

<b>WABCO</b>	<b>Specification</b>	2004-03
	Class: Test Instructions, Conditions of Delivery	Class No.:61
	<b>Avoiding Hazardous Substances</b>	<b>JED 762</b>
Previous Edition 2002-09	Abbreviated Title Avoid. Hazardous Substances	852 007 620 4

## 1 Scope

This specification defines rules concerning substances to be avoided in any product delivered to WABCO as working and service materials, components, subassemblies or devices. There are two categories of substances:

### Category 1: Prohibited substances

These substances shall not be contained at all - or only in quantities not exceeding a certain maximum concentration - in any product delivered to WABCO or applied during manufacture.

### Category 2: Substances including the obligation of declaration

The application of these substances should be reduced and avoided as far as possible. Without being asked, the supplier has to notify WABCO of their application. Their application is only permitted with WABCO's explicit consent.

## 2 Regulations

Attention shall be paid to the obligation for some substances to be labeled.



### 2.1 Prohibited substances

In products, which are delivered to or produced by WABCO companies, substances that are subject to a prohibition or a restriction by European or national regulations and laws shall not be contained at all or only in permitted concentrations.

Substances which in the VDA materials list VDA 232-101 „VDA list of substances including the obligation of declaration“(\*) or in the equivalent „List for Declarable Materials“ in the International Material Data System (IMDS), in the valid editions, are identified as being prohibited, shall not be contained at all or only in the permitted concentrations.

In addition, the „Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of life vehicles“ has to be obeyed. According to article 4, paragraph (2), letter a) materials and components of vehicles (of categories N1 and M1), which are put on the market after 1 July 2003 may not contain lead, mercury, cadmium or hexavalent chromium. Exemptions are defined in annex II of the directive. The annex is amended on a regular basis and is valid in its current version only.

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Moreover, the prohibition applies to the following substances:

Substance	CAS-Number	Application (example)	Concentr.-limit
Acetone	67-64-1	Solvent	10 ppm
Ammonia	7664-41-7	Monomer residue	5 ppm
Chloroparaffineoil	85422-92-0	Lubricant	
Chloroparaffinwax	63449-39-8	Lubricant	
Cyclohexanone	108-94-1	Paints	1000 ppm
Diacetone alcohol (4-Hydroxy-4-methyl-2-pentanone)	123-42-2	Paints, Cleaning agents	
Diethylamine	109-89-7	Paints	
Dimethylamine	124-40-3	Paints	
Ethoxyethanol	110-80-5	Solvent (Paints)	10 ppm
Ethoxyethylacetate	111-15-9	Solvent (Paints)	1000 ppm
Ethylenediaminetetraacetic acid (EDTA)	60-00-4	Cleaner	10 ppm
Hexachlorobutadiene	87-68-3	Solvent	
Mesityl oxide	141-79-7	Paints, Cleaning agents	
Methoxyethanol	109-86-4	Solvent (Paints)	1000 ppm
Methoxyethylacetate	110-49-6	Solvent (Paints)	1000 ppm
Methylamine	74-89-5	Paints	
Mineral oil with polyaromatic hydrocarbons		Mineral oil	
2-Nitro-propane	79-46-9	Solvent	10 ppm
4-Nonylphenol	25154-52-3, 9014-90-8 and others	Surface -active agents	
Nonylphenoethoxylates	9016-45-9 and others	Surface -active agents	
Octylphenol	27193-28-8	Surface -active agents	
Octylphenoethoxylates	9063-89-2, 9036-19-5	Surface -active agents	
Phenylendiamine (o,m,p)	95-54-5	Lubricants	10 ppm
N-Phenyl-alpha-naphtylamine	90-30-2	Lubricants	2000 ppm
N-Phenyl-beta-naphtylamine	135-88-6	Anti-oxidant	
Polybromated difuranes PBDF		Flame retardents	
Polybromated diphenylethers		Flame retardents	
Polychlorated terphenyles PCT		Lubricants	
Styrene	202-851-5	Monomer residue	0,1 ppm
Toluene	108-88-3	Solvent	10.000 ppm
Triethylamine	121-44-8	Paints	
Trimethylamine	75-50-3	Paints	
Zinc chromate	13530-65-9	Anticorrosive primer	10 ppm

## 2.2 Substances including the obligation of declaration

All the substances identified as including the obligation of declaration in the VDA materials list VDA 232-101 „VDA list of substances including the obligation of declaration“(\*) or in the equivalent „List for Declarable Materials“ in the International Material Data System (IMDS), in the valid editions, have to be declared.

Moreover, the obligation of declaration applies to the following substances:

Substance	CAS-Number	Application (example)	Concentr.-limit
Acrylates, Methacrylates		Monomer residue	10 ppm
Amines, volatile		PUR	1 ppm
Bitumens	8052-42-4	Noise absorbing layers	1 ppm
Butanone-2-oxime	96-29-7	PUR	10 ppm
Butylbenzylphthalate	85-68-7	Adhesives, Paints	
Chloro content in lubricants		Lubricants	100 ppm
Chlorocresol (meta-)	59-50-7	Lubricants, Paints	
Chlorocresol (ortho-)	1570-64-5	Lubricants, Paints	
Chloromethyl isothiazolinone	26172-55-4	Aqueous solution	
Chromium	7440-47-3	Coatings	
Coal tar		Distillation product, Filler	
Colophony (rosin)	8050-09-7, 8052-10-6, 73138-82-6	Adhesives, Paints	10.000 ppm
Creosote		Distillation product, filler	
Cyanides		Galvanic	
DHTDMAC	61789-80-8	Plasticizer	
Di(2-methoxyethyl)phthalate (DEMP)	117-82-8	Plasticizer	1000 ppm
N,N-Dimethyl formamide	68-12-2	Solvent, Cold cleaner	1000 ppm
3,6-Dimethyl-4-octyne-3,6-diol	78-66-0	Paints, Cleaning agents	
3,5-Dimethyl-1-hexyn-3-ol	107-54-0	Paints, Cleaning agents	
Dimethyl distearylammonium Chloride (DSDMAC)	107-64-2	Cleaning agent	
DTDMAC	68783-78-8	Car Cleaning agent	
Dimethyl phthalate	131-11-3	Hardener, Paints	
Diphenylamine	122-39-4	Lubricant	
Hydrofluoric acid	7664-39-3	Picling and etching agent	
n-Hexane	110-54-3	Solvent	
Hydroquinone (1,4-Dihydroxybenzene)	123-31-9	Adhesives	10 ppm
Isocyanates, Diisocyanates		Monomer residue in Polyurethanes	10 ppm
Kathon CG	55965-84-9	Aqueous solution	
Limonene	138-86-3, 5989-27-5	Solvent	10.000 ppm
2-Methoxy-1-propanol	1589-47-5	Solvent	5000 ppm
Methyl isothiazolinone	2682-20-4	Aqueous solutions	
Nitrilotriacetic acid	139-13-9	Cleaning agent	1 ppm
Organotin compounds (trialcyl.)		Cooling water	
p-Aramide fibres		Flat gaskets	
PVC		Polymer	
Silicone		Lubricant, Release agent, Anti-foam agent	10 ppm
Tetramethylthiuramidsulfid (Thiram, TMTD)	137-26-8	Accelerator for vulcanisates	

Substance	CAS-Number	Application (example)	Concentr.-limit
2,4,7,9-Tetramethyl-5-decyne-4,7-diol	126-86-3	Paints	
2,4,7,9-Tetramethyl-5-decyne-4,7-diol di(polyoxyethylen)ether	9014-85-1	Paints	
2,5,8,11-Tetramethyl-6-dodecyne-5,8-diol	68227-33-8	Paints	
Toluidine	95-53-4	Pigments	10.000 ppm
Total amount of DMSO extractable content in oils		Lubricants	30.000 ppm
Trichloromethane (Chloroform)	67-66-3		
Triglycidylisocyanurate (TGIC)	2451-62-9	Powder paint hardener	
Vinyl acetate	108-05-4	Monomer residue	10 ppm
Xylenes	1330-20-7	Paints, adhesives	12,50%

## 2.3 Exemptions

Exemptions from these regulations are allowed only with express written permission.

## 3 International Material Data System (IMDS)

Upon delivery of Development Samples and Initial Samples according to WABCO order, the supplier has to make available the materials data for each part in the IMDS System in the form of a Material Data Sheet according to the rules defined there. The details and the WABCO specific regulations are laid down in the manual „Application IMDS – Guideline for Suppliers“. This manual is available in the Internet on the page [www.wabco.info](http://www.wabco.info) (insert in selection box: Supplier).

In case of changes in the material composition of products delivered to WABCO this has to be notified without request by a new Initial Sample Inspection Report and an amended Material Data Sheet.

(\*) Sales:

Dokumentation Kraftfahrwesen E.V. (DKF)  
Ulrichstr. 14  
D-74321 Bietigheim-Bissingen

or in the Internet under: [www.mdssystem.com](http://www.mdssystem.com) > Public IMDS Pages > Lists > Declarable Materials.