

DDS2004	Restrictions on the use of substances of environmental concern as materials or product components			
	Established	Nov. 11, 1999	Revision No. 17	Sep. 5, 2023

1. Scope

This standard applies ⁽³⁾ to DENSO brand products and the parts, materials, and indirect materials (excluding customer-supplied parts) ⁽¹⁾ developed/designed, procured, manufactured, and sold by DENSO CORPORATION and the DENSO group companies (hereinafter referred to as “DENSO”), and covers:

- (1) Chemical substances (prohibited substances) ⁽²⁾ that shall not be contained over the threshold value, and
- (2) Chemical substances (declarable substances) ⁽²⁾ that shall be declared when they are contained in levels over the threshold value.

In addition, in this standard, these chemical substances shall be referred to as “substances of environmental concern”.

Furthermore, see Section 5 for the definition of “containing” in this standard.

Notes (1) This standard also applies to parts, materials, and indirect materials, which have changed due to engineering changes, process changes, and supplier changes.

- (2) If reactive materials and indirect materials, such as thermosetting resins, adhesives, and coating materials are purchased, this applies to the material composition after the reaction. For suppliers, this shall apply to the material composition after the reactions are completed according to the supplier standard processing conditions.

In this standard, indirect materials refer to chemical agents used in the manufacturing processes excluding components of products or parts, and this term is applied when they adhere or residually exist in the product.

- (3) This standard mainly prescribes the restrictions on the use of substances of environmental concern, but also provision related to other environmental regulation. (Restrictions on use of materials, etc.) △

2. Duties

DENSO and its suppliers have a duty to conform to the items covered in this standard, regulations concerning the restrictions on the use of substances of environmental concern, and any new prohibitions and restrictions that result from consideration of regulations.

3. Compliance items

Table 1 shows the items to be complied with by DENSO and its suppliers.

Table 1 Items to be complied with by DENSO and its suppliers



	Compliance item	Responsibility	
		DENSO	Supplier
(1)	<ul style="list-style-type: none"> The parts, materials, and indirect materials used for DENSO brand products shall not contain the “prohibited substances” set out in Section 4. 	YES	YES
(2)	<ul style="list-style-type: none"> If any parts, materials, and indirect materials delivered from the suppliers to DENSO contain any of the “prohibited substances” and “declarable substances” specified in Section 4 beyond the specified threshold value, this shall be declared without fail to DENSO. The suppliers shall declare to DENSO promptly if it is found later that a relevant substance was contained. “Non-disclosure due to confidentiality” is not allowed in these cases. 	–	YES
(3)	<ul style="list-style-type: none"> If a “prohibited substance” exceeds the specified threshold value, and a changeover to an alternative substance is required, the supplier and DENSO shall carry out sufficient discussions regarding the changeover to the alternative substance. 	YES	YES
	<ul style="list-style-type: none"> Suppliers changing over to an alternative substance shall first perform sufficient quality verification tests, and shall obtain the permission of DENSO. 	(YES)	YES
(4)	<ul style="list-style-type: none"> If the changeover to the alternative substance cannot be approved by customer, it is acceptable to use a part which contains “prohibited substances” as special exemption, after getting agreement with related divisions. In this case, the part shall be designated as prohibition of new use in design (see DDS1264 for details), in order to restrict the use for other new products. 	YES	–
(5)	<ul style="list-style-type: none"> DENSO products and parts shall all satisfy the requirements specified in this standard. If requirements specified in customer standards are different from or more stringent than those in this standard (if the changeover of a restricted substance is earlier than the one specified in DENSO standard or if the threshold value for the restricted substance is more stringent than the one specified in DENSO standard, and others), the customer requirement shall be followed. 	YES	–
(6)	<ul style="list-style-type: none"> DENSO brand products shall not use the “prohibited materials” set out in Section 8. 	YES	YES

4. Classifications of substances of environmental concern

The classifications of substances of environmental concern are shown in Table 2.

Table 2 Classifications of substances of environmental concern ⁽⁴⁾



Classification	Definition	Applicable substance	Handling policy
Prohibited substance	Substances that shall not be contained in products, or in the parts, materials, and indirect materials that are to be used in these products	Substances classified as "P" specified in GADSL ⁽⁵⁾	Immediately prohibit the use. <ul style="list-style-type: none"> Regarding lead, cadmium and hexavalent chromium to be contained in products for category M1 and N1 vehicles, the use of these substances shall be prohibited immediately in all regions, except for those exemptions shown in Appendix table 5 [EU ELV Directive ⁽⁶⁾ ANNEX II]. The use of these substances in the parts for other than category M1 and N1 vehicles shall also be prohibited if requested by customer. If Appendix table 5 sets out an expiry date for an exemption, the changeover shall be completed by one year before this expiry date. The products destined for EU to which EU RoHS Directive ⁽⁷⁾ is applied shall comply with the Directive. The use of prohibited substances shall be prohibited immediately except for exempted application. Lead used in non-vehicle commercial products/aftermarket products sold by DENSO shall be prohibited ⁽⁸⁾ according to the type of product subject to regulation, except for applications exempted in Appendix table 5 or the EU RoHS Directive. Mercury shall be prohibited in accordance with Appendix table 2.
		Substances classified as "D/P" specified in GADSL and fell under prohibited application.	
		Substances specified in Appendix table 2 (Prohibited substance list of DENSO)	
Declarable substance	Substances that shall be declared to DENSO when they are contained in products, or in the parts, materials, and indirect materials that are to be used in these products	Substances specified in GADSL, and excluding "Prohibited substances" ⁽⁹⁾⁽¹⁰⁾ mentioned above	The suppliers shall declare it to DENSO.

Notes (4) As a rule, the management of substances of environmental concern shall follow Table 2. However, the substances that are prohibited by regulations but are not considered to be used in automotive products, such as not listed in GADSL, are listed in Appendix table 3 (Prohibited substance list other than those listed in Table 2). If a substance which is not prohibited in Table 2 and is listed in Appendix table 3 is found to be contained, it shall be promptly declared to DENSO (epd-m4@jp.denso.com). The material data sheet (MDS) does not need to be submitted for substances in Appendix table 3.

- Notes (5) “Global Automotive Declarable Substance List (GADSL)” published by “Global Automotive Stakeholder Group (GASG)”. See the latest GADSL (<https://www.gadsl.org>). Appendix table 1 shows GADSL items.
- (6) Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of-life vehicles, and EU Committee/Council decisions
[Original texts are being published in EU Committee web site: URL (as of June 2023) is as follows: https://ec.europa.eu/environment/topics/waste-and-recycling/end-life-vehicles_en] EU ELV Directive Exemptions List (ANNEX II) in both Appendix tables 5 and 6 is ANNEX II eleventh revision (year 2023). Check the above URL to ensure the latest revision.
- (7) Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment
[Original texts are being published in EU Committee web site: URL (as of June 2023) is as follows: https://environment.ec.europa.eu/topics/waste-and-recycling/rohs-directive_en]
- (8) In principle, the use of lead in vehicle products shall be prohibited from July 2023 for Europe and South Korea and from April 2024 for other countries/regions. △
- (9) If the products of DENSO contain an SVHC, regardless of whether it is listed in GADSL, it shall be declared based on IMDS rules.
- (10) In order to control the increase in man-hours for updating material data sheet (MDS) in the whole supply chain due to the increase of restricted substances in the future and to comply promptly with regulations, substances not specified in the GADSL shall be reported as much as possible by taking into consideration of the protection of technical know-how, etc. △

5. Definition of “containing”

If the percentage content ⁽¹¹⁾ of a substance of environmental concern exceeds the threshold values specified in GADSL (if there is no description in column Reporting Threshold, threshold is 0.1%) or Appendix table 2 and Appendix table 3, this substance is deemed to “containing”. ⁽¹²⁾

Notes (11) The percentage content here is the ratio (%) of the “mass of the applicable substance of environmental concern” to the “homogeneous material mass containing the applicable substance of environmental concern”.

- (12) Even if the percentage content of a substance of environmental concern does not exceed the threshold value, the percentage content on and below the threshold shall be managed as necessary to guarantee that the percentage content of the substance is below the threshold value. △

6. Check for containing substances of environmental concern

Suppliers shall declare to DENSO after both creating material data sheet (MDS) and confirming conformance to this standard.

Based on a supplier declaration, DENSO shall create a Products MDS on the basis of the procedures defined in [DDS1297-100](#), and check for containing substances of environmental concern.

When this standard or GADSL is revised, suppliers and DENSO respectively shall check for containing these substances described in this standard regarding existing products, parts, materials, and indirect materials.

7. Handling of spare parts for old type vehicles

There are cases where some of spare parts supplied after discontinuation of mass production of vehicles (hereinafter referred to as “spare parts for old type vehicles”) are exempt from prohibited substances in Table 2.

However, regarding these exempt spare parts for old type vehicles (ones whose remaining time is less than one year if the expiry date of exemption is set), drawings of such parts shall be discarded ⁽¹³⁾ ⁽¹⁴⁾ as far as possible in accordance with [DDS0103](#) so that the parts are prevented from being diverted to new products.

Notes (13) When DENSO considers an alternative part for a spare part for old type vehicle in accordance with [DDS0110](#) or determines collective production for storing parts of production discontinuation, DENSO shall confirm that the part does not conflict with regulations expected in the future in accordance with [DDS1297-002](#). If the part may conflict with the regulations, adoption of alternative part or collective production for storing parts of production discontinuation shall not be allowed.

(14) DENSO group companies outside Japan shall follow procedures prescribed by each company.

Remarks Under the provisions of [DDS1297-100](#), DENSO shall judge at the product design stage whether a product, part, material, or indirect material to be used contains prohibited substances, when an existing spare part for an old type vehicle is diverted to a new product.

8. Materials that DENSO prohibits their use

See Appendix table 4 for materials that DENSO prohibits their use.

△

9. Instruction to comply with this standard in product and part drawings, etc.

(1) DENSO shall, as a rule, clearly instruct suppliers to comply with this standard by indicating the note shown in Table 3 on all of DENSO product and part drawings, material standards, material specification notices, etc.

This shall not apply to drawings that DENSO submits to the customer and drawings of customer-supplied parts. However, regarding restrictions on the use of substances of environmental concern, if a customer instructs DENSO on customer-specified indication, DENSO shall follow the instructions. Of these drawings which are instructed by a customer, if they are drawings used as both approval drawings and in-company drawings of DENSO format and DENSO has permission of a customer, the following note shall be also indicated together with the customer instruction.

Table 3 Note to be indicated on product and part drawings, etc.

	Note
Japanese	本製品の材料・環境負荷物質の使用については、環境負荷物質の材料及び製部品への使用制限に関する基準 DDS2004 を満足すること。
English	THIS PART SHALL CONFORM TO THE STANDARD DDS2004 OF "RESTRICTIONS ON USE OF SUBSTANCES OF ENVIRONMENTAL CONCERN AS MATERIALS OR PRODUCT COMPONENTS" REGARDING USE OF THE MATERIALS AND SUBSTANCES OF ENVIRONMENTAL CONCERN.

(2) Even existing product and part drawings, material standards, and material specification notices without the note shown in Table 3 shall comply with the items specified in this standard.

(3) When a revision is required in existing product or part drawings, material standards, or material specification notices for some reason, the note specified in (1) above shall be included.

(4) Even if DENSO within or outside Japan does not use material standards or material specification notices, the group company shall include the same note in the documents (slips etc.) to be exchanged with the supplier when new material trade is started.

10. Actions for certification

For regulations, such as the EU RoHS Directive, which require certification in addition to the prohibition on the use of specified substances, DENSO engineering divisions take relevant actions by following [DDS0064](#). If the certification procedures are unclear, consult with Engineering Promotion Div.

△

11. Other

If a supplier has reported to the procurement division, business unit procurement division, engineering division, etc. that a prohibited substance is contained in a product delivered to DENSO from the supplier, DENSO shall take appropriate action through the sufficient discussion with the supplier.

Appendix table 1 GADSL items

Item	Reference translation
Substance	(Japanese is omitted in DDS English version.)
Classification	
Reason Code	
Source (Legal requirements, regulations)	
Effective date (Legal requirements, regulations)	
Generic examples	
Reporting Threshold	

- Remarks
- See the latest GADSL (URL: <https://www.gadsl.org>) for the definitions of the terms shown in Appendix table 1.
 - In GADSL, when there is no description in column Reporting Threshold, threshold is 0.1%.

Appendix table 2 Prohibited substance list of DENSO

No.	Substance group	Substance name	CAS RN	Contents of prohibition				Related legal requirements and regulations	Revision No.	For reference GADSL (2023Ver.1.0)	
				Application	Destination region	Threshold and others	Effective date			GADSL No.	GADSL Classification
1	Arsenic and its compounds	Arsenic trioxide	1327-53-3	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	17	D/P
2		Arsenic pentoxide	1303-28-2	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	17	D/P
3		Arsenic acid	7778-39-4	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	17	D/P
4	Asbestos	Asbestos minerals, all members	1332-21-4, and all	All applications	All regions	Prohibit any intentionally added content.	Immediately	Industrial Safety and Health Law (Japan)	9	19	D/P
5	Benzene, 1-(1,1-dimethylethyl)-3,5-dimethyl-2,4,6-trinitro-	Benzene, 1-(1,1-dimethylethyl)-3,5-dimethyl-2,4,6-trinitro- (Musk xylene)	81-15-2	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	23	D/P
6	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	(1) Prohibit containing over 0.1wt%. (2) Prohibit any intentionally added content.	Shipment from DENSO on and after (1) June 1, 2023 (2) Sept. 30, 2023	EU REACH Regulation Stockholm Convention on POPs	17	44	D
7	Trichloroethylene	Trichloroethylene	79-01-6	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	56	D/P
8	MCCP	Alkanes, C ₁₄₋₁₇ , chloro	85535-85-9	All applications	All regions	Prohibit containing SCCP over 1wt%	Immediately	Stockholm Convention on POPs	17	58	D
9	HBCD	rel-(1R, 2S, 5R, 6S, 9R, 10S)-1,2,5,6,9,10-Hexabromocyclododecane	4736-49-6	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	9	67	D/P
		rel-(1R, 2S, 5R, 6S, 9S, 10R)-1,2,5,6,9,10-Hexabromocyclododecane	65701-47-5						9		D/P
		(1R, 2R, 5R, 6S, 9S, 10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-17-7						9		D/P

Appendix table 2 Prohibited substance list of DENSO (Continued)

No.	Substance group	Substance name	CAS RN	Contents of prohibition				Related legal requirements and regulations	Revision No.	For reference GADSL (2023Ver.1.0)	
				Application	Destination region	Threshold and others	Effective date			GADSL No.	GADSL Classification
9	HBCD	(1R, 2R, 5R, 6S, 9R, 10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-18-8	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	9	67	D/P
		(1R, 2S, 5S, 6R, 9S, 10S)-1,2,5,6,9,10-Hexabromocyclododecane	138257-19-9						9		D/P
		(1R, 2S, 5S, 6S, 9S, 10R)-1,2,5,6,9,10-Hexabromocyclododecane	169102-57-2						9		D/P
		(1R, 2R, 5S, 6R, 9R, 10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-15-5						9		D/P
		(1R, 2S, 5R, 6S, 9S, 10S)-1,2,5,6,9,10-Hexabromocyclododecane	678970-16-6						9		D/P
		(1R, 2R, 5R, 6S, 9S, 10R)-1,2,5,6,9,10-Hexabromocyclododecane	678970-17-7						9		D/P
10	4,4' - Diaminodiphenylmethane (MDA)	4,4' - Diaminodiphenylmethane (MDA)	101-77-9	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	71	D/P
11	2,4 Dinitrotoluene	2,4-dinitrotoluene (2,4-DNT)	121-14-2	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	81	D/P
12	Diorganotin compounds	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after May 1, 2024	EU REACH Regulation	16	82	D/P
		Reaction mass of DOTE/MOTE	-	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after May 1, 2024	EU REACH Regulation	16		
13	Dechlorane Plus	1,6,7,8,9,14,15,16,17,18,18-Dodecachloropentacyclo[12.2.1.1*6,9*0*2,13*0*5,10*]octadeca-7,15-diene	13560-89-9, 135821-74-8, 135821-03-3	All applications	All regions	Prohibit any intentionally added content.	Shipment from DENSO on and after September 30, 2023	Stockholm Convention on POPs	16	93	D

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Appendix table 2 Prohibited substance list of DENSO (Continued)

No.	Substance group	Substance name	CAS RN	Contents of prohibition				Related legal requirements and regulations	Revision No.	For reference GADSL (2023Ver.1.0)	
				Application	Destination region	Threshold and others	Effective date			GADSL No.	GADSL Classification
14	Phenol, Isopropylated Phosphate (3:1)	Phenol, Isopropylated Phosphate (3:1)	68937-41-7	Products subject to the TSCA ▪ Motor vehicle etc. are excluded ⁽¹⁵⁾	<Mass produced parts> All regions <Spare parts for old type vehicles> NA	Prohibit containing over 0wt%.	Shipment from DENSO on and after May 1, 2024	Toxic Substances Control Act of 1976 (TSCA)	16	122	D
15	Tetraethyllead	Tetraethyllead	78-00-2	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after May 1, 2024	EU REACH Regulation	16	123	D/P
16	Mercury and its compounds	Mercury and its compounds, all members	7439-97-6, 55728-51-3, and all	Application except the following cell	All regions	Prohibit containing over 0.1wt%. Prohibit any intentionally added content.	Immediately	EU ELV Directive	9	124	D/P
				Cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for electronic displays	All regions	Prohibit containing over 0.1wt%. Prohibit use over 3.5 mg per one fluorescent lamp.	Immediately. Exclude vehicles type approved before July 1, 2012 and spare parts for these vehicles. Manufacture and import are prohibited on and after January 1, 2018				
17	Nonylphenol ethoxylates, -OH terminated	Nonylphenol ethoxylates, -OH terminated, all members	20427-84-3, 27942-27-4, 156609-10-8, 26264-02-8, 26571-11-9, 27177-05-5, 7311-27-5, 9016-45-9, 14409-72-4, 20636-48-0, 26027-38-3, 68412-54-4, 127087-87-0, 37205-87-1, 104-35-8, 34166-38-6, and all	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after August 1, 2020	EU REACH Regulation	16	150	D/P

Note (15) "Motor vehicle etc." means transportation equipment that is propelled or drawn by mechanical power, such as cars, trucks, motorcycles, boats, and construction, agricultural, and industrial machinery. In addition, regardless of the "Application" and "Destination region", it shall apply when requested by customers of DENSO.

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Appendix table 2 Prohibited substance list of DENSO (Continued)

No.	Substance group	Substance name	CAS RN	Contents of prohibition				Related legal requirements and regulations	Revision No.	For reference GADSL (2023Ver.1.0)				
				Application	Destination region	Threshold and others	Effective date			GADSL No.	GADSL Classification			
18	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	PFHxS and its salts, PFHxS related substances	Refer to GADSL	All applications	All regions	PFHxS and its salts: 25 ppb PFHxS related substances: 1000 ppb	Immediately	Stockholm Convention on POPs	16	173, 174, 175	D			
19	Phenol, 2-(2H-benzotriazol-2-yl)-4-(1,1-dimethylethyl)-6-(1-methylpropyl)- (UV 350)	Phenol, 2-(2H-benzotriazol-2-yl)-4-(1,1-dimethylethyl)-6-(1-methylpropyl)- (UV 350)	36437-37-3	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after June 1, 2023	EU REACH Regulation	14	183	D			
20	Phenol, 2-(5-chloro-2H-benzotriazol-2-yl)-4,6-bis(1,1'-dimethylethyl)- (UV 327)	Phenol, 2-(5-chloro-2H-benzotriazol-2-yl)-4,6-bis(1,1'-dimethylethyl)- (UV 327)	3864-99-1	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after June 1, 2023	EU REACH Regulation	14	184	D			
21	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	9036-19-5, 2315-67-5, 2315-61-9, 9002-93-1, 2497-59-8, 9081-99-6, and all	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after August 1, 2020	EU REACH Regulation	12	190	D/P			
22	Phthalate	Di(2-ethylhexyl)phthalate (DEHP) [1,2-Benzenedicarboxylic acid, 1,2-bis(2-ethylhexyl) ester]	117-81-7	All applications	<Mass produced parts> All regions	<Mass produced parts> Prohibit containing 0.1wt% and over as the sum of 4 types in the left column, or 1 type.	<Mass produced parts> Shipment from DENSO on and after January 1, 2019	EU REACH Regulation	15	203	D/P			
		Dibutylphthalate (DBP) (1,2-Benzenedicarboxylic acid, 1,2-dibutyl ester)	84-74-2						<Spare parts for old type vehicles> EU		<Spare parts for old type vehicles> When parts meet either conditions, prohibit containing 0.1wt% and over as the sum of 4 types in the left column, or 1 type.	<Spare parts for old type vehicles> Placing on the market after July 7, 2020	15	D/P
		Benzyl butyl phthalate (BBP) [1,2-Benzenedicarboxylic acid, 1-butyl 2-(phenylmethyl) ester]	85-68-7						-Parts whose changeover is requested by customers of motor cycle or agricultural/construction vehicles. -Parts which are sold as DENSO brand products in consumer market.			15	D/P	
		Diisobutylphthalate (DiBP) [1,2-Benzenedicarboxylic acid, 1,2-bis(2-methylpropyl) ester]	84-69-5						(Regarding four wheeled-vehicle and agricultural/construction vehicle, spare parts for old type vehicles are excluded in EU REACH Regulation.)			15	D/P	

Appendix table 2 Prohibited substance list of DENSO (Continued)



No.	Substance group	Substance name	CAS RN	Contents of prohibition				Related legal requirements and regulations	Revision No.	For reference GADSL (2023Ver.1.0)	
				Application	Destination region	Threshold and others	Effective date			GADSL No.	GADSL Classification
22	Phthalate	Diisopentyl phthalate	605-50-5	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after January 1, 2020	EU REACH Regulation	11	203	D/P
		1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6						11		D/P
		1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4						11		D/P
		1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear	84777-06-0						11		D/P
		Bis(2-methoxyethyl) phthalate	117-82-8						11		D/P
		Dipentyl phthalate	131-18-0						11		D/P
		N-pentyl-isopentylphthalate	776297-69-9						11	Not listed in GADSL (REACH SVHC)	
		1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after September 1, 2022	EU REACH Regulation	14	28	D
		Dihexyl phthalate	84-75-3						203	D/P	
		1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate	68648-93-1							D	
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters	68515-51-5	D									
23	Pitch, coal tar, high-temp.	Pitch, coal tar, high-temp.	65996-93-2	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after November 1, 2019	EU REACH Regulation	11	204	D/P

Appendix table 2 Prohibited substance list of DENSO (Continued)

No.	Substance group	Substance name	CAS RN	Contents of prohibition				Related legal requirements and regulations	Revision No.	For reference GADSL (2023Ver.1.0)	
				Application	Destination region	Threshold and others	Effective date			GADSL No.	GADSL Classification
24	PBDE	Decabromodiphenyl ether ('Deca'; Decabromodiphenyl oxide) (Benzene, 1,1'-oxybis[2,3,4,5,6-pentabromo-)	1163-19-5	All applications	All regions	Prohibit containing over 0wt%.	Immediately	Toxic Substances Control Act of 1976 (TSCA) EU POPs Regulation	17	207	D/P
25	Tris(2-chloroethyl) phosphate	Tris(2-chloroethyl)phosphate	115-96-8	All applications	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	9	269	D/P
26	Trixylyl phosphate	Trixylyl phosphate	25155-23-1	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after December 1, 2022	EU REACH Regulation	14	273	D
27	1-bromopropane (n-propyl bromide)	1-bromopropane (n-propyl bromide)	106-94-5	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after January 1, 2020	EU REACH Regulation	11	Not listed in GADSL (REACH SVHC)	
28	Anthracene oil	Anthracene oil	90640-80-5	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after November 1, 2019	EU REACH Regulation	11	Not listed in GADSL (REACH SVHC)	
29	Sodium perborate; perboric acid, sodium salt	Sodium perborate; perboric acid, sodium salt	10332-33-9, 10486-00-7, 12040-72-1, 125022-34-6, 13517-20-9, 37244-98-7, 90568-23-3, 11138-47-9, 15120-21-5	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after December 1, 2022	EU REACH Regulation	14	Not listed in GADSL (include REACH SVHC)	
30	Sodium peroxometaborate	Sodium peroxometaborate	7632-04-4	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after December 1, 2022	EU REACH Regulation	14	Not listed in GADSL (REACH SVHC)	
31	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] (covering any of the individual stereoisomers of [1] and [2] or any combination thereof)	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] (covering any of the individual stereoisomers of [1] and [2] or any combination thereof)	117933-89-8, 186309-28-4, 343934-04-3, 343934-05-4, 676367-02-5, 676367-03-6, 676367-04-7, 676367-05-8, 676367-06-9, 676367-07-0, 676367-08-1, 676367-09-2	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after March 1, 2023	EU REACH Regulation	14	Not listed in GADSL (REACH SVHC)	

Appendix table 2 Prohibited substance list of DENSO (Continued)

No.	Substance group	Substance name	CAS RN	Contents of prohibition				Related legal requirements and regulations	Revision No.	For reference GADSL (2023Ver.1.0)	
				Application	Destination region	Threshold and others	Effective date			GADSL No.	GADSL Classification
32	Formaldehyde, oligomeric reaction products with aniline	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	Not listed in GADSL (REACH SVHC)	
33	Bis(2-methoxyethyl) ether	Bis(2-methoxyethyl) ether	111-96-6	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	Not listed in GADSL (REACH SVHC)	
34	1,2-dichloroethane (EDC)	1,2-dichloroethane (EDC)	107-06-2	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	Not listed in GADSL (REACH SVHC)	
35	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Immediately	EU REACH Regulation	16	Not listed in GADSL (REACH SVHC)	
36	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after May 1, 2024	EU REACH Regulation	16	Not listed in GADSL (REACH SVHC)	
37	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)	93925-00-9, 1471311-26-8 and all	All applications Spare parts for old type vehicles are excluded at the moment.	All regions	Prohibit containing over 0.1wt%.	Shipment from DENSO on and after May 1, 2024	EU REACH Regulation	16	Not listed in GADSL (REACH SVHC)	

Appendix table 3 Prohibited substance list other than those listed in Table 2

No.	Substance group	Substance name	CAS RN	Contents of prohibition				Related legal requirements and regulations	Revision No.
				Application	Destination region	Threshold and others	Effective date		
1	Aldrin	Aldrin	309-00-2	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16
2	Alpha hexachlorocyclohexane	Alpha hexachlorocyclohexane	319-84-6	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16
3	Beta hexachlorocyclohexane	Beta hexachlorocyclohexane	319-85-7	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16
4	Chlordane	Chlordane	57-74-9, 5103-71-9, 5103-74-2	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	17
5	Chlordecone	Chlordecone	143-50-0	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16
6	Dicofol	Dicofol	115-32-2, 10606-46-9	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16
7	Dieldrin	Dieldrin	60-57-1, 128-10-9	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16
8	Endrin	Endrin	72-20-8	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16
9	Heptachlor	Heptachlor	76-44-8	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16

Appendix table 3 Prohibited substance list other than those listed in Table 2 (Continued)

No.	Substance group	Substance name	CAS RN	Contents of prohibition				Related legal requirements and regulations	Revision No.
				Application	Destination region	Threshold and others	Effective date		
10	Lindane	Lindane	58-89-9	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16
11	Endosulfan	Endosulfan	115-29-7, 33213-65-9, 959-98-8	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16
12	Toxaphene	Toxaphene	8001-35-2	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan)	16
13	DDT	DDT	50-29-3, 789-02-6	All applications	All regions	Prohibit any intentionally added content.	Immediately	Stockholm Convention on POPs, Chemical Substance Control Law (Japan) Prohibition of Certain Toxic Substances Regulations, 2012 (Canada)	16
14	N,N'-Ditolyl-p-phenylenediamine	N,N'-Ditolyl-p-phenylenediamine, N-Tolyl-N'-xylyl-p-phenylenediamine, or N,N'-Dixylyl-p-phenylenediamine	620-91-7, 15017-02-4, 27417-40-9, 28726-30-9, 68953-84-4, 70290-05-0	All applications	All regions	Prohibit any intentionally added content.	Immediately	Chemical Substance Control Law (Japan)	16
15	PCTP	Pentachlorobenzenethiol(PCTP)	133-49-3	All applications	All regions	Prohibit containing over 1wt%.	Immediately	TSCA Section 6(h)	16
16	Chloromethyl methyl ether	Chloromethyl methyl ether that has the molecular formula C2H5ClO	107-30-2	All applications	All regions	Prohibit any intentionally added content.	Immediately	Prohibition of Certain Toxic Substances Regulations, 2012 (Canada)	16
17	(4-Chlorophenyl) cyclopropylmethanone	(4-Chlorophenyl) cyclopropylmethanone, O-[(4-nitrophenyl)methyl] oxime that has the molecular formula C17H15ClN2O3	94097-88-8	All applications	All regions	Prohibit any intentionally added content.	Immediately	Prohibition of Certain Toxic Substances Regulations, 2012 (Canada)	16

DENSO DESIGN STANDARD

DDS2004

Appendix table 3 Prohibited substance list other than those listed in Table 2 (Continued)

No.	Substance group	Substance name	CAS RN	Contents of prohibition				Related legal requirements and regulations	Revision No.
				Application	Destination region	Threshold and others	Effective date		
18	-	Substances restricted by EU REACH Regulation ANNEX XVII ⁽¹⁶⁾	By the condition of each entry	By the condition of each entry	All regions	By the condition of each entry	Immediately	EU REACH Regulation	16
19	-	Substances restricted by the European BPR ⁽¹⁷⁾	(17)	Products processed to add biocidal functionality	All regions	It depends on the status of the application for approval of the active substance in the relevant product type. • Prohibited if the application for approval has not been filed and approval has been rejected. • Otherwise available.	Immediately	EU BPR	16
20	-	Lead and lead compounds restricted by Danish law. ⁽¹⁸⁾	Refer to GADSL.	By Danish law	All regions	Prohibit containing over 0.01wt%.	Immediately	Danish law (Statutory Order no. 1082 of 13 September 2007)	16
21	Gamma hexachlorocyclohexane	Gamma hexachlorocyclohexane	608-73-1	All applications	All regions	Prohibit any intentionally added content.	Immediately	EU POPs Regulation	17
22	Endosulfan sulfate	Endosulfan sulfate	1031-07-8	All applications	All regions	Prohibit any intentionally added content.	Immediately	Environmental Protection Law of the People's Republic of China; New Pollutant Control Action Plan, 2023	17
23	-	Substances restricted by the South Korea BPR ⁽¹⁹⁾	(19)	Products treated to add function for removal, etc. of harmful organisms.	All regions	It depends on the status of the application for approval of the active substance in the relevant type of biocidal products. • Only approved active substance available.	Immediately	South Korea BPR	17

Notes (16) For the applicable substances, see the website of the European Chemicals Agency (URL: <https://echa.europa.eu/substances-restricted-under-reach>).

(17) The applicable substances are defined by the provisions of EU BPR [Biocidal Products Regulation (EU) No. 528/2012]. The products of DENSO cover the following product types:

Product type 7 - film preservative, Product type 8 - wood preservative, Product type 9 - fiber, leather, rubber and polymerized materials preservatives.

For information on the status of CAS RNs for active substances and applications for approval by product type, see the website of the European Chemicals Agency (URL: <https://echa.europa.eu/information-on-chemicals/biocidal-active-substances>).

(18) A reference English translation is available on the website of the Ministry of Environment of Denmark.

(URL: <https://eng.mst.dk/media/mst/69075/Blybekendtgørelse - BEK nr 1082 af 2007 09 13 oversat til engelsk.pdf>)

There are the exemptions lists. (Reference: Lead compounds in electronic components are exempted. Metallic lead in solders for electrical connections is not applicable.)

(19) The applicable substances are defined by the provisions of South Korea BPR (CONSUMER CHEMICAL PRODUCTS AND BIOCIDES SAFETY CONTROL ACT, ENFORCEMENT DECREE and ENFORCEMENT RULE).

The products of DENSO cover the following biocidal product type: 3-b film preservatives, 3-c fiber and leather preservatives, 3-d wood preservatives.

For the applicable substances, see the regulation of South Korea BPR. For information on the approval status of biocidal product type, see the website of CHEMP (URL: <https://chemp.me.go.kr/cpms/biocidalMtr/confmReqst/nbm000List.do>) (Korean only).

Appendix table 4 Prohibited material list of DENSO

No.	Material group	Material name	Contents of prohibition	Related legal requirements and regulations	Revision No.
1	PVC PVDC	Polyvinyl chloride (PVC) Polyvinylidene chloride (PVDC)	Packing materials used for parts ⁽²⁰⁾ for which DENSO customer requests the changeover. Detailed effective date will be separately instructed by DENSO.	Standards for Quality and Structure of Packing Materials in South Korea	17

Note (20) It is intended to protect the value and condition of products or to preserve their quality in the process of transportation and storage. Items that are delivered to customers (manufacturers, dealers, and users) in the state of being attached to the product at the time of shipment and are removed by the dealer, user or in the assembly process of manufacturer are targets.

Appendix table 5 EU ELV Directive Exemptions List [ANNEX II eleventh revision (2023)]
<Reference translation ⁽²¹⁾> and IMDS application code



Appendix table 5 is a reference translation (Japanese) of Appendix table 6, so it is omitted.

Note (21) Appendix table 5 is a reference translation.

Appendix table 6 EU ELV Directive Exemptions List [ANNEX II eleventh revision (2023)] <Original> and IMDS application code



EU ELV Directive Exemptions List (ANNEX II)			IMDS Application Code
(Exemptions for applications of prohibited substances) Materials and components	Scope and expiry date of the exemption	To be labelled or made identifiable in accordance with Article 4(2)(b)(iv)	
Lead as an alloying element			
1(a). Steel for machining purposes and batch hot dip galvanised steel components containing up to 0.35 % lead by weight			69
1(b). Continuously galvanised steel sheet containing up to 0.35 % lead by weight	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles		70
2(a). Aluminium for machining purposes with a lead content up to 2 % by weight	As spare parts for vehicles put on the market before 1 July 2005		71
2(b). Aluminium with a lead content up to 1.5 % by weight	As spare parts for vehicles put on the market before 1 July 2008		
2(c)(i). Aluminium alloys for machining purposes with a lead content up to 0.4 % by weight	Vehicles type-approved before 1 January 2028 and spare parts for these vehicles		72
2(c)(ii). Aluminium alloys not included in entry 2(c)(i) with a lead content up to 0.4 % by weight ⁽²²⁾	This exemption shall be reviewed in 2024.		
3. Copper alloy containing up to 4 % lead by weight	This exemption shall be reviewed in 2025.		3
4(a). Bearing shells and bushes	As spare parts for vehicles put on the market before 1 July 2008		52
4(b). Bearing shells and bushes in engines, transmissions and air conditioning compressors	As spare parts for vehicles put on the market before 1 July 2011		51
Lead and lead compounds in components			
5(a). Lead in batteries in high-voltage systems ⁽²³⁾ that are used only for propulsion in M1 and N1 vehicles	Vehicles type-approved before 1 January 2019 and spare parts for these vehicles	X	73
5(b)(i). Lead in batteries: (1) used in 12 V applications (2) used in 24 V applications in special purpose vehicles as defined in Article 3 of Regulation (EU) 2018/858 of the European Parliament and of the Council	This exemption shall be reviewed in 2025.	X	85
5(b)(ii). Lead in batteries used in applications not included in entry 5(a) or entry 5(b)(i)	Vehicles type approved before 1 January 2024 and spare parts for these vehicles	X	86
6. Vibration dampers	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles	X	8
7(a). Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings	As spare parts for vehicles put on the market before 1 July 2005		10
7(b). Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings containing up to 0.5 % lead by weight	As spare parts for vehicles put on the market before 1 July 2006		
7(c). Bonding agents for elastomers in powertrain applications containing up to 0.5 % lead by weight	As spare parts for vehicles put on the market before 1 July 2009		48
8(a). Lead in solders to attach electrical and electronic components to electronic circuit boards and lead in finishes on terminations of components other than electrolyte aluminium capacitors, on component pins and on electronic circuit boards	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles	X ⁽²⁴⁾	53
8(b). Lead in solders in electrical applications other than soldering on electronic circuit boards or on glass	Vehicles type-approved before 1 January 2011 and spare parts for these vehicles	X ⁽²⁴⁾	54
8(c). Lead in finishes on terminals of electrolyte aluminium capacitors	Vehicles type-approved before 1 January 2013 and spare parts for these vehicles	X ⁽²⁴⁾	55
8(d). Lead used in soldering on glass in mass airflow sensors	Vehicles type-approved before 1 January 2015 and spare parts of such vehicles	X ⁽²⁴⁾	56
8(e). Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)	This exemption shall be reviewed in 2024.	X ⁽²⁴⁾	57
8(f)(i). Lead in compliant pin connector systems	Vehicles type-approved before 1 January 2017 and spare parts for these vehicles	X ⁽²⁴⁾	67
8(f)(ii). Lead in compliant pin connector systems other than the mating area of vehicle harness connectors	Vehicles type-approved before 1 January 2024 and spare parts for these vehicles	X ⁽²⁴⁾	68

Appendix table 6 EU ELV Directive Exemptions List [ANNEX II eleventh revision (2023)] <Original> and IMDS application code (Continued)



EU ELV Directive Exemptions List (ANNEX II)			IMDS Application Code
(Exemptions for applications of prohibited substances) Materials and components	Scope and expiry date of the exemption	To be labelled or made identifiable in accordance with Article 4(2)(b)(iv)	
Lead and lead compounds in components			
8(g)(i). Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	Vehicles type approved before 1 October 2022 and spare parts for these vehicles	X ⁽²⁴⁾	75
8(g)(ii). Lead in solders to complete a viable electrical connection between the semiconductor die and the carrier within integrated circuit flip chip packages where that electrical connection consists of any of the following: (i) a semiconductor technology node of 90 nm or larger; (ii) a single die of 300 mm ² or larger in any semiconductor technology node; (iii) stacked die packages with dies of 300 mm ² or larger, or silicon interposers of 300 mm ² or larger.	This exemption shall be reviewed in 2024. Valid for vehicles type-approved from 1 October 2022 and spare parts for these vehicles	X ⁽²⁴⁾	76 - 8 (g)(ii)(i) 77 - 8 (g)(ii)(ii) 78 - 8 (g)(ii)(iii)
8(h). Lead in solder to attach heat spreaders to the heat sink in power semiconductor assemblies with a chip size of at least 1 cm ² of projection area and a nominal current density of at least 1 A/mm ² of silicon chip area	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles	X ⁽²⁴⁾	60
8(i). Lead in solders in electrical glazing applications on glass except for soldering in laminated glazing	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles	X ⁽²⁴⁾	61
8(j). Lead in solders for soldering of laminated glazing	Vehicles type-approved before 1 January 2020 and spare parts for these vehicles	X ⁽²⁴⁾	62
8(k). Soldering of heating applications with 0,5A or more of heat current per related solder joint to single panes of laminated glazings not exceeding wall thickness of 2,1 mm. This exemption does not cover soldering to contacts embedded in the intermediate polymer	Vehicles type approved before 1 January 2024 and spare parts for these vehicles	X ⁽²⁴⁾	79
9. Valve seats	As spare parts for engine types developed before 1 July 2003		15
10(a). Electrical and electronic components which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic matrix compound. This exemption does not cover the use of lead in: — glass in bulbs and glaze of spark plugs, — dielectric ceramic materials of components listed under 10(b), 10(c) and 10(d).		X ⁽²⁵⁾ (for components other than piezo in engines)	63
10(b). Lead in PZT-based dielectric ceramic materials of capacitors being part of integrated circuits or discrete semiconductors			64
10(c). Lead in dielectric ceramic materials of capacitors with a rated voltage of less than 125 V AC or 250 V DC	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles		65
10(d). Lead in the dielectric ceramic materials of capacitors compensating the temperature-related deviations of sensors in ultrasonic sonar systems	Vehicles type-approved before 1 January 2017 and spare parts for these vehicles		66
11. Pyrotechnic initiators	Vehicles type-approved before 1 July 2006 and spare parts for these vehicles		18
12. Lead-containing thermoelectric materials in automotive electrical applications to reduce CO ₂ emissions by recuperation of exhaust heat	Vehicles type-approved before 1 January 2019 and spare parts for these vehicles	X	-

Appendix table 6 EU ELV Directive Exemptions List [ANNEX II eleventh revision (2023)] <Original> and IMDS application code (Continued) △

EU ELV Directive Exemptions List (ANNEX II)			IMDS Application Code
(Exemptions for applications of prohibited substances) Materials and components	Scope and expiry date of the exemption	To be labelled or made identifiable in accordance with Article 4(2)(b)(iv)	
Hexavalent chromium			
13(a). Corrosion preventive coatings	As spare parts for vehicles put on the market before 1 July 2007		21
13(b). Corrosion preventive coatings related to bolt and nut assemblies for chassis applications	As spare parts for vehicles put on the market before 1 July 2008		49
14. Hexavalent chromium as an anti-corrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75 % by weight in the cooling solution:		X	
(i) designed to operate fully or partly with electrical heater, having an average utilised electrical power input < 75W at constant running conditions;	Vehicles type approved before 1 January 2020 and spare parts for these vehicles		80 -14 (i)
(ii) designed to operate fully or partly with electrical heater, having an average utilised electrical power input ≥ 75W at constant running conditions;	Vehicles type approved before 1 January 2026 and spare parts for these vehicles		81 -14 (ii)
(iii) designed to fully operate with non-electrical heater.			82 -14 (iii)
Mercury			
15(a). Discharge lamps for headlight application	Vehicles type-approved before 1 July 2012 and spare parts for these vehicles	X	25
15(b). Fluorescent tubes used in instrument panel displays	Vehicles type-approved before 1 July 2012 and spare parts for these vehicles	X	
Cadmium			
16. Batteries for electrical vehicles	As spare parts for vehicles put on the market before 31 December 2008		29

- Notes (22) Applies to aluminium alloys where lead is not intentionally introduced but is present due to the use of recycled aluminium.
- (23) Systems that have a voltage of □ 75 V DC as defined in Directive 2006/95/EC of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (OJ L 374, 27.12.2006, p. 10).
- (24) Dismantling if, in correlation with entry 10(a), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.
- (25) Dismantling if, in correlation with entries 8(a) to 8(k), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.

References

- [DDS0064](#) General rules for product regulation and approval
- [DDS0103](#) Procedures for discarding drawings
- [DDS0110](#) Study procedure for alternating supply parts (General rules)
- [DDS1264](#) Procedure for prohibiting use in new designs
- [DDS1297-002](#) Procedure for complying with regulations for substances of environmental concern of products of production discontinuation
- [DDS1297-100](#) Procedure for investigating and managing substances of environmental concern (for global system)

Issued by: Eng. Promotion Div., DENSO CORPORATION
 Approved by: Design Administration Special Committee
 Drafted by: Yoshiyasu Hirose, Eng. Promotion Div., DENSO CORPORATION