Di-n-octyl phthalate (DNOP)	60)	Hexachlorobutadiene (HCBD)
20)	Short-chain chlorinated paraffins(C10～C13)	61)	Pentachlorothiophenol (PCTP)
21)	Azocolourants and azodyes which form certain aromatic amines	62)	Cyclohexane
22)	Tris(2-chloroethyl) phosphate (TCEP)	63)	Inorganic ammonium salts
23)	Tris(1-chloro-2-propyl) phosphate(TCPP)	64)	1,4-dioxane
24)	Tris(1,3-dichloro-2-propyl) Phosphate (TDCPP)	65)	Pigment Violet 29
25)	Dimethyl fumarate (DMF)	66)	Perfluorohexane sulfonic acid (pfhxs) its salts and pfhxs-related compounds
26)	Tri-substituted organostannic compoundsincluding TBTO, TBT and TPT	67)	Long-Chain Perfluoroalkyl Carboxylate(LCPFAC) and Perfluoroalkyl Sulfonate Chemical Substances
27)	Dibutyltin (DBT) compounds	68)	Mineral oil mineral oil saturated hydrocarbons (MOSH) mineral oil aromatic hydrocarbons (MOAH) Target purpose: packing material
28)	Dioctyltin (DOT) compounds	69)	Long-chain(C9-C21) perfluorocarboxylic acids (PFCAs), their salts and related compounds
29)	Beryllium oxide	70)	Medium-chain chlorinated paraffins(C14～C17)
30)	Polycyclic aromatic hydrocarbons (PAH_S)Benzo[def]chrysene etc.	71)	2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol(UV-328)
31)	Hexachlorobenzene	72)	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene (Dechlorane Plus)
32)	Formaldehyde (as regulated by law)	73)	O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate (Chlorpyrifos)
33)	Perchlorates	74)	1,1,1-Trichloro-2,2-bis (4-methoxyphenyl) ethane (Methoxychlor)
34)	Ozone Depleting Substances	75)	2,4-Dinitrotoluene
35)	Perfluorooctanoic acid (PFOA),its salts and PFOA-related substances	76)	2-Methoxyethanol
36)	Asbestos	77)	N,N-Dimethylformamide (DMF)
		78)	Restricted substances under REACH Regulation AnnexXVII

【notes】

Form-5

Survey table for supply chain

The following table is to be filled by the primary dealer（original manufacturer of a product delivered to Nichicon）.

Product name	
Nichicon material code	
Company name	
Facility name	
Address	
Use or non-use of banned substances	
Sony Green Partner certified ※2	
Name of the person controlling chemicals	
Name of the department the person in charge belongs to	
TEL	
FAX	
E-MAIL	

The following table is to be filled out by the secondary dealer（manufacturer of a raw material or its processor who delivers to Nichicon）.

Product name		
Type No.		
Company name		
Facility name		
Address		
Business relationship		
Sony Green Partner certified ※2		
Use or non-use of banned substances		
Name of the person controlling chemicals		
Name of the department the person in charge belongs to		
TEL		
FAX		
E-MAIL		

※2 *If you acquire the certification of Sony's "Green Partner Environmental Quality Approval System", please enter the certification number.

- "Person in charge", "Department", "TEL", "FAX", and "E-mail" should be the contact information on the person controlling banned substances.
- "Use or non-use of banned substances" means whether or not you handle any banned substance involved with the goods to be delivered to Nichicon.
- "Business relationship" means the description of the business form. For example, supplier of the base material of lead frames, or outsourcing the tin-plating process.
- If the space is too small for your entry, the form may be photocopied.

Revision history

Ver.No.	Date of revision	Description of revision
Version 1	July 1, 2005	New
Version 2	August 7, 2006	Total revision (mains as described below) 1) “Materials”, “Sub-materials”, “Contained”, “Impurities”, “Homogenous materials” , “Allowable concentration of banned substances” were added to (3) Definitions. 2) The environmental load substances were reviewed (in compliance with Joint Industry Guidelines (JIG) for Material Composition Declaration for Electronic Products). 3) The allowable concentration of banned substances was reviewed. 4) Survey for supply chain was added. 5) Permitted the use of Japanese version of JGPSSI-designated Survey Response Tools Format 1 (Standard Type). 6) “Measurement procedures” was added.
Version 3	March 28, 2007	1)Change of the allowable concentrations for the Cadmium (100ppm => 75ppm) 2)Review for 5-2), Survey for environmental load substances (supplementation, addition) 3)Additional explanation for Sheet-1 4)Action review for 5-6), when higher concentration of any banned substance than is allowed is contained. 5)Eliminated Chemical substance group PTC of Frm-2, 3 (Made the indication same with Sheet-2) 6)Added formaldehyde to control substances 7)Added “We may require the measurement data…..” for 5-2). 8)Added a description of China RoHS for 3-4) 9)Added Certificate of non-use of chemicals contained in the products <For components/unit parts/sub-materials>. 10) Added formaldehyde to 3-3) “Environmental load substances”.
Version 4	September 30, 2007	1)Added an explanation to 3-(2) “Sub-materials”. 2)Added Nichicon special requirement 1) to 12) to 3-(3). 3)Changed from “Sheet-2 or JIG Guideline substance” to “Sheet-2 and JIG Guideline substance” in 3-(4) to (6). 4)Change from “threshold” to “allowable concentration” in 4-(1). 5)Deleted about Japanese version limitation of JGPSSI response format. 6)Added information about submission of Form-2 when including Nichicon’s specified substances other than JIG to 5-(2). 7)Delete “Production Management Div.” from 6. Inquiry on Green Procurement. 8)Changed JGPSSI website URL in 7. 9)Added “Additional rules for packaging materials” to Sheet-1. 10) In Sheet-2: ・ As for PVC, changed it from reduction substances to banned substances. ・ Specified specific Phthalates to be banned substances, and made it clear in Table-4. ・ Added Cyanide, Pentachlorophenol, Benzene, Hexachlorobenzene and 1, 1, 2-Trichloroethane to banned substances. 11)Added PFOS, HFC and PFC to reduction substances. 12)Added Phthalates other than Table-4 and PFOA to control substances. 13)Changed Form-2, 3 and 4 (Followed the change of Sheet-2)

Ver.No.	Date of revision	Description of revision
Version 4	September 30, 2007	14)Added “upon deliberation between both parties” and “If your product intentionally contain…” to Form-3 and 4. 15)Changed from “3. Definitions” to “3. Definitions and Explanations”. 16)Deleted “The names and quantities of the substances contained shall be reported to us” in 3-(5) and (6). 17)Changed from “MSDS or ingredient information” to “MSDS and ingredient information” in Table-1. Changed from “MSDS and ingredient information” to “MSDS, ingredient information” in 5-(5). 18)Added about “New (Changed) Materials/Components Application and Approval Form” and “attached to this guideline” to 5-(5). 19)Expression change in 5-(6). 20)Added “JIS H8625” as a hot-water extraction method in Table-2. 21)Added “UV-VIS” as an ultraviolet and visible light spectrophotometry in Table-3.
Version 5	November 25, 2008	Revision on a large scale (mains as described below) 1) 3.(2) Changed an explanation of sub-materials “handling” “presentation”->”shipment” “indication” Added a drier as an example. 2) 3. Added 〔Table-1〕 Nichicon special requirement 3) 3. Additional explanation of control substance, homogeneous materials, allowable concentration. 4) 3.(4) Added explanations of Others. Substances required the information transmission, (12) Control standard value. 5) 3.Added control standard values and metals contained in packaging materials in [Table-2], 8) 3.2 Added REACH Regulation regime 9) 5.Composition change 10) 5. Added JAMP MSDSplus and JAMP AIS to the required document. 11)7. Added a website address of JAMP 10) Sheet-2 Added to the banned substances -> HFC, PFC, PFOS, Specific benzotriazole, Cobalt dichloride, PAHs, Natural rubber, Red phosphorus, PCT Added to the reduction substances -> PFOA Added to the control substances -> DNHP Deleted from [Table-7]Specific Phthalates List -> DNHP, DMEP 11) Changed form-2,3,4 (Correspond to the change of sheet-2)
Version 5.1	March 25, 2009	Added a lacked substance. Formaldehyde was added to the substance surveyed in Format-2.
Version 6	April 26, 2010	1) Expression change in 3.1(3)①item4 2) Change in Table-1 as follows ・JIG level -> Criteria Rationale for Disclosure of JIG ・PVC compounds [JIG level B -> Criteria Rationale for Disclosure of JIG I] ・Formaldehyde -> Formaldehyde (for use not described in JIG) ・Deleted the following banned substances TBTO, TBT, TPT, HFC, PFC ・Added the following banned substances Chlordecone, Lindane (γ-Hexachlorocyclohexane),α–hexachlorocyclohexane,β–hexachlor

Ver.No.	Date of revision	Description of revision
Version 6	April 26, 2010	ocyclohexane, PFOSF, Pentachlorobenzene, Musk xylene ・Added the following reduction substances Brominated compounds other than brominated flame retardant, Chlorine compounds ・Added the following control substances Selenium and its compounds, Arsenic and its compounds, Beryllium and its compounds, Bismuth and its compounds, DNHP (Di-n-hexyl Phthalate) etc. Phthalates not listed in Table-A of JIG 3) Change in 3.1(6), 3.1(8), 3.1(9) 4) Added *1,2,3 in Table-2 5) Change in 3.2(2), 3.2(4) 6) Content change in 5.(2)③item 6 according to the latest information 7) Added 5.(3)item 2 8) Added photo of the sample to be included in the measurement data in 5.(3)item 5 9) Changed JGPSSI information to the latest one in item 7 and Form-4 10) Added “Measurement method: IEC62321(2008) is recommended” in Sheet-1 11) Change in Table-6 as follows ・JIG level -> Criteria Rationale for Disclosure of JIG ・Formaldehyde -> Formaldehyde (for use not described in JIG) ・Deleted the following banned substances TBTO, TBT, TPT, HFC, PFC ・Added the following banned substances Formaldehyde (for use described in JIG), Fluorinated greenhouse gases (PFC, SF6, HFC), Dimethyl fumarate (DMF), Tri-substituted organostannic compounds including TBTO, TBT, and TPT, Dibutyltin (DBT) compounds, Dioctyltin (DOT) compounds, Hexabromocyclododecane (HBCDD) and all major diastereoisomers, Beryllium oxide, Perchlorates, Diarsenic pentoxide, Diarsenic trioxide, Refractory Ceramic Fibres, Aluminosilicate, Refractory Ceramic Fibres, Zirconia Aluminosilicate, Tris (2-chloroethyl) phosphate (TCEP), Chlordecone, Lindane (γ-Hexachlorocyclohexane), α–hexachlorocyclohexane, β–hexachlorocyclohexane, Perfluorooctane sulfonyl fluoride (PFOSF), Pentachlorobenzene, Musk xylene ・Added and changed the following reduction substances Brominated compounds other than brominated flame retardant, Chlorine compound, Added HBCDD to brominated flame retardants other than PBBs and PBDEs ・Added the following control substances DNHP (di-n-hexyl phthalate etc. Phthalates not described in JIG, Formaldehyde (for use not described in JIG), Deleted Table-7 Reviewed the subject chemical substances in Form-2,3,4 with the change of Table-6.
Version 7	February 2, 2012	1) Updated 3.2(2) to SVHC 73 substances, and changed JAMP tool from “ver.3.01” to “after ver.4.00” in 3.2(4) 2) Added 5. Management of recycling materials

Ver.No.	Date of revision	Description of revision
Version 7	February 2, 2012	3) Added 8)JEITA“Standardized Self-Audit Sheet” in 6.(1) Required document 4) Changed JGPSSI-designated Survey Response from “ver.4.02” to “after ver.4.11” in 6.(2) 5) Designated IEC62321 as a measurement method of banned substances in 6.(3) and Sheet-1 Changed［Table-4］and［Table-5］ 6) Banned a spot test for the measurement of Hexavalent chromium in 6.(3) 7) Added contact information (inspection at overseas bases) of SGS and changed contact information of Mitsui Chemical Analysis Center Co., Ltd. in 6.(3) 8) Added websites of JIG-101, MSDSplus, AIS and JEITA“Standardized Self-Audit Sheet” in 8. 9) Changed［Table-1］～［Table-8］as below: ・Deleted “Refractory Ceramic Fibres, Aluminosilicate” and “Refractory Ceramic Fibres, Zirconia Aluminosilicate” from banned substances ・Clarified “Azo dyes/pigments” and “Phthalates” ・Added “Bisphenol A” in control substances 10) Changed Form-1 “Evaluation response for environmental management activities”
Version 8	October 27, 2014	1) 3.1 (3) Deleted [Table-1] Nichicon special requirement 2) 3.2 (2) Updated to SVHC 155 substances and (4) JAMP tool information 3) 5. Added explanation of recycled material 4) 6. Deleted JGPSSI form, and relocated material ingredient to individual item. 5) Integrate Form-3 and Form-4. 6) Changed “JEITA Standardized Self-Audit Sheet” to “JAMP check sheet”. 7) Reviewed forms 8) Added the below banned substances; Tris(1-chloro-2-propyl) phosphate(TCPP) Tris(1,3-dichloro-2-propyl) phosphate(TDCPP) Perfluorooctanoic acid (PFOA) (including salt)(relocated from reduction substances table) 9) Added the below reduction substance; Bisphenol A (relocated from control substance table) 10) Added the below control substance; Antimony and its compounds (relocated from reduction substance table) 11) Changed from MSDS to SDS.
Version 9	November 28, 2016	1) Reviewed Item No. ・Example : 3.1-> (1) ・Example : (1) -> ① ・Example: ① -> (a) 2) Reviewed sentences in context completely 3) [Table-1] Deleted Allowable concentration and Control standard value 4) Reviewed Table No. in context ・Example : [Table-3] -> [Table-2] 5) Changed from “Allowable concentration” to “Guarantee concentration”. ・Example : 3(1)③(a)

Ver.No.	Date of revision	Description of revision
Version 9	November 28, 2016	6) 3(1)③(a) Added “Please notify us in case the substitution of the environmental load substances listed in〔Table-4〕is difficult. We shall adjust it separately as needed.” 7) Changed from “MSDS plus and AIS” to “chemSHERPA-AI/CI or MSDSplus and AIS” ・Example : 3(1)④ 8) Change from “Control standard value” to “Control concentration” ・Example : 3(1)⑨ 9) 3(1)⑨ Reviewed explanation of Control concentration completely ・Deleted “the measurement value with the fluorescent X-ray device” ・Added “In case our suppliers (customers) / consumers require a severer control concentration, please contact us. We shall perform an individual support after discussion. 10) 3(2)④ Added “HP of Jamp chemSHERPA” 11) Changed HP address of ECHA (European Chemicals Agency) / NICHICON CORPORATION ・Example : 3(2)② 12) 3(2) ④ Reviewed explanation of information transmission completely ・Added “The update of substance list for AIS will terminate at the end of December, 2017. Our company will accept chemSHERPA / MSDSplus / AIS until June, 2018 and thereafter accepting only chemSHERPA but not permitting submission of MSDSplus / AIS. An outline and the utilization of chemSHERPA are available at the below HP.” 13) 6(2), ［Table-3］, ［Table-4］ Added the below sentence. ・We shall notify the detail separately about control concentration / measurement / operation of Phthalate esters (DEHP/BBP/ DBP/DIBP). 14) 6(3) Changed SGS Japanese contact window 15) Added Banned substances ［Table-4］ Form-2, Form-4 Changed ・Di(2-ethylhexyl)phthalate (DEHP) ・Butyl benzyl phthalate(BBP) ・Dibutyl phthalate(DBP) ・Diisobutyl Phthalate (DIBP) ・Refractory Ceramic Fiber ・N-Phenyl-benzenamine ・Styrene ・2,4,4-trimethylpentene(BNST) 16) ［Table-5］ Reviewed Reduction substances completely ① Added Reduction substances ・Chlorine and its compounds ・Bromine and its compounds ② Deleted Reduction substances ・Chlorine compounds

Ver.No.	Date of revision	Description of revision
Version 10	June14, 2018	1)Correct table of contents 8.Remove the following additional items on packing materials 2)3(2)④Information transmission Remove the update of substance list for AIS will terminate at the end of December, 2017. 3)6(1)Required document Update ［Table-1］ Required document 4) 6(1)Required document Remove (*2) We shall notify the detail separately about control concentration / measurement / operation of Phthalate esters (DEHP/BBP/ DBP/DIBP) are enlisted in IEC62321 (Scheduled in July, 2017). 5)6(3) Review description of Measurement procedures of the measurement data Added Measurement of hexavalent chromium in packing materials ①Hexavalent chromium is the subject of regulation for chromium, and metallic chromium and trivalent chromium are not subject to regulation ②First measure total chromium. ③Confirm Cd + Pb + Hg + Cr <100 ppm considering total chromium content as hexavalent chromium (At the same time, satisfy Cd <5 ppm of plastic, paint and ink part) In this case there is no need to analyze to identify hexavalent chromium ④In the case of Cd + Pb + Hg + Cr ≧ 100 ppm, an analysis for specifying hexavalent chromium content is carried out Check Cd + Pb + Hg + Cr6 + <100 ppm. ・Update Japanese contact window 6)6(5)②Existing approved material. once in the same month every year ⇒within one year 7)-Remove 8. Additional rules for packaging materials 8) Review ［Table-1］Pre-treatment for measuring banned substances 9) [Table-4] Banned substances ・Review concentration and Maintain substance name, reference laws and regulations Remove (*4) We shall notify the detail separately about control concentration / measurement / operation of Phthalate esters (DEHP/BBP/ DBP/DIBP) are enlisted in IEC62321 (Scheduled in July, 2017).

Ver.No.	Date of revision	Description of revision
Version 10		10) [Table-5] Reduction substances, [Table-6] Control substances Maintain substance name, reference laws and regulations 11)Review Survey table for environmental load substances 12) Review Certificate of ~~non-use~~ non-inclusion of chemicals contained in the products
Version 11	November14,2019	1) Deleted all references to “JAMP MSDSplus” and “AIS”. 2) Change URL of JAMP chemSHERPA. 3) 4.1) Materials ”Add“However, the denominator of concentration calculation should be a homogeneous materials unit.” 4) [Table-4] Add CAS No. for those with CAS No. 5) [Table-4] Sheet-2(1 out of 3) No.1 “Cadmium” Use for “all materials” Guarantee concentration is changed to 100ppm and Control concentration is changed to 75ppm. → Because there is no specific customer request. 6) [Table-4] Sheet-2(1 out of 3),Form-2,Form-4 Deleted No.14 “Benzo [def] Chrysene” Subsequent substance number advance Added “benzo [def] chrysene, etc.” to No.30. →Because it is the same material as No.30. Added “HFC, SF6, PFC, etc.” to No.38 “Fluorinated greenhouse Gases”. 7) [Table-5],Form-2(2/2) Deleted No.1" Brominated flame retardants other than PBB's, PBDE's, and HBCDD" and No.2" Brominated compounds other than brominated flame retardants" Subsequent substance number advance →Because it is the same material as No.3. 8) [Table-5],Form-2(2/2) Separation of substance numbers for “Chlorine and its compounds” and “Bromine and its compounds”.
Version 12	November1,2021	Table number correction ・Appendix Table-2, Table-4 → Table-3, Table-5 → Table-4, Table-6 → Table-5 ・Table 1 *1 Text revised, URL added ・6(2)③ 7-part text modification ・6(3) One-pot text modification

Ver.No.	Date of revision	Description of revision
Ve Version 12	November1,2021	･6③ (Cd<5ppm of plastic, paint, and ink parts at the same time) of 7 pots ③ is deleted. 6(3) Eleven Pot Examples Deleted 6(5)② Text review 7. Individual consultation is added. If it is difficult to respond to this guideline or if any doubt arise, we will discuss and resolve it individually. ･Inquiry on Green procurement Number changed: 7→8 The following are amended for Table 3. ･ EU Packaging Directive No. Amendment 94/64/EEC→94/62/EC ･ No.2 Deleted "Chemical Substance Regulations (Denmark)" from Major Referenced Laws and Customer Requirements, etc. No.4 and No.6 U.S. TSCA added No.10 major reference laws, customer requirements, etc. were revised to the same description as No. 7-9. No. 12CAS number correction Added No. 16, 29 Annex 17 to REACH Regulations No.20 Added Annex 17 to REACH Regulations and deleted the Chemical Substances Regulations (Norwegian) No.21 Delete the description of (for list in JIG) No.26 CAS number deletion No.35 Perfluorooctanoic acid (PFOA) (including salt) → Perfluorooctanoic acid (PFOA),its salts and PFOA-related substances REACH Regulation AnnexXVII → EU POPs Regulation. Threshold：25ppb is added. No.37 And its salts and esters were added, and CAS numbers were deleted No.42 CAS No. 58-89-9 added No.45 CAS number 307-35-7 added. No.48 (Specified Benzotriazole) added No.55 CAS number 68921-45-9 added New addition of No. 57-66 No.57 N,N'-ditryl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine or N,N'-dixylyl-p-phenylenediamine No.58 2,4,6-tri-butylphenol tert- No.59 PIP(3:1) Triarylisopropyl phosphate Alias: Tris phosphate (isopropylphenyl) No. 60 Hexachlorobutadiene（HCBD） No. 61 Pentachlorothiophenol（PCTP） No. 62 cyclohexane No. 63 inorganic ammonium salt No.64 1, 4-dioxane No. 65 Pigment Violet 29

Ver.No.	Date of revision	Description of revision
Ve Version 12	November1,2021	No. 66 perfluorohexanesulfonic acid (PFHxS) and its salts and PFHxS related substances No. 67 long chain perfluoroalkyl carboxylic acids (LCPFACs) and perfluoroalkyl sulfonic acid compounds No. 68 mineral oil MOSH: mineral oil saturated hydrocarbons MOAH: mineral oil aromatic hydrocarbons Table 3 below: Notes *2 → *1 and *3 were deleted. Table-4 No.4 Added fluorine and its compounds Table 5 Added Nos. 10 to 13 No. 10 perfluorohexanoic acid (PFHxA) and its salts and related substances No. 11 long-chain (C9-C21) perfluorocarboxylic acids (PFCAs) and their salts and related substances No. 12 decabromodiphenylethane No.13 REACH Regulation SVHC Form 2 Added「Special notes」column. Added「If there are exempted uses, please describe them in the special notes column.」at the last.
Version 13	December 16, 2022	3.(1)⑧ and ⑨ expression correction. Changed the reference URLs in Section 6 Table-1」and Section 8 as follows. （Before Change） http://www.nichicon.co.jp/procure/procure02.html （After Change） https://www.nichicon.co.jp/english/eco/eco_green.html 6.(3) Added "(No.1 to No.10)" as RoHS 10 substances 8. Add E-MAIL：kankyou@nichicon.com Corrected the following for Table 3 Prohibited Substances. No.6 Guaranteed concentration changed from 1000 to 500ppm, PIC Regulation Annex V added No.20 Add (C10～C13) to Short-chain chlorinated paraffins No.69 Table-5 Changed from Control Substance No.11 to banned substance No.69 No.70 Table-5 Changed from Control Substance No.9 to banned substance No.70 No.71 Add 2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol(UV-328) No.72 Add 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene (Dechlorane Plus) No.73 Add O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate（Chlorpyrifos） No.74 Add 1,1,1-Trichloro-2,2-bis (4-methoxyphenyl) ethane (Methoxychlor) No.75 Add 2,4-Dinitrotoluene No.76 Add 2-Methoxyethanol No.77 Add N,N-Dimethylformamide（DMF）

Ver.No.	Date of revision	Description of revision
Version 13	December 16, 2022	No.78 Add Restricted substances under REACH Regulation AnnexXVII(Limited to regulatory use) No 35,66,69 Change "Threshold" to "Guaranteed Concentration" Table-4 Corrected the following for reduction substances No.5 Add Per- and polyfluoroalkyl substances (PFAS) Table-5 Corrected the following regarding control substances No.9 Changed to Banned Substance No.70, No.9 is missing No.11 Changed to Banned Substance No.69, No.11 is missing No.14 Add The first 10 risk assessments substances of TSCA〔Table－6〕 No.15 Add 20 High Priority Substances Undergoing TSCA's Risk Assessment Process Table-6 Add The first 10 risk assessments substances of TSCA Table-7 Add 20 High Priority Substances Undergoing TSCA's Risk Assessment Process Form-2, Form-4 Revised according to the change in Attachment-2 Form-2 Purpose→Reason for inclusion
Version 14	August 29, 2023	Due to organizational changes, the Quality Assurance Headquarters was changed to the Quality and Production Innovation Headquarters.