MITSUBA GROUP
GREEN PURCHASING GUIDELINE

The environmental requirements for suppliers.

April 2011

MITSUBA CORPORATION

INTRODUCTION

Now, in the 21st century, the awareness towards environmental concerns has been raised even more in the whole society, while the company, as well, is strongly being demanded to create a recycling-oriented society.

We have addressed a decrease in environmental burdens as one of the most critical business challenges because we think that we should seek for the environmental management bearing always in mind “what a society really desires”.

Our products are being realized using materials delivered from a number of our suppliers. For this reason, our in-house environmental management activities will not be good enough to reduce environmental burdens; it will absolutely be imperative to realize environmental management activities based on supply chain involving our suppliers.

In addition, global production and sales have recently been increasing.

We’ve revised “Mitsuba Green Purchasing Guideline” to “Mitsuba Group Green Purchasing Guideline” to be used commonly in Mitsuba Group, based on which we will reduce environmental burdens as well as establish Environmental Management System.

Your understanding and support will be greatly appreciated for our approach to the global environmental protection appropriate for the 21st century.

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1. POSITION OF THIS GUIDELINE

This Mitsuba Group Green purchasing guideline clarifies basic approach to environment which is commonly used in Mitsuba Group companies; besides, it explains requirements from Mitsuba Group to suppliers.

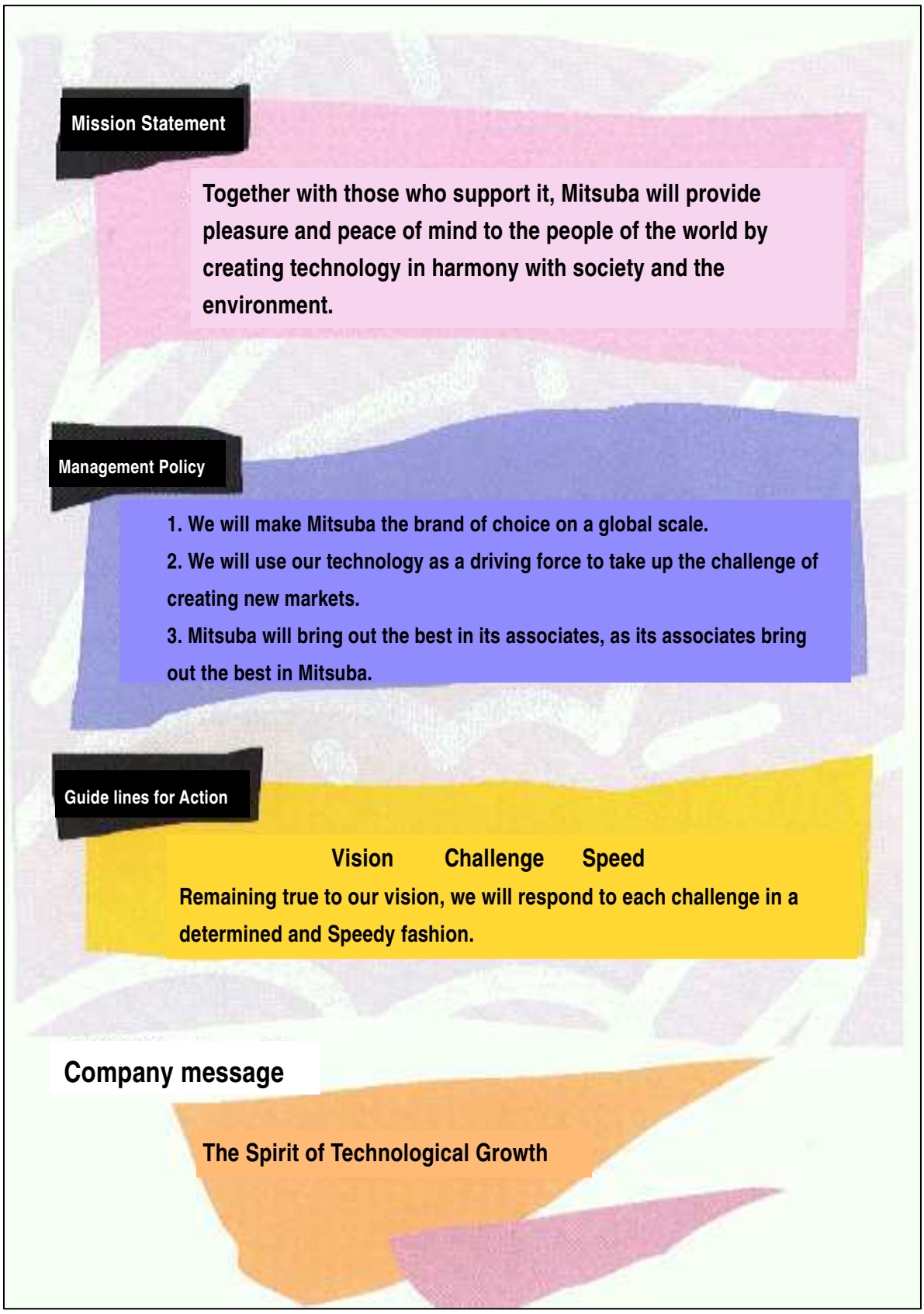
The Mitsuba Group Green Purchasing Guideline will be used by the following 30 companies.

Japan - 10 companies		Mitsuba Corporation
		Tatsumi Corporation
		Higashinihon Diecasting Industry Co., Ltd.
		Monimo Manufacturing Co., Ltd.
		Toyo Electric Manufacturing Co., Ltd.
		Sun-You Corporation
		Oshima Electric Works Co., Ltd.
		AMCO Corporation
		Ochiai Manufacturing Co., Ltd.
		Miyazaki Mitsuba Corporation
America - 8 companies	U.S.A.	American Mitsuba Corporation
		CME L. L. C.
		CME Automotive L. L. C.
		Mitsuba Bardstown, Inc.
	Mexico	Tokyo Electrica de Mexico, S. A. DE C. V.
		Corporacion Mitsuba de Mexico, S. A. DE C. V.
		Partes de Precision Mitsuba de Mexico, S. A. DE C. V.
	Brazil	Mitsuba do Brasil Ltda.
Europe - 3 companies	Italy	MITSUBA ITALIA S.p.A
	Hungary	Mitsuba Automotive Systems of Europe Kft.
	France	Mitsuba Manufacturing France S.A.
Asia - 6 companies	Thailand	Thai Summit Mitsuba Electric Manufacturing Co., Ltd.
	Philippines	Mitsuba Philippines Corporation
	Vietnam	Mitsuba M-Tech Vietnam Co., Ltd.
	India	Mitsuba Sical India Ltd.
	Indonesia	P.T. Mitsuba Indonesia
		P.T. JIDECO Indonesia
China - 3 companies		Guangzhou Mitsuba Electric Co., Ltd.
		Mitsuba Electric (Dalian) Co., Ltd.
		Mitsuba Shihlin Electric (Wuhan) Co.,Ltd.,

See website of Corporation Mitsuba for companies of Mitsuba Group. (http://www.mitsuba.co.jp)

2. BASIC STANCE OF MITSUBA GROUP

2.1 CORPORATE PHILOSOPHY



Environmental Declaration

We will work to achieve a continuous harmonization with our natural environment by means of technical developments harmonized with society and the environment.

1. We will endeavor to save resources and energy in all its corporate activities, including development, production and sales.

2. We will endeavor to reduce waste materials and polluting substances as well as achieve correct processing of those materials.

3. We will endeavor to achieve harmony with the local environment while also endeavoring to secure a living environment where all can live in peace.

Mitsuba Corporation President

Tsuneo Akuto

September 17, 1997

2.3 ACTION GUIDELINE

The action guideline is a concrete guiding principal to move the “Environmental Declaration” into action.

Environmental Action Guideline

- **We will attempt to make sparing and effective use of limited resources.**
- **We will endeavor to save on energy in our corporate activities, in order to fulfill our corporate responsibilities with regard to global warming.**
- **We will endeavor to find substitutes for ozone-destroying substances in order to protect the ozone layer.**
- **We will manage chemical substances properly and use abolition of harmful chemical substances including not using it for our products.**
- **We will establish an environmental management system and endeavor to observe in-company regulations that are stricter than public laws.**
- **We will positively participate in social activities relating to the environment.**

Mitsuba Corporation President

Tsuneo Akuto

August 24, 2007

3. APPROACH TO ENVIRONMENT OF MITSUBA GROUP

3.1 ESTABLISHING OF EMS

The Mitsuba Group considers global environmental protection as an important management issue, so that we started establishing EMS: Environmental Management System from 1997 to make continued efforts to reduce environmental burdens. These activities include not only prevention of global warming and natural resources saving with emissions recycling, but also reduction of environmental burdens related to the operation of respective companies and departments.

The perspective of Life Cycle Assessment (LCA) with regard to not only production step but also use and discharge step of the product is crucial to achieve continuous reduction of environmental burdens which is contemplated by ISO14001 Environmental Management System. We will work on this task.

3.2 SUBSTANCE OF CONCERN (SOC) MANAGEMENT

Since “Agenda 21: Sound Management of Hazardous Chemicals” was adopted by Rio Summit (UN Conference on Environment and Development) in 1992, the management of chemicals, especially hazardous substances included in waste material of vehicles and home electric appliances, has been a critical issue of concern around the world.

As for automobiles, there exist “EU ELV Directive 2000/53/EC”, “RoHS Directive 2002/95/EC”, “Directive 76/769/EEC relating to Restrictions on the marketing and use of certain dangerous substances”, “Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.” of Japan, and “EU REACH regulations EC 1907/2006” etc.

We will set forward the management of chemicals included in our products and establishing of SOC management system for the whole supply-chain.

4. POLICY OF GREEN PURCHASING

Previously, we had asked our suppliers for its cooperation as to quality, cost and delivery due date.

However, what the society is now asking for our products is the reduction of environmental burdens based on life cycle which consists of procurement including supply-chain, production, use and discharge.

In concrete terms, chemical management of products, resource savings, energy savings and prevention of environmental pollution.

In order to respond to these demands, we must seek your support for green purchasing.

5. REQUIREMENTS TO SUPPLIERS

5.1 ESTABLISHMENT OF EMS

(1) Establish EMS: Environmental Management System that meets ISO14001 or what is equivalent to the former.

(2) Acquisition of such certification systems as Eco Action 21, Eco Stage and Environmental Management System Standard (KES) in Japan will also be considered as that Environmental Management System is already built as with the acquisition of ISO14001

(3) Likewise, regulations for small and medium-scale businesses established in other countries having fewer burdens are acceptable as well.

(4) Proceed with activities related to environmental conservation in case of not yet being certified. (Development of objective and action plan, role sharing, compliance with regulations, reduction of energy, reduction of waste, management of chemicals, environmental education, audit, etc.)

The detail is shown in Exhibit 3 “EMS: SELF-ASSESSMENT CHECKLIST”.

5.2 SOC MANAGEMENT

5.2.1 INTENDED SCOPE

(1) Object of SOC management is what Mitsuba Group companies procure.

a Materials and parts --- Including the ones not for auto parts and samples.

b Sub-materials --- Solder, Adhesive, Grease, metal working lubricant, tape, marker, etc.

c Packing material --- Including not only carton but shocking absorber, band and ink etc.

5.2.2 REGULATED SUBSTANCES

(1) Meet the regulations stipulated in the “GADSL”.

(2) The “MES A 015” regulated chemicals specified in our drawings are equivalent to “GADSL”.

5.2.3 SOC MANAGEMENT SYSTEM

(1) Establish SOC Management System.
(Clarification of role sharing, human development, control criteria, supplier management, parts control, internal audit, etc.)
See Exhibit 4 “SOC MANAGEMENT SYSTEM - REQUIREMENTS” for the further retails.

(2) We may perform audit of your SOC Management System.

5.3 INVESTIGATION ON SOC

5.3.1 SUBMISSION OF EVIDENCE

(1) We will request our suppliers’ to submit some “evidence” to prove noninclusion of specified SOC, according to the request from our customers or in case that we consider that it’s necessary.

(2) The evidence to prove noninclusion of SOC is an analysis data which indicates that only sub-threshold SOC is contained. Four substances specified in ELV Directive (Pb, Cd, Hg, Cr6+) are subject to this requirement. We will request you to submit the same evidence clarifying a substance name in case of other substance.

(3) We will make a request on a case-by-case basis if our customer specify types of analysis

equipment, ISO17025 Certification of laboratory, analysis date and language to be used etc.

5.3.2 SUBMISSION OF IMDS DATA

(1) The IMDS data signifies complete constituent data by delivered material, which is reported by such tools as IMDS system, JAMA/JAPIA integrated data sheet etc,

(2) We will request you to report a material constituent in the IMDS data. Especially, constituents specified in GADSL will always be required to report regardless of quantity.

(3) It is allowed not to disclose up to 10% of constituents treating it as MISC (others) in case you cannot give a full disclosure for confidentiality reasons. In such case, grand total should be 100% summing up MISC and disclosed part.
Also, note that MISC should not include any prohibited substance as well as substance required to report which are specified in GADSL.

(4) We will request you to report again in case that an undisclosed constituent treated as MISC becomes declared substance due to modification of GADSL.

(5) It will eventually be necessary to collect data from material suppliers through supply-chain to prepare the IMDS data; therefore, it is advisable to try to collect data of delivered materials on a regular basis regardless of requirement to submit report.
In addition, the IMDS data will be required to obtain model certification for vehicle. We will seek our suppliers' support to meet the submission deadline.

5.3.3 SPECIFIED CHEMICAL SUBSTANCES

(1) Due to legislative trends regarding chemicals in the countries, we may ask our suppliers' help to do some survey on whether specific chemical substance is being used or not, based on requirements from customers or at the discretion of us. In such cases, we will seek our suppliers' support to make inquiries to material suppliers etc.

5.4 SUBMISSION OF DECLARATION

(1) We will request our suppliers to pledge that no chemicals prohibited in the "GADSL" are included in the "purchased product" delivered from them and that substances required to report should be declared regardless of quantity used.

(2) We will request our suppliers' to submit "Declaration", according to the request from our customers or in case that we consider that it's necessary.

(3) Please report using a supporting data: Exhibit 1 "Declaration form on conformity to the Mitsuba chemicals regulation".

6. Exhibit

(1) Exhibit 1 “DECLARATION OF CONFORMITY TO THE MITSUBA CHEMICALS REGULATION “

(2) Exhibit 2 “EMS: SELF-ASSESSMENT CHECKLIST“

(3) Exhibit 3 “SOC MANAGEMENT SYSTEM – REQUIREMENTS”

(4) Exhibit 4 “GLOSSARY”

(5) Exhibit 5 “GADSL” as of Mar. / 2010

Mitsuba Group Green Purchasing Guideline is disclosed at web side of Corporation Mitsuba (http://www.mitsuba.co.jp/purchase/index.htm).

7. CONTACT FOR INQUIRIES

Submit inquiries related to this guideline to follow contact by English or Japanese.

Attn: Purchasing Planning Section, Purchasing Department No. 2
E-mail : greenkobai@mitsuba.co.jp
TEL: 0277-52-0171 FAX: 0277-54-6920

Exhibit 1

Attn: Mitsuba Corporation, Purchasing Dept. (When Mitsuba corporation)

DECLARATION OF CONFORMITY TO THE “MITSUBA CHEMICALS REGULATION”

We will pledge that no chemicals prohibited in the “GADSL” are included in the “purchased products” (raw material, part, auxiliary material, product, equipment and supply) which we are currently delivering and will deliver in the future, and that we declare substances required to report regardless of quantity we use.

We also pledge to observe this guideline as to prohibited substances and substances required to report which will be added in the future GADSL revision.

Fill-out date

Supplier name

Name of person in charge

Sign

Exhibit 2 EMS: SELF-ASSESSMENT CHECKLIST

（Please fill out below in case of not being certified according to ISO14001etc.）

№	Item	ISO requirements (Reference)	Evaluation criteria	Evaluation
1	Environmental policy	Environmental policy (4.2)	1)There is a company philosophy regarding environmental conservation.	
			2)Policy on environmental conservation is already established and it is pledged on continuous improvement and pollution prevention.	
			3)It is pledged on observation of regulations through environmental policy.	
			4)Environmental policy is documented, communicated to all the employees and accessible to the third party.	
2	Plan/Organization	Objective, Target and Action plan (4.3.3)	1)There are objective as well as target to achieve policy.	
			2)Organization and person in charge are clearly identified to achieve objective and target.	
			3)There is an action plan in which means and method to achieve objective and target are identified.	
3	Environmental impact assessment/ Operation and maintenance control	Environmental aspect(4.3.1)/ Operation and maintenance control (4.4.6)/ Surveillance and measurement(4.5.1)	1)Impact by business activities on following items are evaluated and identified; efforts for improvement are being made.	—
			1)Air pollution	
			2)Water pollution	
			3)Noise/Vibration	
			4)Prohibited substance (See the List of regulated chemicals)	
			5)Wastes	
			6)Energy(Amount consumed of Electricity/Gas/Fuel etc)	
			2)Supervisor is designated for specified phenomenon (including machines/operation); control is in place.	
			3)There is product assessment mechanism to provide with environmentally friendly products	
4	Compliance	Legal and other requirements(4.3.2)/ Compliance evaluation(4.5.2)	1)Acts/codes and industry norms etc. related to environment are identified; control is in place.	
			2)There is adequate control over facilities/equipments regarding related environmental laws.	
5	Risk management	Preparation and response to emergency(4.4.7)	1)Emergency response on environmental conservation is well prepared having established procedure.	
6	Enlightenment/Education/ Disclosure of information	Competence, Education&Training and Consciousness(4.2.2), Communication(4.4.3)	1)Training programs necessary for personnel within the system are identified and being implemented to achieve her/his objective.	
			2)Training programs especially for those who involve in some operation causing huge impact on environment are being implemented; a list of those operators is available.	
			3)Information on environmental conservation of the company is being disclosed.	
7	Response to no-conformity	No-conformity and corrective/preventive action(4.5.3)	1)Procedures to implement corrective/preventive actions in case of no-conformity on Environmental Management System are already established.	
8	Self-evaluation	Environmental Management System audit (4.5.5)/Management Review(4.6)	1)Self-evaluation on progress status of plan as well as achievement status of objective are being implemented; evaluation results are reported to directors.	
			2)Self-evaluation results are reflected in environmental policy, plan and organization for continuous improvement.	
9	Documents control	Documents(4.4.4)	1)Responsibility and procedures to implement previous questions are determined and documented.	

Note) Fill out in evaluation section. (Y:YES,　N:NO,　NA:Not Applicable))

Exhibit 3 SOC MANAGEMENT SYSTEM - REQUIREMENTS

1. Organization
   a Determine internal role sharing as to SOC Management.
   Ex. Control of regulation/customer requirements, supervision/control of suppliers (when necessary) input/control of data, etc.

2. Policy
   a The directors should give internal indications as to SOC Management.
      Ex. Quality/Environmental policy, or any meeting.
   b Define, when necessary, degrees of risk on SOC inclusion in material. (in case a high risk component will be used.)
      Note) Based on our experiences, there exists significant risk with plastic, paint, ink, marker, tape and plating in case of being produced in developing countries and with PVC regardless of producer country.

3. Man/Machine
   a Foster internal human resources who can judge if it's conform or is not conform according to the SOC regulations and customer requirements.
   b Foster those who can operate IMDS or JAMA sheet which is a tool in automobile industry.
   c Do adequate employees' training on SOC according to business contents.
   d Enable to do SOC analysis. (internal equipment or external laboratory)

4. Management standard
   a Inform al internal personal of SOC related regulations and customer requirements as well as control items within the company.

5. Customer response
   a Submit IMDS data of material and evidence to prove noninclusion according to customer's requirements.
      Note) IMDS data: Specification of material chemical constituent.
            Evidence: Analysis results of 4 substances specified in ELV directive for prove noninclusion:
   b Control response to customer requirements to avoid delay. (Please inform in case of delay)

6. Product design
   a Give indications of SOC management as output of product design, if applicable. Ex. Design and specification (in case of dedicating in product design)

7. Process design
   a Give indications of SOC management as output of process design. Ex. Control plan, Work instruction sheet.
      (Including sub-material and packing material for exportation such as marker and ink etc.)
   b Pay attention to incorrect use, mix, contamination and chemical changes, if applicable. Ex. plating, soldering (in case that there exists a risk due to incorrect use, mix, contamination and chemical changes)

8. Purchasing
   a Add SOC Management status to the items of supplier selection and continuous evaluation.
   b Inform suppliers of SOC management standard of your company Ex. Green purchasing guideline
      (Except a case in which supplier is considered to have sufficient knowledge.)
   c Verify, when needed, management status of supplier by documents and visit etc.

d Make a request at an early stage for suppliers to submit the IMDS data and evidence to prove noninclusion of SOC (if necessary).
Note: The IMDS data has come to be required for model certification of vehicle; it is getting to be required before mass production start.

e Obtained IMDS data among others should not be controlled as individual data but as internally shared data.

9. Surveillance, Measurement

a Confirm, depending on material/component risk, that SOC is not included.
Note) Acquisition of complete constituent data of corresponding material and evidence to prove noninclusion of SOC; or analysis at your own or by third party.

10. History control

a Implement traceability control (usage history on material/component), if applicable.

11. Change control

a Verify SOC according to changes to be implemented in case that you would modify internal process, supplier or material.
Ex. Process audit, Acquisition of IMDS data/evidence to prove noninclusion of Substance of Concern, Material analysis, Process audit of suppliers.

12. Non-conforming product

a Define procedure when SOC related problems occur. Ex. Rules on control of non-conforming products.

b Report to your customers when SOC related problems occur.

13. Evaluation/Improvements

a Audit internal SOC Management status on a regular basis.
Ex. Departments such as product design, process design, purchasing, production, inspection, and Shipping, etc.

b Report an audit result to directors to implement required improvements.

14. Analysis method of SOC

a. Analysis method of SOC is as follows.

	Target elements	analysis method
Qualitative analysis method	Lead, cadmium, mercury	X-ray fluorescence analysis method
	Hexavalent chromium	X-ray fluorescence analysis method IEC 62321(Diphenylcarbazide spot method)
	Bromine-containing fire-retarding material (PBB、PBDE)	X-ray fluorescence analysis method
Quantitative analysis method	Lead, cadmium, mercury	Inductively Coupled Plasma (ICP) Atomic Absorption Spectroscopy（AAS）
	Hexavalent chromium	Diphenylcarbazide spectrophotometric method (EN 15205、I SO 3613)
	Bromine-containing fire-retarding material (PBB、PBDE)	Gas Chromatograph Mass Spectrometry (GC/MS)

b. Consideration of Qualitative analysis method.

At the X-ray fluorescence analysis, when the result shown chromium / bromine is under the threshold value, it means hexavalent chromium / bromine-containing fire-retarding material (PBB、PBDE) is under the threshold value.

The color appears when hexavalent chromium is about 200ppm by analysis method of IEC 62321.
IEC 62321 is effective for screening contains or not contain, but when hexavalent chromium detect, quantitative analysis is necessary.

c. Consideration of quantitative analysis method.
We accept EN 15205 and ISO 3613 for hexavalent chromium analysis method.
However when calculate ppm of hexavalent chromium, the numerator is weight of hexavalent chromium, the denominator is weight of chromate film.

Some laboratory is calculating as weight of hexavalent chromium divided by weight of chromate film plus Zinc coating, but many customers do not accept.

If there are 2 results as EN15205 and ISO3613, EN15205 has priority, many customer recommend it.
The threshold value of EN 15205 is 0.1μg / cm2 = 0.1 percent = 1,000ppm.

d. Example of calculate.

Hexavalent chromium derived 5 μg from 50cm2 surface area plating parts.
The quantity = 5 μg / 50cm2 = 0.1μg / cm2

Define thickness of chromate film is 0.2μm, specific gravity is 5g/cm3
Source: JIS H8625 Chromate conversion coatings on electroplated zinc and cadmium coatings,
And ISO3613 Chromate conversion coatings on zinc, cadmium, aluminium-zinc alloys and zinc-aluminium alloys -- Test methods

Total mass of chromate film of 50cm2 surface plating parts. Do not include Zinc coating.
= surface(50cm2) X chromate film thickness (0.2μm) X specific gravity (5g/cm3)
=（50cm2）×（0.00002cm)×(5g/cm3）= 0.005g =5,000μg

Then ppm of Hexavalent chromium in chromate film (P) is,
P = 5 / 5,000 = 0.001 =0.1% =1,000ppm

This means that when thickness of chromate film is 0.2μm, specific gravity is 5g/cm3,
0.1μg / cm2 = 1,000ppm.

Exhibit 4 GLOSSARY

1. IMDS DATA

(1) The IMDS data signifies constitutional component data of material used, which sometimes is called "environmental data".

Ex1. Standard components of cold rolled steel plate (SPCC)

Component	CAS No.	Content percentage(%)
Iron	7439-89-6	99.55
Manganese	7439-96-5	0.30
Carbon	7440-44-0	0.075
Phosphorus	7723-14-0	0.050
Sulphur	7704-34-9	0.025

Ex2. Component example of PET resin including 20% of glass

Component	CAS No.	Content percentage(%)
Polyethylene Terephthalate	25038-59-9	71
GF-Fiber	-	20
Misc., not to declare	system	9

(2) The IMDS data requires parts mass, percentage of recycle material used, and material identification etc. as well as information specified above.

(3) The IMDS data is an ingredient specification of material. Please make inquiries to material manufacturers.

(4) Some material ingredient are prohibited to use or required to report when used.

(5) It is permitted not to disclose up to 10% of constituent treating it as MISC (others) in case you cannot give a full disclosure for confidentiality reasons. In such case, grand total should be 100% summing MISC and disclosed part up.

Also note that MISC should not include prohibited substance and substances required to report which are stipulated in GADSL.

2. GADSL

(1) GADSL (Global Automotive Declarable Substance List) refers to the controlled chemicals list that is commonly used across industries and that was established by auto manufacturer, auto components supplier and chemical manufacturer. http://www.gadsl.org/

(2) Chemicals included in GADSL are classified into three categories:
- P（Prohibited）: Impossible to use in over threshold level or intentional use
- D（Declarable）: Possible to use; but required to report regardless of quantity used.
- P/D（Prohibited and Declarable）: it is different by chemicals or purpose.

For example, asbestos is classified into the category P: Completely prohibited from use; lead is P/D it prohibited from using except for some purposes such as battery.

3. IMDS SYSTEM

(1) IMDS is a system to collect the complete integrant data efficiently.

It is a system to collect, through supply chain, information on materials and chemicals included in approximately thirty thousand pieces of components constituting the vehicle, in order to response

to EU ELV Directive which includes regulations on SOC of new model vehicle, used cars and recycle percentage etc. https://www.mdsystem.com/

(2) IMDS is an online system, so that it is required to be online all the time. In addition, it is necessary to register a company ID etc.

4. JAMA Sheet

(1) JAMA Sheet (official name: JAMA/JAPIA integrated data sheet), having the same purpose as IMDS, is an agreed form between Japan Automobile Manufacturers Association (JAMA) and Japan Auto Parts Industries Association (JAPIA). http://www.japia.or.jp/

(2) JAMA sheet is an offline system, so that always-on connection is not required after having downloaded JAMA sheet.

(3) JAMA Sheet complies with IMDS.

5. Evidence to prove noninclusion of SOC

(1) The evidence to prove noninclusion of SOC is an analysis result on SOC included in material. The SOC usually means such substances as regulated by EU ELV Directive, which include lead, cadmium, mercury and hexavalent chromium.
Some clients have also added PBB and PBDE among bromine-containing fire-retarding materials which are regulated by EU RoHS.

(2) MSDS (Material Safety Data Sheet) is an instruction manual for users who actually handle those materials, so that structural components are roughly described. For that reason, this sheet is inadequate as an evidence to prove noninclusion. MIL Sheet is inappropriate as well because of the same reason. MIL sheet does not work as an analysis result to demonstrate noninclusion of lead and cadmium.

6. FYA: Case examples

(1) Product containing hexavalent chromium was shipped because service parts were used as mass-produced products;

(2) Use of vinyl tape containing lead produced prior to July 1, 2006 (when RoHS was started.)

(3) The judgment was failed because bromine found by X-ray fluorescence analysis (wrong inspection method).

7. FYA: Case examples − Use of SOC in the past

SOC gives a big impact on health and ecosystem, but on the other hand it has convenient aspects. As a matter of fact, it was used in diverse ways (and is still being used in some cases).

(1) Lead was used for water pipes, lead pellets, toys, fishing weights and leaded gasoline as it is soft. For automobile, lead was used for lead battery, wheel balance weight, solder, shaft bearing, lamp glass, paint, plastic stabilizer, red and yellow colorant, rubber vulcanization accelerator, rubber stabilizer, grease, carbon brush and free-cutting steel. It means that recycled material can contain SOC in case that low technical level is applied to recycling.

(2) Cadmium was contained in cadmium plating, Nickel-Cadmium rechargeable battery, polyvinyl chloride stabilizer, colorant, brass impurities, silver solder impurities.
Recycled PVC carries a significant risk to include SOC. Old PVC material is, as well, at a high risk of inclusion.

(3) As for hexavalent chromium, attention will be required for handling of goods plated with hexavalent chromium. Some clients have not yet changed from hexavalent to trivalent chromium plating.

別紙5「GADSL」:2010年3月現在　　Exhibit 5 "GADSL" as of Mar. / 2010

このリストは、化学物質の群を示します。詳細はGADSLのサイト(http://www.gadsl.org/)を参照してください。
This list shown chemical substance group, see GADSL website (http://www.gadsl.org/) for detail.
このリストは定期的に改正されます。
This list revises periodically.

P(Prohibited):禁止物質、D(Declarable):要報告物質
閾値は記載がなければ 0.1%
When blank, Threshold is 0.1%

No.	Substance(物質名)	物質名(和名:ミツバ追記)	CAS-No.	Classi-fication(管理区分)	Source(Legal requirements, regulations)、specified condition (法的必要条件、法規定、特定条件)	Threshold(閾値)
1	Acetaldehyde	アセトアルデヒド	75-07-0	D	EU-R 1272/2008 /EEC	
2	Acetamide	アセトアミド	60-35-5	D	EU-R 1272/2008 /EEC	
3	Acetamide, N-methyl-	アセトアミド N-メチル	79-16-3	D	Classified as toxic to reproduction class 2 according to EU-R	0.10%
4	Acetonitrile	アセトニトリル	75-05-8	D	EU-R 1272/2008 /EEC	
5	Acrylamide	アクリルアミド	79-06-1	D	EU-R 1272/2008 /EEC	
6	Acrylonitrile	アクリロニトリル	107-13-1	D	EU-R 1272/2008 /EEC	
7	Amines, carcinogenic, which are formed from Azo-dyes, selected	アゾ染料から形成されて選択された発癌性があるアミン		P	EU-D 2002/61/EC	The list of affected Azo-dyes is continuously updated at: List B: Auf dem Weltmarkt nicht erhältlich (are not allowed) http://www.vci.de/template_downloads/tmp_VCIInternet/AzoTR614~DokNr~115196~n~101.pdf
8	Amines, which can form carcinogenic Nitrosamines, selected	発癌性のあるニトロソアミンを形成できるアミン		D	Legally regulated according to german TRGS 615. Limit for all secondary Amines in volatile corrosion inhibitors, which can form carcinogenic Nitrosamines. Volatile corrosion inhibitors include papers, plastic films and	
9	4-Aminobiphenyl and its salts, all members	4-アミノビフェニルとその塩		P	EU-R 1272/2008 /EEC, carcinogen class 2 EU-D 76/769/EEC	0.01%
10	Ammonium Perchlorate	塩素酸アンモニウム	7790-98-9	D	Pyrotechnical compound	
11	Aniline and its salts, all members	アニリンとその塩		D	EU-R 1272/2008 /EEC	
12	Antimonytrioxide (Diantimonytrioxide)	三酸化アンチモン（三酸化二アンチモン）	1309-64-4	D	EU-R 1272/2008 /EEC	
13	9,10-Anthracenedione, 1-[(5,7-dichloro-1,9-dihydro-2-methyl-9-oxopyrazolo[5,1-b]quinazolin-3-yl)azo]-		74336-60-0	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
14	Aromatic amines, selected	芳香族アミン		D		0.1%
15	Arsenic and its compounds, all members	砒素とその化合物		D	EU-R 1272/2008 /EEC EU-D 76/769/EEC	0.01% (unless present in metals & alloys, then the declaration limit is 0.05%).
16	Asbestos Fibres, all members	アスベスト繊維		P	EU-D 76/769/EEC Definition of asbestos fiber for counting purpose by OSHA in 1992； Particle with a length >5 μm, a diameter of <3μm and aspect ratio(length：width)>3：1	Any intentionally added content
17	Asbestos Minerals, all members	アスベスト鉱物		D	Potential to form Asbetos fibres (see entry Asbestos fibres)	
18	Barium compounds (organic or water soluble), selected	バリウム化合物（有機化合物あるいは水溶性化合物）		D	EU-R 1272/2008 /EEC	1%
19	Benzidine and its salts, all members	ベンジジンとその塩すべて		P	EU-R 1272/2008 /EEC, carcinogen class 2 EU-D 76/769/EEC & Canadain Toxic Substances Regulation	0.01%, see details for Canada specific
20	Benzene	ベンゼン	71-43-2	D/P	EU-D 76/769/EEC	0,01% for physical solid state parts. 0,1% in fuels
21	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene	アルキルジフェニルアミン	68921-45-9	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
22	1,4-Benzenediamine, N,N' -mixed Ph and tolyl derivs	ハイドロキノン、o-トルイジン、アニリン縮合物	68953-84-4	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
23	2-Benzothiazolesulphenamide, N, N-dicyclohexyl-	N, N-サイクロヘキシル-2-ベンゾチアゾールスルフェナミド	4979-32-2	D	Japan (Chemical Substances control Law) Type I Monitoring Chemical Substance	Any intentionally added content must be reported
24	Beryllium and its compounds, all members	ベリリウムおよびその化合物		D	EU-R 1272/2008 /EEC	
25	Biocidal coatings / biocidal additives, selected	殺虫性塗布剤/殺生剤		D	EU-D 2032/2003/EC	Any intentionally added content

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26	Bis(chloromethyl) ether (BCME)	ビス（クロロメチル）エーテル	542-88-1	P	Prohibition of Certain Toxic Substances Regulations, 2005 (SOR/SOR/2005-41. Published in Canada Gazette Part II, 2006-11-29 Vol. 140, No. 24	Any intentionally added content
27	Butadiene, 1,3 -	１，３ブタジエン	106-99-0	D	EU-R 1272/2008 /EEC	
28	Cadmium and its compounds, all members	カドミウムおよびその化合物	7440-43-9	D/P	EU-D 2000/53/EEC EU-R 1272/2008 /EEC EU-D 76/769/EEC	0,01% for impurities, any intentionally introduced content must be reported
29	Chlorinated hydrocarbons, selected	塩素化炭化水素		D/P	Multiple (see below). Several chlorinated hydrocarbons listed are not explicitly prohibited in applications associated with manufactured articles, however, within the EU there is a general regulatory presumption toward substitution for industrial uses	
30	Chlorinated or brominated Dioxins or Furans, all members	塩素化および臭素化ダイオキシンあるいはフラン		P	ChemVerbotsV	Content above 10 ppb
31	Chlorinated Paraffins, Short & Medium Chain Length (SCCP, MCCP), all members: Note that the use of specific CAS numbers for these substances differs throughout the world. Example CAS numbers are provided below; however, other	短鎖及び中鎖の塩化パラフィン(SCCP,MCCP)： これらの物質の特定のCAS番号の使用が世界中で異なることに注意してください。ロングリストにCAS番号を提供します。しかしながら、他のCAS番号が使用されるかもしれません。		D/P	EU-D 76/769/EEC	1%
32	Chloroaniline	クロロアニリン	106-47-8	D	EU-R 1272/2008 /EEC	
33	Chloromethyl methyl ether (CMME)	クロロメチルメチルエステル（CMME）	107-30-2	P	Prohibition of Certain Toxic Substances Regulations, 2005 (SOR/SOR/2005-41. Published in Canada Gazette Part II, 2006-11-29 Vol. 140, No. 25	Any intentionally added content
34	Chloro-fluoro-carbons (CFC) and other Ozone depleting substances, all members	クロロフルオロカーボン (CFC) およびその他のオゾン層破壊物質	-	P	EU-R 2009/1005, EPA ODP class 1	
35	Chromium(VI)-salts, all members	六価クロム化合物	14977-61-8	D/P	EU-R 1272/2008 /EEC EU-D 2000/53/EEC	0,1% for impurities, any intentionally introduced content
36	Cobalt and its compounds, all members	コバルトおよびその化合物	7440-48-4	D	EU-R 1272/2008 /EEC	Cobalt compounds and alloys, excluding cobalt in steels
37	Colophony (Rosin), selected	コロホニー（ロジン）		D	ACGIH Worldwide - Documentation of the TLVs and BEIs with other Worldwide Occupational Exposure Values;	
38	Copper (metallic)	銅（金属）	7440-50-8	D	No current regulations but substance of concern in dispersive friction material applications due to environmental impact potential; could be subject to future	
39	Cyclododecane, hexabromo-(HBCD)	ヘキサブロモシクロデカン	25637-99-4	D	EU risk assessment	
40	Cyclohexane	シクロヘキサン	110-82-7	D	EU-R 552/2009	
41	2-Cyclohexen-1-one, 3,5,5-trimethyl-	イソホロン	78-59-1	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
42	Cyclopentasiloxane, decamethyl-	シクロペンタシロキサン,デカメチル-	541-02-6	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
43	Cyclotetrasiloxane, heptamethylphenyl-	シクロテトラシロキサン,ヘプタメタクリルフェノール-	10448-09-6	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
44	Cyclotetrasiloxane, octamethyl-	オクタメチルシクロテトラシロキサン	556-67-2	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
45	Decanedioic acid, bis(1,2,2,6,6-pentamethyl-4-piperidinyl)ester	チヌビン292(セバシン酸ビス(1,2,2,6,6-ペンタメチル)エステル	41556-26-7	D	Canadian Priority List in 2008, and Producers, importers and related industry in Canada have to submit information on production or import amount.	0.1%, Report any intentionally added content. No testing required.

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46	Diamino-diphenylmethane (4,4'-Diaminodiphenylmethane)	ジアミノ-ジフェニル-メタン (4,4`-ジアミノ-ジフェニルメタン)	101-77-9	P	EU-R 1272/2008 /EEC	
47	Dichloropropanol (1,3-Dichloro-2-propanol)	ジクロロプロパノール (1,3-ジクロロ-2-プロパノール)	96-23-1	D	EU-R 1272/2008 /EEC	
48	Dimethylformamide (N,N-Dimethylformamide)	N,N-ジメチルホルムアミド	68-12-2	D	1999/137/EC 91/689/EEC	
49	Diorganotin compounds	有機スズ化合物	CAS	D	EU-R 1272/2008 /EEC	
50	Dodecachloropentacyclo 1, 3, 4-Metheno-1H-cyclobuta(cd)pentalene, Mirex	ドデカクロロペンタシクロ[5.3.0.0(2,6).0(3,9).0(4,8)]デカン マイレックス	2385-85-5	P	Prohibition of Certain Toxic Substances Regulations, 2005 (SOR/SOR/2005-41. Published in Canada Gazette Part II, 2006-11-29 Vol. 140, No. 24	Intentional addition prohibited
51	Epichlorohydrin (1-chloro-2,3-epoxypropane)	エピクロルヒドリン（1-クロロ-2,3-エポキシプロパン）	106-89-8	D	EU-R 1272/2008 /EEC	
52	Ethanol, 2-(2-methoxyethoxy)-	ジエチレングリコールモノメチルエーテル	111-77-3	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
53	1-ethenylpyrrolidin-2-one (2-Pyrrolidione, 1-ethenyl-)	N-ビニル-2-ピロリドン	88-12-0	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
54	Ethyl-/ Methyl-Glycols and their Acetates	エチレングリコールモノ（エチル/メチル）エーテルおよびそのアセテート類		D	EU-R 1272/2008 /EEC	
55	Fatty acids, C6-19-branched, Zinc salts	C6-19 分枝脂肪酸の亜鉛塩	68551-44-0	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
56	Fluorotelomers, selected	フッ素テロマー	Some substances may not have CAS#s	D	Stewardship Program to reduce facility emissions and product content of PFOA, its higher homologues, and related chemicals including precursors (see column B) on a global basis by 95 percent no later than year-	0.1% by mass of treated article eg carpet, upholstry, other textiles
57	Formaldehyde	ホルムアルデヒド	50-00-0	D	EU-R 1272/2008 /EEC	Any intentionally added content of formaldehyde must be reported. Formaldehyde in any material, which may be emitted under reasonable and forseeable conditions, must be qualitatively indicated
58	2-Furancarboxaldehyde	フルフラール	98-01-1	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
59	Halons, all members	ハロン		P	EU-R 594/91/EEC	
60	Hexachlorobenzene	ヘキサクロロベンゼン	118-74-1	D/P	Prohibition of Certain Toxic Substances Regulations, 2005 (SOR/SOR/2005-41. Published in Canada Gazette Part II, 2006-11-29 Vol. 140, No. 24	P if ≥ 20ppb/ D if ≥ 10 ppb
61	Hexachloro-1,3-butadiene (HCBD)	ヘキサクロロ-1,3-ブタジエン	87-68-3	P	Prohibition of Certain Toxic Substances Regulations, 2005 (SOR/SOR/2005-41. Published in Canada Gazette Part II, 2006-11-29 Vol. 140, No. 24	Intentional addition prohibited
62	Hexachlorocyclohexane, gamma isomer, Lindane	ヘキサクロロシクロヘキサン	58-89-9	D	GefStoffV with Annex IV Nr. 5	
63	Hexanedioic acid, bis(2-ethylhexyl) ester	アジピン酸ジ-2-エチルヘキシル	103-23-1	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
64	Hexanoic acid, 2-ethyl-	2-エチルヘキサン酸	149-57-5	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.

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65	Hydrazine	ヒドラジン	302-01-2	D	EU-R 1272/2008 /EEC	
66	Hydrobromofluorocarbons (HBFC's), all members	ハイドロブロモフルオロカーボン; HBFC's:		P	Montreal Protocol; EU-R 2009/1005; US EPA Class I ODS	
67	Hydrochlorofluorocarbons (HCFC's), all members	ハイドロクロロフルオロカーボン; HCFC's		D/P	Montreal Protocol; EU-R 2009/1005; US EPA Class II ODS	
68	Hydrofluorocarbons (HFC's), all members	ハイドロフルオロカーボン; HFC's:		D/P	Kyoto Protocol	
69	Lead and its compounds, all members	鉛およびその化合物		D/P	EU-D 2000/53/EEC EU-R 1272/2008 /EEC	0,1% for impurities, any intentionally introduced content
70	Mercury and its compounds, all members	水銀およびその化合物		D/P	EU-D 2000/53/EEC EU-R 1272/2008 /EEC EU-D 76/769/EEC	0,1% for impurities, any intentionally introduced content must be reported
71	Methanol	メタノール	67-56-1	D	Norway, Sweden (SFS 1985:840; SFS 1986:8), Denmark, Finland	
72	2-Methoxyethanol	2-メトキシエタノール	109-86-4	P	Prohibition of Certain Toxic Substances Regulations, 2005 (SOR/SOR/2005-41. Published in Canada Gazette Part II, 2006-11-29 Vol. 140, No. 24	Prohibited ≥ 0.5% w/w in Diethylene glycol methyl ether. Any intentionally added content in hard parts
73	Methylacrylamidomethoxy-acetate	メチルアクリルアミドメトキシアセテート	77402-03-0	D	EU-R 1272/2008 /EEC	
74	1-methylpyrrolidin-2-one (2-Pyrrolidinone, 1-methyl)	N-メチル-2-ピロリドン	872-50-4	D	EU-R 790/2009	
75	Mineral fibres (Natural or Synthetic) except Continuous Filament Fibres, all members	連続的な長繊維以外のセラミック繊維（天然及び合成繊維）		D	World Health Organization for definition of respirable fiber, and IARC monograph 81, 2002, for Man-Made vitreous fibers	All fibers or fibrils 5 microns or less, in diameter, with a length:diameter ratio equal to or greater than 3:1
76	Monomethyldibromodiphenylmethane	モノメチルジブロモジフェニルメタン（DBBT）	99688-47-8	D	EU Directive 76/769/EEC	
77	Monomethyldichlorodiphenylmethane	モノメチルジクロロジフェニルメタン	81161-70-8	D	EU Directive 76/769/EEC	
78	Monomethyltetrachlorodiphenylmethane	モノメチルテトラクロロジフェニルメタン	76253-60-6	D	EU Directive 76/769/EEC	
79	Naphthalene	ナフタレン	91-20-3	D	EU Directive 1272/2008 /EEC, Canadian Challenge Batch 1	Report any known concentration
80	2-Naphthalenol, 1-[(4-methyl-2-nitrophenyl)azo]-	ピグメントレッド3(1-(4-メチル-2-ニトロフェニルアゾ)	2425-85-6	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
81	2-Naphthylamine and its salts, all members	２－ナフチルとその塩すべて		P	EU-R 1272/2008 /EEC, carcinogen class 2 EU-D 76/769/EEC	0.01%
82	Nickel and its compounds, all members	ニッケルおよびその化合物		D	EU-D 76/769/EEC	
83	Nitrites, all members	亜硝酸塩		D	EU-R 1272/2008 /EEC	
84	4-Nitrobiphenyl and its salts	４－ニトロビフェニルとその塩すべて		P	EU-R 1272/2008 /EEC, carcinogen class 2 EU-D 76/769/EEC	0.01%
85	Nitrocellulose	ニトロセルロース	9004-70-0	D	Pyrotechnical compound	
86	N-Nitrosamines, selected	ニトロソアミン		D/P	legally regulated according to German TRGS 552 limit for workplace air (value 1 µg/m3), TRGS 615 limit for volatile corrosion inhibitors and TRGS 905 classified as carcinogenic class 1. Legally regulated for corrosion	
87	Nonylphenol	ノニルフェノール	25154-52-3	D	EU Directives 1272/2008 /EEC, 76/769/EEC, Toxic for reproduction-Category 3. Possible risk of harm to the unborn child. Possible risk of impaired fertility	
88	Nonylphenol ethoxylates, all members	アルキルフェノールエトキシレート		D	EU-D 2003/53/EC	
89	7-Oxa-3,20-diazadispiro[5.1.11.2]-heneicosan-21-one, 2,2,4,4-tetramethyl-		64338-16-5	D	Canadian Priority List in 2006, and Producers, importers and related industry in Canada have to submit information on production or import amount. Type 2 Monitoring Substance in Japan, that is, persistent substance. Producers and importers of this substan	
90	Pentachlorobenzene	ペンタクロロベンゼン	608-93-5	P	Prohibition of Certain Toxic Substances Regulations, 2005 (SOR/SOR/2005-41. Published in Canada Gazette Part II, 2006-11-29 Vol. 140, No. 24	Any intentionally added content
91	Pentachlorophenol (PCP) and its salts, all members	ペンタクロロフェノール(PCP) とその塩		P	EU-R 1272/2008 /EEC EU-D 76/769/EEC	5ppm

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92	Perchlorates, all members	過塩素酸塩		D	California Assemby Bill No. 826 - Perchlorate Contamination Prevention Act; implemented July 1, 2006. http://www.dtsc.ca.gov/Hazardous	
93	Perfluorooctane sulfonates C8F17SO2X (X = OH, Metal salt, halide, amide, and other derivatives including polymers) (PFOS), all members	パーフルオロオクタンスルホン酸（PFOS）C8F17SO2X（X=OH、金属塩、ハロゲン化合物、アミド、重合体を含む他の誘導体）		P	76/769/EEC 2006/122EEC (Prohibited from July 1st 2008)	
94	PFOA and its salts, Perfluorooctanoic acids C8F15O2X (X = H, NH4, and Metal salts), all members	パーフルオロオクタン酸とその塩 C8F15O2X (X = H, NH4、金属塩)		D	In January 2006, the EPA created a Voluntary Stewardship Program to reduce facility emissions and product content of PFOA, its higher homologues, and related chemicals including precursors on a global basis by 95 percent no later than year-end 2010, and t	0.1% by mass in components made from fluoropolymers. PFOA is primarily used in the manufacture of fluoropolymers as a polymerization aid. It is not expected to be present at greater than trace levels in the final components made from
95	Phenol	フェノール	108-95-2	D	EU-R 1272/2008 /EEC	
96	Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethlethyl)-	2-(2H-1,2,3-ベンゾトリアゾール-2-イル)-4,6-ジ-tert-ブチルフェノール	3846-71-7	P	Japan (Chemical Substances control Law)	
97	Phenol, 2,4,6-tris(1,1-dimethylethyl)-	tert-2,4,6-トリブチルフェノール	732-26-3	D	Japan (Chemical Substances control Law)	
98	Phenol, 2-(5-chloro-2H-benzotriazol-2-yl)-4,6-bis(1,1'-dimethylethyl)-	2,4-ジ-tert-ブチル-6-(5-クロロ-2H-1,2,3-ベンゾトリアゾール	3864-99-1	D	Japan (Chemical Substances control Law) Type I Monitoring Chemical Substance	Any intentionally added content must be reported
99	Phenylendiamines and its salts, all members	フェニレンジアミンとその塩		D	EU-R 1272/2008 /EEC EU-D 76/769/EEC Japan (Chemical Substances control Law)	
100	Phosphonium, triphenyl(phenylmethyl)-, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)		75768-65-9	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
101	Phosphoric acid tributylester	リン酸トリブチル	126-73-8	D	December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental Protection Ac t, 1999 (CEPA, 1999).. It has got limited evidence	0.1%, Report any intentionally added content. No testing required.
102	Phosphoric acid, tris(2-methylphenyl) ester	トリ-o-クレジルリン酸	78-30-8	D	1272/2008 /EWG, toxic and dangerous for the environment	
103	Phthalates, selected	選択されたフタル酸類		D	EU-D 76/769/EEC	
104	Polyamine Curing Agents, selected	ポリアミン硬化剤		D	Not currently regulated but releasable hexamines are relevant to vehicle interior air quality	
105	Polybrominated biphenyls (PBB), all members	ポリ臭化ビフェニル(PBB)		P	EU Commission Regulation 552/2009 (REACH Annex XVII)	
106	Polybrominated diphenyl ethers (PBDE), all members	ポリ臭化ジフェニルエーテル(PBDE)		D/P	EU-D 2003/11/EC	
107	Polybrominated Terphenyls (PBT), all members	ポリ臭化ターフェニル(PBT)		D		
108	Polychlorinated Biphenyls (PCB), all members	ポリ塩化ビフェニル (PCB)		P	EU-D 76/769/EEC	0.005%
109	Polychlorinated Naphthalenes, all members	ポリ塩化ナフタレン		D	Japan (Chemical Substances control Law)	
110	Polychlorinated Terphenyls (PCT), all members	ポリ塩化ターフェニル（PCT)		P	ChemVerbotsV	0.001%
111	Polycyclic aromatic hydrocarbons (PAH; PCAH) in extender oils and extender oils in	エキステンダー油とタイヤのエキステンダー油の選択された多環式芳香族炭化水素(PAH;PCAH)		P	EU-D 2005/69/ EC	1 PPM for Benzo(a)Pyrene and 10 PPM for the sum of all PAHs listed below
112	Propanol, 2-methoxy-	2-メトキシ-1-プロパノール	1589-47-5	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
113	Radioactive substances (including scrap metal contaminants), all members	放射性物質 (スクラップ金属のコンタミを含む)		D	Strahlenschutzverordnung (StrSchV)	Above Background Radiation
114	Selenium and its compounds, all members	セレンとその化合物		D	Japan (Waste Disposal and Cleansing Law)	
115	Silica, Crystalline	結晶性シリカ	14808-60-7	D	IARC Group 1 Carcinogen, US National Toxicology Program Probable Human carcinogen	any intentionally added content

No.	Substance（物質名）	物質名（和名：ミツバ追記）	CAS-No.	Classi-fication（管理区分）	Source(Legal requirements, regulations)、specified condition（法的必要条件、法規定、特定条件）	Threshold（閾値）
116	Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, reaction products with ammonia, octamethylcyclotetrasiloxane and silica		68937-51-9	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
117	Siloxanes and Silicones, di-Me, hydrogen-terminated	両末端H ポリジメチルシロキサン	70900-21-9	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
118	Siloxanes and Silicones, Me 3,3,3-trifluoropropyl, Me vinyl,hydroxy-terminated		68952-02-3	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
119	Sodium azide	アジ化ナトリウム	26628-22-	D	Pyrotechnical compound	
120	Styrene (Vinyl benzene)	スチレン (ビニルベンゼン)	100-42-5	D	EU Risk Assessment	
121	Styrene oxide (Epoxy styrene)	酸化スチレン(エポキシスチレン)	96-09-3	D	EU-R 1272/2008 /EEC	
122	Sulfur Hexafluoride	六フッ化硫黄	2551-62-4	P	Substance of concern due to global warming potential	
123	Tetrabromobisphenol A	テトラブロモビスフェノールA	79-94-7	D	EU risk assessment	
124	Tetrachlorobenzene, all members	テトラクロロベンゼン	12408-10-5, 84713-12-2	P	Prohibition of Certain Toxic Substances Regulations, 2005 (SOR/SOR/2005-41. Published in Canada Gazette Part II, 2006-11-29 Vol. 140, No. 24	Any intentionally added content
125	Methane, tetrafluoro-	テトラフルオロメタン	75-73-0	P	Statutory Order no. 552 of 2 July 2002 of the Danish Ministry of the Environment	
126	Thallium and its compounds, all members	タリウムおよびその化合物		D	EU-R 1272/2008 /EEC	
127	Thioperoxydicarbonic diamide ([(H2N)C(S)]2S2), tetramethyl-	テトラメチルチウラムジスルフィド	137-26-8	D	Japan:(Waste Disposal and Cleaning Law)	
128	Toluene	トルエン	108-88-3	D	EU Directives 1272/2008 /EEC, 76/769/EEC, Toxic for reproduction-Category 3. Possible risk of harm to the unborn child.	
129	o-Toluidine generating substances, selected	o-トルイジンを発生させる物質	95-53-4	D	EU-R 1272/2008 /EEC, 76/769/EEC	1.5%
130	Tris(2-chloroethyl)phosphate	リン酸トリス(2-クロロエチル)	115-96-8	D	EU-R 1272/2008 /EEC	
131	Trichlorophenol and its salts, all members	トリクロロフェノールとその塩		D	EU-R 1272/2008 /EEC	
132	Trichloropropane (1,2,3 - Trichloropropane)	トリクロロプロパン (1,2,3 - トリクロロプロパン)	96-18-4	D	EU-R 1272/2008 /EEC	
133	Trimethylphosphate	リン酸トリメチル	512-56-1	D	EU-D 76/769/EEC	
134	Triorganotin compounds all members	トリ有機スズ化合物		P	EU-D 76/769/EEC EU-R 1272/2008 /EEC Chemical Substances Control Law in Japan	
135	Triphenylphosphate	リン酸トリフェニル	115-86-6	D	Flame retardant under review	
136	Tris-(1-aziridinyl) phosphine oxide	トリス-(1-アジリジニル)ホスフィンオキシド	545-55-1	P	EU-D 83/264/EEC	
137	Tris(2,3-dibromopropyl)phosphate [TRIS]	リン酸トリス（2,3-ジブロモプロピル） [TRIS]	126-72-7	P	EU-D 79/663/EEC	
138	Vanadium(V) oxide	五酸化バナジウム	1314-62-1	D	Canada Gazette Vol. 140, No. 49 - December 9, 2006 (Canadian Challenge). The Canadian Challenge is regulated under the Part 5, Section 71, of the Canadian Environmental	0.1%, Report any intentionally added content. No testing required.
139	Vinyl chloride (Monomer)	塩化ビニル(モノマー)	75-01-4	P	EU-R 1272/2008 /EEC	Threshold 5ppm vinyl chloride monomer in materials