Govaerts Recycling nv
Kolmenstraat 1324
3570 ALKEN

Your notice of	**Your reference**	**Date**
17-10-2024	52405788	14-01-2025

Analysis Report 24.05530.03

Required tests :

Centexbel	**Cryogenically ground**
Centexbel	**Determination of the elemental composition (screening)**
Centexbel	**Determination of the composition using XRF-screening**
Centexbel	**Detection of ceramic fibres**
Centexbel	**LCMS screening (Reach SVHC)**
Centexbel	**Determination of the emission profile by thermal extraction.**
Centexbel	**Determination of low phthalates concentration – Content for Reach SVHC**

Sample id	Information given by the client	Date of receipt
T2420530	kunststof plank	17-10-2024

Stijn Steuperaert
Order responsible

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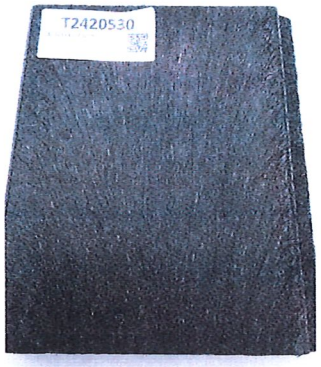
Samples

T2420530
kunststof plank



Reference: T2420530 - kunststof plank

Cryogenically ground

Date of ending the test	24-10-2024
Standard used	Centexbel
Equipment	SPEX Sample Prep 6875D
Fineness of the final material	Grain
Amount of ground finished product (g)	25
Sample collection	All fractions have been accurately collected

Sample generated: T2420530_01d

Reference: **T2420530_01d - kunststof plank**

Reach SVHC conclusion

The results for the analysis on specific elements and substances show that the sample does not contain any of the compounds mentioned on the Reach candidate list of 27-06-2024 (substances of very high concern), in concentrations > 0.1 mass%.

Reference: **T2420530_01d - kunststof plank**

Determination of the elemental composition (screening)

Date of ending the test	08-11-2024
Method used	Centexbel
Product standard	Reach SVHC_27-06-2024
Sample preparation	Mineralization using concentrated acids in a microwave.
Determination	ICP-OES

Results
Determination of B (boron)

Metals	Reporting limit mg/kg	Concentration mg/kg
B (boron)	20.0	< 20.0

The result of the Boron determination indicates compounds* of the REACH SVHC list (27-06-2024) are not present in the samples in concentrations >0.1 %

*boric acid, disodium tetraborate- anhydrous; tetraboron disodium heptaoxide- hydrate, diboron trioxide, sodiumperoxometaborate, sodiumperborate, disodium octaborate, orthoboric acid, sodium salt, Orthoboric acid, sodium salt, barium diboron tetraoxide

Reference: **T2420530_01d - kunststof plank**

Determination of the composition using XRF-screening

Date of ending the test	29-10-2024
Standard used	Centexbel
Product standard	Reach SVHC_27-06-2024
Sample preparation	Homogenizing, weighing, thickness determination, sample presentation under Helium
Determination	X-ray fluorescence. Screening of element selection using a WD detector. Semi-quantitative measurements performed using QuantExpress based on a fundamental parameter method.

Results

Matrix CH2

Element	Reporting limit (mass %)	Concentration (w%)
As	0.010	<RL
Co	0.010	<RL
Cr	0.0070	<RL
Pb	0.010	<RL
Sn	0.0070	<RL
Br	0.010	<RL
Zr	0.010	<RL
Cd	0.0050	<RL
Al	0.0080	0.0819
Si	0.010	0.0694

* RL = reporting limit

Specific screening for elements indicating possible presence of Reach SVHC compounds (27-06-2024)*
The results for the specific elements show that the sample does not contain the (mainly inorganic) compounds* on the Reach candidate list (substances of very high concern), in concentrations >0.1 mass%.
Presence of a significant amount of Al & Si. To exclude the unlikely presence of aluminosilicate based ceramic fibers with certainty an additional SEM screening is necessary. The results for the other specific elements show that the sample does not contain the other (mainly inorganic) compounds* on the Reach candidate list (substances of very high concern), in concentrations >0.1 mass%.

* diarsenic tri- et pentoxide, arsenic acid, calcium arsenate, leadhydrogenarsenate, triethylarsenate, cobaltdiacetate, cobaltsulphate, cobaltdichloride, cobaltcarbonate, cobaltdinitrate, cadmium, cadmium oxide, cadmium chloride, cadmium sulphide, cadmium fluoride, cadmium sulphate, cadmium nitrate, cadmium hydroxide, cadmium carbonate, potassium chromate and dichromate , sodium chromate and dichromate, chromiumtrioxide, ammoniumdichromate, strontiumchromate, , chromic and dichromic acid, oligomers of chromic and dichromic acid, pentazincchromate octahydroxide, dichromium tris(chromate), potassium hydroxyoctaoxodizincatedichromate, lead chromate and pigments based

on lead chromate, Orange lead (lead tetroxide), Pyrochlore antimony lead yellow, Lead monoxide, Trilead bis(carbonate)dihydroxide, leaddinitrate
leadoxidesulfate, Lead titanium trioxide, Silicic acid, lead salt , Lead titanium zirconium oxide , Pentalead tetraoxide sulphate, Trilead dioxide phosphonate, Tetralead trioxide sulphate, Lead bis(tetrafluoroborate), Tetraethyllead, Leaddiazide - leadazide, leaddipicrate, leadstyphnate, Lead cyanamidate, [Phthalato(2-)]dioxotrilead , Dioxobis(stearato)trilead , Acetic acid lead salt(basic), C16-C18 fatty acid lead salts, Sulfurous acid lead salt (dibasic), Lead(II) bis(methanesulfonate), Lead di (acetate), HBCDD, DecaBDE, bistributyltinoxide, dibutyltindichloride, dibutylbis(pentane-2.4-dionato-O,O')tin, silicic acid barium salt (lead doped), aluminosilicate refractory ceramic fibres, zirconia aluminosilicate refractory ceramic fibres, trixylyl phosphate, 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE), 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (MOTE), Dioctyltin bis(fatty acyloxy) derivs. with C12 as the predominant carbon number, 1,2 Bis(2,4,6-tribromophenoxyethane) (BTBPE), Tetrabromobisphenol A (TBBPA)

Reference: **T2420530_01d - kunststof plank**

Detection of ceramic fibres

Date of ending the test	13-11-2024
Standard used	Centexbel
Apparatus	FEG-SEM electron microscope with elements-analysis

Results

Presence of ceramic fibres:	Not present

Performed in the chemical lab under the responsibility of Eddy Albrecht

Reference: **T2420530_01d - kunststof plank**

LCMS screening (Reach SVHC)

Date of ending the test	04-11-2024
Method used	Centexbel
Product standard	Reach SVHC_27-06-2024
Extraction method	Methanol/DMSO/ethyl acetate ultrasonic extract
Analytical method	LC-DAD-MS/MS
Results	
Reporting limit	See table

The method is used to screen for the presence of organic REACH SVHC compounds (27-06-2024)*.
The results for the specific substances show that the sample does not contain the (mainly organic) compounds* on the Reach candidate list (substances of very high concern), in concentrations >0.1 mass%.

* 4-nonylphenols (branched+linear) (NP), Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP), 4-nonylphenols (branched+linear) ethoxylated (NPEO), 4-(1,1,3,3-tetramethylbutyl)phenol (OP), 4-(1,1,3,3-tetramethylbutyl)phenol ethoxylated (OPEO), Heptylphenol (branched + linear) (HP), RP-HP (with >=0.1% w/w 4-heptylphenol, branched and linear), 4-tert-butylphenol (PTBP), p-(1,1,- dimethylpropyl)phenol (PTAP), Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP), Bisphenol A (BPA), Bisphenol B (BPB) (=4,4'-(1-methylpropylidene), Pentadecafluorooctanoic acid (PFOA), (C9-C14) perfluorocarboxylicacids (PFA's), Pefluorononanoic acid (+Na and NH4 salts) (PFNA), Pefluorodecanoic acid (+Na and NH4 salts) (PFDA), Perfluorohexane-1-sulfonic acid and its salts (PFHxS), 2.3.3.3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acryl halides (HFPO-DA) Perfluorobutane sulfonic acid (PFBS) and its salts,Ammonium pentadecafluorooctanoate (APFO), Azodicarbonamide (ADCA), Imidazoline-2-thiol, C.I. Direct Red 28, C.I. Direct Black 38, 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320), 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328), 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350), 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one (Irgacure 907), 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone (Irgacure 369), Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA), butyl 4-hydxybenzoate, 2-methylimidazole, 1-vinylimidazole, 2,2-bis(bromomethyl)propane-1,3-diol (BMP), 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA), N-(hydroxymethyl)acrylamide, Perfluoroheptanoic acid (PFHpA), Melamine, Isobutyl 4-hydroxybenzoate, Bisphenol S,Tetrabromobisphenol A (TBBPA); Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (DPPO)

Components	C (%)
NP	< 0.0010
NPEO	< 0.010
OP	< 0.010
OPEO	< 0.010
HP	< 0.0010
PTBP	< 0.010
PTAP	< 0.010
PDDP	< 0.010
Bisphenol A	< 0.010
Bisphenol B	< 0.010
Bisphenol S	< 0.010
PFOA	< 0.010
PFA's	< 0.010
PFNA	< 0.010
PFDA	< 0.010
PFHxS	< 0.010
HFPO-DA	< 0.010
PFBS	< 0.010
APFO	< 0.010
ADCA	< 0.010
Imidazoline-2-thiol	< 0.010
C.I. Direct Red 28	< 0.010
C.I. Direct Black 38	< 0.010
UV 320	< 0.010
UV 328	< 0.010
UV 350	< 0.010
Irgacure 907	< 0.010
Irgacure 369	< 0.010
TMA	< 0.010
Butyl 4-hydroxybenzoate	< 0.010
2-methylimidazole	< 0.010
1-vinylimidazole	< 0.010
BMP	< 0.010
TBNPA	< 0.010
N-(hydroxymethyl)acrylamide	< 0.010
PFHpa	< 0.010
Melamine	< 0.010
isobutyl 4-hydroxybenzoate	< 0.010
TBBPA	< 0.010
DPPO	< 0.010

Reference: **T2420530_01d - kunststof plank**

Determination of the emission profile by thermal extraction.

Date of ending the test	15-11-2024
Method used	Centexbel
Product standard	Reach SVHC_27-06-2024
Sample preparation	One or more 1 cm diameter samples are heated in a glass tube at a fixed temperature under an inert gas flow. The gas flow is lead over a tenax filled tube where volatile organic compounds (VOC's) are trapped. The tenax tube with the VOC's is thermally desorbed. Released VOC's are cryo trapped and injected into a GCMS.
Temperatuur	140°C
Time	30'
Analytical method	Gas chromatography with Agilent MSD detector

Results

The method is based on VDA 278 to evaluate fogging behaviour of plasticisers. For the more volatile VOC's semi-quantitative results (µg/g) can be obtained while for the heavier VOC's and SVOC's it is a screening method for their presence. If present in higher concentrations only part of the products have already evaporated (results as ng/min.g).

Specific screening for substances indicating possible presence of Reach SVHC compounds (27-06-2024)*
Presence of a significant amount of phthalates (DEHP) which indicates concentration may be >0.1%. A quantitative determination is necessary to be sure. The results for the other specific substances show that the sample does not contain the other compounds* on the Reach candidate list (substances of very high concern), in concentrations >0.1 %.

* Anthracene, anthracene oils, anthracene pastes, benzo(a) pyrene, benzo(a)anthracene, fluoranthene, benzo(k)fluoranthene, phenanthrene, pyrene, chrysene, benzo(ghi)perylene, pitch coal tar (high temp), dibutylphthalate (DBP), diisobutylphthalate (DiBP), Bis(2-methoxyethyl) phthalate (DMEP), benzylbutylphthalate (BBP), bis-(2-ethylhexyl)phthalate (DEHP), 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DHIP), 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP), 1,2-benzenedicarboxylic acid, C6-C8-C10-alkylesters with ≥ 0.3% of dihexyl phthalate (Di(C6-C10)alkylphthalate esters, diisopentylphthalate (DIPP), N-pentyl-isopentylphthalate, dipenthylphtalate (DPP), dipentylphthalate (branched, linear), dihexylphthalate (DHP), dicyclohexyl phthalate (DCHP), dihexylphthalate (branched, linear), diisohexyl phthalate, Cyclohexane-1,2-dicarboxylic anhydrides (Hexahydrophthalic anhydrides - HHPA) , Hexahydromethylphthalic anhydrides (MHHPA), 3-benzylidene camphor;3-BC, 2.2-bis(4'-hydroxyphenyl)-4-methylpentane, 2,4-dinitrotoluene, 2,4-diaminotoluene, 4,4'- Diaminodiphenylmethane (MDA), Formaldehyde- oligomeric reaction products with aniline, o-Anisidine, o-Toluidine, 4,4' -methylenedi-o-toluidine, 2,2'-dichloro-4,4'-methylenedianiline, diamonidiphenylether and its sals, p-aminoazobenzene, p-cresidine, o-aminoazotoluene, biphenyl-4-ylamine, 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine
hexabromocyclododecane (HBCDD), trischloroethylphosphate, trixylylphosphate, Dechlorane Plus, C10-C13 chloroalkanes, Phenolphthalein, musk xylene,formamide, acrylamide, N-methylacetamide, N,N-dimethylacetamide, N,N' -dimethylformamide, 1-methyl-2-pyrrolidone, trichloroethylene, 1,2,3-trichloropropane, 1,2-dichloroethane, 1-bromopropane, 1,2-Diethoxyethane, EGDME, TEGDME, bis(2-methoxyethyl) ether, Bis(2-(2-methoxyethoxy)ethyl)ether, Furan, propylene oxide, 2-methoxyethanol, 2-ethoxyethanol, 2-ethoxyethylacetate, 2-methoxyethyl acetate, Dinoseb, TGIC, β -TGIC, Michler's ketone, Michler's base, C.I. Basic Violet 3, C.I. Solvent Blue 4, C.I. Basic Blue 26, 4,4'-

bis(dimethylamino)-4"-(methylamino) trityl alcohol, methoxyacetic acid, dimethylsulphate, diethylsulphate, 1,3-propanesultone, nitrobenzene, karanal, octamethylcyclotetrasiloxane(D4), decamethylcyclopentasiloxane(D5), dodecamethylcyclohexasiloxane(D6), terphenyl; hydrogenated, ethylenediamine(EDA), Bistributyltinoxide is detected along with the inorganic compounds using XRF

2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers (only screened for 2-(4-tert-butylbenzyl)propionaldehyde), 2,3-dibromo-1-propanol (2,3-DBPA), Glutaral, Medium-chain chlorinated paraffins (MCCP), 1,4-dioxane, tris(2-methoxyethoxy)vinylsilane, 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol, (±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC), S-(tricyclo(5.2.1.0'2,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate, reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine, Bis(4-chlorophenyl) sulphone, Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol (Phenol, methylstyrenated EC nr 270-966-8; cas nr 68512-30-1), Bumetrizole (UV-326), 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327), 2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one, 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329), 2,4,6-tri-tert-butylphenol,Bis (α ,α -dimethylbenzyl) peroxide

A2405530 **T2420530_01d** **Govaerts Recycling nv, Alken kunststof plank**

Group MReach **Apparatus** Gerstel

	Requested	CAS	tR min	ng/min.g	µg/g (30';140°C)
F001	Diisobutylphthalate (DiBP)	84-69-5	21,18	130,5	<5
F002	Dibutylphthalate (DBP)	84-74-2	22,31	112,3	<5
F003	Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	22,84	-	-
F004	Diisopentylphthalate (DiPP)	605-50-5	23,91	-	-
F005	N-pentylisopentylphthalate	776297-69-9	24,60	-	-
F006	Dipentylphthalate (DPP)	131-18-0	25,35	-	-
F007	Diisohexyl phthalate	71850-09-4	28,00	-	-
F008	Benzylbutylphthalate (BBP)	85-68-7	30,71	-	-
F009	Dihexylphthalate (DHP)	84-75-3	30,24	-	-
F010	Dicyclohexylphthalate	84-61-7	33,53	-	-
F011	Di-n-heptyl phthalate	3648-21-3	33,58	-	-
F012	Bis-(2-ethylhexyl)phthalate (DEHP)	117-81-7	33,67	459,2	13,78
X071	C6-C8 phthalates, C7 rich (DHIP)	71888-89-6	28,53	-	-
X072	C7-C11 phthalates (DHNUP)	68515-42-4	37,30	-	-
X085	Hexahydrophthalic anhydrides	85-42-7	16,96	-	-
X086	Dipentylphthalate isomers	84777-06-0	20,53	-	-
X090	Hexahydromethylphthalic anhydrides	25550-51-0	14,64	-	-
X103	Dihexylphthalates, branched+linear	68515-50-4	26,52	-	-
X107	Di(C6-C10)alkyl phthalate >0,3%DHP	68515-51-5	26,45	-	-
X108	Di(C6/C8/C10)alkyl phthalate >0,3%DHP	68648-93-1	25,63	-	-
D004	Phenanthrene	85-01-8	20,74	-	-
D005	Anthracene	120-12-7	20,85	-	-
D006	Fluoranthene	206-44-0	24,57	-	-
D007	Pyrene	129-00-0	25,62	-	-
D008	Benz(a)anthracene	56-55-3	32,93	-	-
D009	Chrysene	218-01-9	33,08	-	-
E006	Benzo[k]fluoranthene	207-08-9	37,33	-	-
E008	Benzo[a]pyrene	50-32-8	38,68	-	-
E010	Benzo[ghi]perylene	191-24-2	46,88	-	-
X211	Terphenyl, hydrogenated (cluster)	61788-32-7	21,04	-	-
G009	Bumetrizole (UV-326)	3896-11-5	33,95	-	-
G010	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)	3147-75-9	34,26	-	-
G011	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	35,39	-	-

A2405530 **T2420530_01d** **Govaerts Recycling nv, Alken**
kunststof plank

Group MReach2 **Apparatus** Gerstel

	Requested	CAS	tR min	ng/min.g	µg/g (30';140°C)
A001	Furan	110-00-9	4,00	-	-
A002	1-Bromopropane	106-94-5	5,62	-	-
K002	2-Methoxyethanol	109-86-4	5,52	-	-
K003	1,2-Dichloroethane	107-06-2	5,69	-	-
A003	Ethylenediamine	107-15-3	6,28	-	-
K004	1,2-Dimethoxyethane	110-71-4	5,96	-	-
X091	Propylenoxide	75-56-9	5,54	-	-
A004	Formamide	75-12-7	6,91	-	-
K006	Trichloroethylene	79-01-6	6,85	-	-
K007	2-Ethoxyethanol	110-80-5	7,03	-	-
A005	Dimethylformamide (DMF)	68-12-2	8,60	-	-
X087	Methoxyacetic acid	625-45-6	7,12	-	-
K008	1,2-Diethoxyethane	629-14-1	8,79	-	-
A007	N-methylacetamide	79-16-3	9,42	-	-
H001	1,4-Dioxane	123-91-1	7,18	-	-
A008	Zoldine MS+ (3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine)	143860-04-2	10,02	-	-
K009	2-Methoxyethyl acetate	110-49-6	9,30	-	-
X089	Dimethyl Sulphate	77-78-1	5,17	-	-
A009	Acrylamide	79-06-1	10,02	-	-
A010	N,N-Dimethylacetamide	127-19-5	10,20	-	-
K013	2-Ethoxyethylacetate	111-15-9	10,47	-	-
K014	1,2,3-Trichloropropane	96-18-4	10,58	-	-
K015	Bis(2-methoxyethyl)ether	111-96-6	11,13	-	-
X088	Diethyl Sulphate	64-67-5	11,20	-	-
A012	N-methyl-2-pyrrolidone	872-50-4	12,75	-	-
X105	1,3-Propanesultone	1120-71-4	14,27	-	-
A013	1,2-Bis(2-methoxyethoxy)ethane	112-49-2	14,92	-	-
H004	Bis(2-(2-methoxyethoxy)ethylether	143-24-8	17,68	-	-
H007	2,4,6-tri-tert-butylphenol	732-26-3	18,69	-	-
E004	2-phenylpropene/phenol: Oligo/alkylation reaction products-marker 1	6362-80-7	20,67	-	-
X106	Karanal	117933-89-8	19,26	-	-
X076	Formaldehyde/aniline oligomeric react prods	25214-70-4	20,88	-	-
X081	β-TGIC	59653-74-6	24,88	-	-
X077	Phenolphtalein	77-09-8	25,53	-	-
X082	TGIC	2451-62-9	25,08	-	-
H009	2,2'-Methylene-bis(6-tert-butyl-p-cresol)	119-47-1	32,12	-	-

A2405530 T2420530_01d — **Govaerts Recycling nv, Alken kunststof plank**

Group MReach3 — **Apparatus** Gerstel

	Requested	CAS	tR min	ng/min.g	µg/g (30';140°C)
B001	o-Toluidine	95-53-4	13,23	59,5	<5
B002	o-Anisidine	90-04-0	14,47	-	-
B003	p-Cresidine	120-71-8	15,55	-	-
B004	2,4-Diaminotoluene	95-80-7	16,74	-	-
B005	Biphenyl-4-ylamine	92-67-1	20,23	-	-
B006	4-Aminoazobenzene	60-09-3	24,46	-	-
B007	4,4'-Oxydianiline and its salts	101-80-4	24,94	-	-
B008	4,4'-Diaminodiphenylmethane	101-77-9	25,31	-	-
B009	o-Aminoazotoluene	97-56-3	28,52	-	-
B010	4,4'-Methylenedi-o-toluidine	838-88-0	29,32	-	-
B011	2,2'-Dichloro-4,4'-methylenedianiline	101-14-4	33,03	-	-
C002	Nitrobenzene	98-95-3	13,47	-	-
C004	2,4-Dinitrotoluene	121-14-2	18,19	-	-
C005	Dinoseb	88-85-7	20,77	-	-
C006	5-Tert-butyl-2,4,6trinitro-m-xylene (musk xylene)	81-15-2	21,36	-	-
G003	TCEP (tri(2-chloroethyl)phosphate)	115-96-8	20,11	-	-
G004	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	15087-24-8	22,34	-	-
H008	1,7,7-Trimethyl-3-[(4-methylphenyl)methylene]-bicyclo[2.2.1]heptan-2-one	36861-47-9	24,13	-	-
G005	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	28,85	-	-
X436	2-(4-methylbenzyl)-2-(dimethylamino)-1-(4-morpholinophenyl)butan-1-one	119344-86-4	37,34	-	-
G006	Michlers' base	101-61-1	30,86	-	-
G007	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	31,64	-	-
G008	Hexabromocyclododecane	3194-55-6	33,18	-	-
G012	Michlers' ketone	90-94-8	38,28	-	-
G013	Trixylylphosphate	25155-23-1	38,17	-	-
X109	Dechlorane plus	13560-89-9	58,48	-	-
H003	2,3-Dibromo-1-propanol	96-13-9	13,43	-	-
X067	Short chain chlorinated paraffins	85535-84-8	16,78	-	-
X334	Medium chain chlorinated paraffins	85535-85-9	21,90	-	-
X073	Pitch, coal tar, high temp	65996-93-2	20,53	-	-
E001	Octamethylcyclotetrasiloxane	556-67-2	12,02	-	-
E002	Decamethylcyclopentasiloxane	541-02-6	13,96	22,6	<5
E003	Dodecamethylcyclohexasiloxane	540-97-6	15,85	-	-
H006	Tris(2-methoxyethoxy)vinylsilane	1067-53-4	17,28	-	-
H002	Glutaral	111-30-8	10,59	-	-
H005	2-(4-tert-butylbenzyl)propionaldehyde (lilial)	80-54-6	18,08	-	-
H010	Bis(4-chlorophenyl)sulphone	80-07-9	27,78	-	-

A2405530 T2420530_01d — **Govaerts Recycling nv, Alken kunststof plank**

Group MReach4 — **Apparatus** Gerstel

	Requested	CAS	tR min	ng/min.g	µg/g (30';140°C)
J019	Acetophenon	98-86-2	13,16	35,2	<5
J022	2-Phenyl-2-propanol	617-94-7	13,02	-	-

Remark: S-(tricyclo(5.2.1.0'2,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate and 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine + 2,2,3,3,5,5,6,6-octafluoro4-(heptafluoropropyl)morpholine could not be determined in a targeted approach due to the unavailability of the analytical standard - the chromatogram has however been searched for possible presence. Oligomerization and alkylation reaction products of 2-phenylpropene and phenol - screening based on 3 marker substances

Reference: **T2420530_01d - kunststof plank**

Determination of low phthalates concentration – Content for Reach SVHC

Date of ending the test	21-11-2024
Standard used	Centexbel
Extraction method	Ultrasonic extraction with THF
Analytical method	Gas chromatography with mass spectrometric detection – internal standard :D4-dibutyl-phthalate
Components	Dibutylphthalate (DBP), di-isobutylphthalat (DIBP), benzylbutylphthalate (BBP), di-(2-ethylhexyl)-phthalate (DEHP)
Results	
Determination limit	0,01 % (w/w)

Components	% (w/w)	CAS no	Acronym
Benzyl butyl phthalate	< 0.010	85-68-7	BBP
Dibutyl phthalate	< 0.010	84-74-2	DBP
Di-(2-ethylhexyl)-phthalate	0.027	117-87-7	DEHP
Di-isobutyl phthalate	< 0.010	84-69-5	DIBP

The method was designed for low phthalate content. For contents above 2%, complete recovery cannot be guaranteed.

Reference: **A2405530**

Comments

In this report, the following sample was tested on REACH SVHC parameters:

T2420530 – kunststofplank

For homogenization of the sample, it was cryogenically grinded and received the number T2420530_01d. Testing was done on the grinded sample.

The XRF results show presence of Al and Si. Since the SVHC list mentions Al Si ceramic fibres, an additional SEM analysis was performed to further investigate the presence of this type of fibre. The result was negative.

Thermal extraction GCMS results indicate presence of plasticizer DEHP. Four phthalates have been quantitatively tested in order to evaluate the concentration with the limit of 0.1% in REACH Annex XVII entry 51. Results show presence of 0.027% DEHP, which is below the legal REACH limit in Annex XVII.

Additionally, relevant chemicals from REACH Annex XVII and the POPs Regulation could also be covered:

- XRF screening shows no presence of Pb (REACH Annex XVII entry 63) and Cd (REACH Annex XVII entry 23). In this way, these parameters from REACH Annex XVII are also covered
- XRF screening shows no presence of bromine. This indirectly shows the absence of brominated flame retardants listed in the POPs Regulation
- SCCP is screened in thermal extraction GCMS because it is an SVHC substance, in addition, this substance also occurs within the POPs Regulation.

Within this assignment, all chemicals from REACH SVHC (27/06/24) were tested and an additional check was made for relevant REACH Annex XVII and POP substances. The results in this report do not indicate the presence of substances of legal concern.