



W.R. Lang GmbH  
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Page 1 of 8

Your letter of  
15.08.2017

Your ref

Our ref  
2.5/mü

Phone extension  
379-251

Date  
29.11.2017

## TEST REPORT – TRANSLATION

### General

<b>Test report – No.:</b>	<b>2 . 5 / 8 8 4 - 3 / 2 0 1 7</b>
Commissioned by:	see above
Objects tested:	<b>1 Sample: EVA SPEZIAL SANDWICH TRIPLEX®</b> see page 2 for details
Sampling:	by customer
Test:	Conformity acc. to REACH Regulation (EC) 1907/2006 (SVHC-List)
Date received:	16.08.2017
Test period:	21.08. - 26.09.2017
Processed by:	1) Ms. Stauche 2) Mrs. Krämer
Subcontractors:	3) Accredited testing laboratory: DEKRA Automobil GmbH, Köthener Straße 33, 06118 Halle
Test procedure:	1) see table page 2 No. 1 2) see table page 2 No. 2 – 6 3) see table page 2 No. 7
Remarks:	The sample was homogenized by cryogenic grinding.
Report copies:	1 copy for client, 1 copy for OMPG

Results of measurements and analyses refer only to the tested samples. This test report is legally valid with the signature of the head of laboratory or his / her representative only. Copies must be done completely. Copies, even in extracts, require the written permission of OMPG Ltd. Processes marked with an asterisk (\*) are not accredited.

**Please note:**

Results below the minimum detection limits are reported as „< [MDL]“


Krämer  
Head of Analytics



Test standards and Requirements

Nr.	Parameter	Test standards	Assessment of samples
1	Metals	Digestion acc. to SOP2.5.L126 and ICP-OES acc. to DIN EN ISO 11885	<b>The examined sample contains none of the SVHC- Substances acc. to SVHC-List (Date 12.01.2017), and also none of the substances acc. to annex XVII REACH VO (EG) 1907/2006.</b>
2	Volatile organic compounds (VOC)	Headspace GC-MS-Screening *	
3	Miscellaneous organic compounds	GC-MS-Screening after extraction *	
4	Organotin compounds	DIN EN 71-3:2014-12 in connection with SAA2.5.L145	
5	Phthalates	SAA2.5.L144 (Extraction with CH <sub>2</sub> Cl <sub>2</sub> and GC-MS)	
6	PAH	AfPS GS 2014:01-PAH	
7	shortchained chlorinated paraffins C 10 – C 13 (SCCP) Regulation (EC) 850/2004 Annex I B and Regulation (EU) 2015/2030	QMA 2374	

Picture, Objects tested

Sample	Sample designation / Picture
2.5/884/03/2017	EVA SPEZIAL SANDWICH TRIPLEX® 



## Results

### Metals to exclude the following:

SVHC: [Phthalato(2-)]dioxotrilead; 2-Ethylhexyl-10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoat (DOTE); Aluminosilicate Refractory Ceramic Fibres; are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008; Ammonium dichromate; Arsenic acid; Lead(II) bis(methanesulfonate); Lead bis(tetrafluoroborate); Lead chromate; Lead chromate molybdate sulphate red (C.I. Pigment Red 104); Lead cyanamidate; Lead di(acetate); Lead diazide, Lead azide; Lead dinitrate; Lead dipicrate; Lead hydrogen arsenate; Lead monoxide (lead oxide); Lead styphnate; Lead oxide sulfate; Lead sulfochromate yellow (C.I. Pigment Yellow 34); Lead titanium trioxide; Lead titanium zirconium oxide; Boric acid; Cadmium; Cadmium chloride; Cadmium fluoride; Cadmium oxide; Cadmium sulphate; Cadmium sulphide; Calcium arsenate; Chromium trioxide; Diarsenic pentoxide; Diarsenic trioxide; Diboron trioxide; Dichromium tris(chromate); Disodium tetraborate, anhydrous; Dioxobis(stearato)trilead; Acetic acid, lead salt, basic; Fatty acids, C16-18, lead salts; Potassium chromate; Potassium dichromate; Potassium hydroxyoctaoxidizincatedichromate; Silicic acid, lead salt; Silicic acid (H<sub>2</sub>SiO<sub>5</sub>), barium salt (1:1), lead-doped with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD), the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008; Cobalt(II) diacetate; Cobalt(II) dinitrate; Cobalt(II) carbonate; Cobalt(II) sulphate; Cobalt dichloride; Sodium chromate; Sodium dichromate; Sodium peroxometaborate; Sodium perborate, perboric acid, sodium salt; Orange lead (lead tetroxide); Pentalead tetraoxide sulphate; Pentazinc chromate octahydroxide; Pyrochlore, antimony lead yellow; Reaction mass of 2-Ethylhexyl-10-ethyl-4,4,-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoat and 2-Ethylhexyl-10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoat (Reaction mass of DOTE und MOTE); Bis(tributyltin) oxide (TBTO); Dibutyltin dichloride (DBTC); Acids generated from chromium trioxide and their oligomers; Dichromic acid; Oligomers of chromic acid and dichromic acid, Chromic acid; Sulfurous acid, lead salt, dibasic; Strontium chromate; Tetralead trioxide sulphate; Tetraboron disodium heptaoxide, hydrate, Tetraethyllead; Trilead bis(carbonate) dihydroxide; Trilead diarsenate; Trilead dioxide phosphonate; Triethyl arsenate; Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008

Parameter	Sample designation	2.5/884/03/2017	Assessment
Aluminium	mg/kg	13	<b>The sample contains none of the above mentioned substances.</b>
Antimony	mg/kg	< 10	
Arsenic	mg/kg	< 10	
Barium	mg/kg	< 2	
Boron	mg/kg	< 4	
Lead	mg/kg	< 5	
Cadmium	mg/kg	< 1	
Chromium	mg/kg	< 2	
Potassium	mg/kg	< 15	
Cobalt	mg/kg	< 2	
Sodium	mg/kg	< 40	
Nickel	mg/kg	2,6	
Molybdenum	mg/kg	< 3	
Mercury	mg/kg	< 0,05	
Titanium	mg/kg	< 5	
Strontium	mg/kg	6,4	
Zinc	mg/kg	4.770	
Tin	mg/kg	< 10	
Zirkonium	mg/kg	< 5	



VOC gem. REACH mittels HS-GC/MS-Screening

Sample designation	2.5/884/03/2017	Limits Regulation 1907/2006 EC (SVHC)
Parameter		
1,2,3-Trichloropropane	n.n. <sup>1)</sup>	0,1 % each
1,2-Bis(2-methoxyethoxy)ethan (TEGDME; triglyme)	n.n. <sup>1)</sup>	
1,2-Dichloroethane	n.n. <sup>1)</sup>	
1,2-Diethoxyethane	n.n. <sup>1)</sup>	
1,2-Dimethoxyethane; Ethylenglycoldimethylether (EGDME)	n.n. <sup>1)</sup>	
1-Bromopropane (n-Propylbromide)	n.n. <sup>1)</sup>	
2-Ethoxyethanol	n.n. <sup>1)</sup>	
2-Ethoxyethylacetate	n.n. <sup>1)</sup>	
2-Methoxyethanol	n.n. <sup>1)</sup>	
Acrylamide	n.n. <sup>1)</sup>	
Bis(2-methoxyethyl)ether	n.n. <sup>1)</sup>	
Methoxy acetic acid	n.n. <sup>1)</sup>	
N,N-Dimethylacetamide	n.n. <sup>1)</sup>	
N,N-Dimethylformamide	n.n. <sup>1)</sup>	
N-Methylacetamide	n.n. <sup>1)</sup>	
Trichloroethene	n.n. <sup>1)</sup>	
<b>Assessment</b>	<b>passed</b>	

<sup>1)</sup> The substance could not be detected above 0,1 %.



GC-MS-Screening to exclude the following substances

Parameter	Sample designation	2.5/884/03/2017	Limits Regulation (EC) 1907/2006 (SVHC)
<u>Primary aromatic Amines</u>	2,2'-dichloro-4,4'-methylenedianiline; 2,4-dinitrotoluene; 2-Methoxyaniline (o-Anisidine); 4,4'-Diaminodiphenylmethane (MDA); 4,4'-methylenedi-o-toluidine; 4,4'-oxydianiline and its salts; 4-Aminoazobenzene; 4-Aminobiphenyl; 6-methoxy-m-toluidine (p-cresidine); o-aminoazotoluene; o-toluidine, 4-methyl-m-phenylenediamine (toluene-2,4-diamine)	n.d. <sup>1)</sup>	je 0,1 %
<u>Flame Retardants / Plasticizer</u>	Tris(2-chloroethyl)phosphate; Trixylylphosphate; Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified : α-Hexabromocyclododecane (134237-50-6), β-Hexabromocyclododecane (134237-51-7), γ-Hexabromocyclododecane (134237-52-8); Bis(pentabromophenyl)ether (Decabromodiphenylether; DecaBDE)	n.d. <sup>1)</sup>	je 0,1 %
<u>Stabilizer:</u>	4-(1,1,3,3-tetramethylbutyl)phenol; 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated covering well-defined substances and UVCB substances, polymers and homologues; 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327); 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320); 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350); 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328); 1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC); 1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	n.d. <sup>1)</sup>	je 0,1 %
<u>Miscellaneous (Solvents, Additives):</u>	1-Methyl-2-pyrrolidone (NMP); 4-heptylphenol, branched and linear (substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof); p-(1,1-dimethylpropyl)phenol; 4,4'-isopropylidenediphenol (Bisphenol A; BPA); Cyclohexane-1,2-dicarboxylic anhydride (all possible combinations of the cis- and trans-isomers cis-cyclohexane-1,2-dicarboxylic anhydride trans-cyclohexane-1,2-dicarboxylic anhydride); Dinoseb (6-sec-butyl-2,4-dinitrophenol); Formaldehyde, oligomeric reaction products with aniline; Formamide; Hexahydromethylphthalic anhydride [1]; Hexahydro-4-methylphthalic anhydride [2] Hexahydro-1-methylphthalic anhydride [3] Hexahydro-3-methylphthalic anhydride [4]; Imidazolidine-2-thione (2-imidazoline-2-thiol); Nitrobenzene	n.d. <sup>1)</sup>	je 0,1 %
<b>Assessment</b>		<b>passed</b>	---

<sup>1)</sup> none of the listed substances could be detected above 0,1 %

Organotin substances acc. to DIN EN 71-3:2014-12 in combination with SOP 2.5.L145

To determine: Bis(tributyltin)oxide (TBTO); Dibutyltindichloride (DBTC); Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)

Probenbezeichnung		2.5/884/03/2017	Limits Regulation (EC) 1907/2006 Annex XVII No. 20
Parameter			
DBT (Dibutyl tin)	mg/kg	< 0,06	1000
TBT (Tributyl tin)	mg/kg	< 0,06	1000
MOT (Monooctyl tin)	mg/kg	< 0,06	---
DOT (Dioctyl tin)	mg/kg	< 0,06	1000
TPhT (Triphenyl tin)	mg/kg	< 0,06	1000
<b>Assessment</b>		<b>passed</b>	---



Phthalate

Sample designation		2.5/884/03/2017	Limits Regulation (EC) 1907/2006 (SVHC)
Parameter			
Di-2-ethylhexylphthalate ( <b>DEHP</b> ) CAS 117-81-7	%	< 0,05	0,1 %
Dibutylphthalate ( <b>DBP</b> ) CAS 84-74-2	%	< 0,05	0,1 %
Benzylbutylphthalate ( <b>BBP</b> ) CAS 85-68-7	%	< 0,05	0,1 %
Diisobutylphthalate ( <b>DIBP</b> ) CAS 84-69-5	%	< 0,05	0,1 %
1,2-Benzene-dicarboxylic acid, di-C7-11-branched and linear alkyl esters ( <b>DHNUP</b> ) CAS 68515-42-4	%	< 0,05	0,1 %
<b>DIHP</b> (1,2-Benzene-dicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich) CAS 71888-89-6	%	< 0,05	0,1 %
Bis (2-methoxyethyl) phthalate ( <b>DMEP</b> ) CAS 117-82-8	%	< 0,05	0,1 %
Diisopentylphthalate ( <b>DIPP</b> ) CAS 605-50-5	%	< 0,05	0,1 %
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear CAS 84777-06-0	%	< 0,05	0,1 %
N-pentyl-isopentylphthalate ( <b>nPIPP</b> ) CAS 776297-69-9	%	< 0,05	0,1 %
Dipentylphthalate ( <b>DPeP</b> ) CAS 131-18-0	%	< 0,05	0,1 %
Di-n-hexyl-phthalate ( <b>DnHP</b> ) CAS 84-75-3	%	< 0,05	0,1 %
1,2-Benzene-dicarboxylic acid, di-C6-10-alkyl esters CAS 68515-51-5 and 68648-93-1; mixed from 1,2- Benzene-dicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ dihexyl phthalate	%	< 0,05	0,1 %
<b>Assessment</b>		<b>passed</b>	---



PAH acc. to AfPS GS 2014:01-PAK to exclude

Anthracene; Anthracene oil; Anthracene oil, Anthracene free; Anthracene oil, anthracene paste; Anthracene oil, anthracene paste, anthracene fraction; Anthracene oil, anthracene paste, distn. lights; Benzo[a]pyrene (Benzo[def]chrysenes); Pitch, coal tar, high-temp.

Sample designation		2.5/884/03/2017	Limits Regulation (EC) 1907/2006 (Annex XVII No. 50)
Parameter			
Naphthalene	mg/kg	< 0,2	--
Acenaphthylene	mg/kg	< 0,2	--
Acenaphthene	mg/kg	< 0,2	--
Fluorene	mg/kg	< 0,2	--
Phenanthrene	mg/kg	< 0,2	--
Anthracene	mg/kg	< 0,2	--
Fluoranthene	mg/kg	< 0,2	--
Benzo(a)anthracene <sup>1)</sup>	mg/kg	< 0,2	--
Chrysene <sup>1)</sup>	mg/kg	< 0,2	1,0
Benzo(b)fluoranthene <sup>1)</sup>	mg/kg	< 0,2	1,0
Benzo(k)fluoranthene <sup>1)</sup>	mg/kg	< 0,2	1,0
Benzo(j)fluoranthene <sup>1)</sup>	mg/kg	< 0,2	1,0
Benzo(e)pyrene <sup>1)</sup>	mg/kg	< 0,2	1,0
Benzo(a)pyrene <sup>1)</sup>	mg/kg	< 0,2	1,0
Indeno(1,2,3-cd)pyrene	mg/kg	< 0,2	1,0
Dibenz(a,h)anthracene <sup>1)</sup>	mg/kg	< 0,2	--
Benzo(g,h,i)perylene	mg/kg	< 0,2	1,0
Benzo(a)anthracene <sup>1)</sup>	mg/kg	< 0,2	--
Σ PAH	mg/kg	< 0,2	SVHC: Σ < 1000 mg/kg
<b>REACH Annex XVII No. 50 and SVHC</b>		<b>passed</b>	<b>PAH <sup>1)</sup> je &lt; 1 mg/kg</b>



Shortchained chlorinated paraffins (SCCP)

1) limit of determination 200 mg/kg (0,02 %)

Sample designation		2.5/884/03/2017		Limit Regulation (EC) 850/2004 Annex I B and Regulation (EU) 2015/2030
Parameter				
Short chain chlorinated paraffins, C10-C13	%	< 0,02 <sup>1)</sup>		0,15 %
Assessment		passed		---