topic **List of LCI values for the Belgian Royal Decree of 8/5/2014 regarding threshold values for emissions towards the indoor environment of construction products for certain intended uses**

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author Dieter De Lathauwer, Federal Public Service Health, Safety of the Food Chain and Environment (BELGIUM)

disclaimer This file and document have been established based on the Royal Decree and the JRC ECA 29 report. It is intended as help and guidance and cannot in any way replace the official values as referenced to in the Royal Decree. It has been verified by UBA, ANSES and Eurofins.
If errors are found, please contact dieter.delathauwer@health.belgium.be

Guidance The 4th column are the values to be used in the Royal Decree and are a combination of the harmonized EU-LCI values and the notified AgBB-values for those substances no harmonized values has yet been established.
A cross in the 5th column indicates whether it is a harmonized EU-LCI value.
A value "to be determined" indicates that the substance is of the list of substances to be harmonized, but no EU-LCI nor AgBB value exist, only a French CLI value. The manufacturer is free to determine the emission of these substances awaiting an AgBB or EU-LCI value.
For your information also current AgBB values and the current Afsset/ansses (France) values are given.

1	2	3	4	5	6	7	
	CAS no.	**Compound**	**LCI-value**	EU-LCI	AgBB NIK (µg/m³) 2012 (0)	AFSSET/ANSES CLI (µg/m³) 2009	
aromatic hyrdocarbons	108-88-3	Toluene	**2900**	x	1900	300	(1)
aromatic hyrdocarbons	100-41-4	Ethylbenzene	**850**	x	4400	750	
aromatic hyrdocarbons	1330-20-7	Xylene (o-, m-, p-) and mix of o-, m- and p-xylene isomers	**500**	x	2200	200	
aromatic hyrdocarbons	106-42-3			x			
aromatic hyrdocarbons	108-38-3			x			
aromatic hyrdocarbons	95-47-6			x			
aromatic hyrdocarbons	98-82-8	Isopropylbenzene (Cumene)	**500**		1000	400	
aromatic hyrdocarbons	103-65-1	n-Propylbenzene	**950**	x	1000	200	
aromatic hyrdocarbons	108-67-8	Trimethylbenzene (1,2,3-;1,2,4-;1,3,5-)	**450**	x	1000	1000	
aromatic hyrdocarbons	95-63-6			x			
aromatic hyrdocarbons	526-73-8			x			
aromatic hyrdocarbons	611-14-3	2-Ethyltoluene	**1000**		1000	200	
aromatic hyrdocarbons	527-84-4	Cymene (o-,m-,p-) (1-Isopropyl-2(3,4)-methylbenzene) and mix of o-,m- and p-cymene	**1000**	x	1100	1000	
aromatic hyrdocarbons	535-77-3			x			
aromatic hyrdocarbons	99-87-6			x			
aromatic hyrdocarbons	25155-15-1			x			

aromatic hyrdocarbons	95-93-2	1,2,4,5-Tetramethylbenzene	**1100**		1100	200
aromatic hyrdocarbons	104-51-8	n-Butylbenzene	**1100**		1100	200
aromatic hyrdocarbons	99-62-7	Diisopropylbenzene (1,3-;1,4-)	**750**	x	1400	200
aromatic hyrdocarbons	100-18-5			x		
aromatic hyrdocarbons	2189-60-8	Phenyl octane and isomers	**1100**	x	1600	200
aromatic hyrdocarbons				x		
aromatic hyrdocarbons	104-72-3	Phenyl decane and isomers	**1800**		1800	200
aromatic hyrdocarbons	6742-54-7	Phenyl undecane and isomers	**1900**		1900	200
aromatic hyrdocarbons	4994-16-5	4-Phenyl cyclohexene (4-PCH)	**1300**		1300	250
aromatic hyrdocarbons	100-42-5	Styrene	**250**	x	860	250
aromatic hyrdocarbons	98-83-9	2-Phenylpropene (α-Methylstyrene)	**2500**		2500	1200
aromatic hyrdocarbons	637-50-3	1-Propenyl benzene (ß-methyl styrene)	**2400**		2400	1200
aromatic hyrdocarbons	536-74-3	Phenyl acetylene	**840**		840	250
aromatic hyrdocarbons	611-15-4	Vinyl toluene (o-, m-, p-) and mix of o-,m- and p-vinyl toluene	**4900**		4900	2400
aromatic hyrdocarbons	100-80-1					
aromatic hyrdocarbons	622-97-9					
aromatic hyrdocarbons	25013-15-4					
aromatic hyrdocarbons	1074-17-5	1-Methyl-2(3)-propylbenzene	to be determined		-	200
aromatic hyrdocarbons	1074-43-7					
aromatic hyrdocarbons		Other alkylbenzenes, as long as indiv. isomers have not to be evaluated differently	**1000**		1000	-
aromatic hyrdocarbons	91-20-3	Naphthalene	5		5	10
aromatic hyrdocarbons	91-17-8	Decahydronaphthalene	to be determined		-	1000
aromatic hyrdocarbons	95-13-6	Indene	**450**	x	450	450
saturated aliphatic hydrocarbons S (n-, iso- and cyclo-)	110-54-3	n-Hexane	**72**		72	700
saturated aliphatic hydrocarbons S (n-, iso- and cyclo-)	110-82-7	Cyclohexane	**6000**	x	7000	6000
saturated aliphatic hydrocarbons S (n-, iso- and cyclo-)	108-87-2	Methyl cyclohexane	**8100**	x	8100	8100
saturated aliphatic hydrocarbons S (n-, iso- and cyclo-)	142-82-5	n-Heptane	**21000**		21000	-
saturated aliphatic hydrocarbons S (n-, iso- and cyclo-)		Other saturated aliphatic hydrocarbons until C8	**15000**		15000	10000

saturated aliphatic hydrocarbons S (n-, iso- and cyclo-)		Other saturated aliphatic hydrocarbons higher than C9	**6000**	x	6000	6000	
terpenes	498-15-7	3-Carene	**1500**	x	1500	1500	
terpenes				x			
terpenes	80-56-8	α-Pinene	**2500**	x	1500	450	
terpenes	127-91-3	β-Pinene	**1400**	x	1500	1400	
terpenes	138-86-3	Limonene	**1500**		1500	450	
terpenes		Other terpene hydrocarbons	**1400**	x	1500	1400	
aliphatic alcohols	75-65-0	2-Methyl-2-propanol (tert-butanol)	**620**	x	620	600	
aliphatic alcohols	78-83-1	2-Methyl-1-propanol	**3100**		3100	1500	
aliphatic alcohols	71-36-3	1-Butanol	**3000**	x	3100	3000	
aliphatic alcohols	71-41-0	1-Pentanol (all isomers)	**730**	x	730	700	
aliphatic alcohols	30899-19-5			x			
aliphatic alcohols	94624-12-1			x			
aliphatic alcohols	6032-29-7			x			
aliphatic alcohols	584-02-1			x			
aliphatic alcohols	137-32-6			x			
aliphatic alcohols	123-51-3			x			
aliphatic alcohols	598-75-4			x			
aliphatic alcohols	75-85-4			x			
aliphatic alcohols	75-84-3			x			
aliphatic alcohols	111-27-3	1-Hexanol	**2100**	x	2100	2100	
aliphatic alcohols	108-93-0	Cyclohexanol	**2000**	x	2100	2000	
aliphatic alcohols	104-76-7	2-Ethyl-1-hexanol	**540**	x	540	1100	(2)
aliphatic alcohols	111-87-5	1-Octanol	**1100**	x	1100	1100	(3)
aliphatic alcohols	123-42-2	4-Hydroxy-4-methyl-pentane-2-on (diacetone alcohol)	**960**	x	960	950	
aliphatic alcohols		Other C4 - C13 saturated alcohols n- and iso-	**500**		500		(4)
aliphatic alcohols	105-08-8	1,4-Cyclohexanedimethanol	**-**		-	-	(5)
aromatic alcohols	108-95-2	Phenol	**10**		10	20	
aromatic alcohols	128-37-0	BHT (2,6-di-tert-butyl-4-methylphenol)	**100**	x	100	100	
glycols, glycoethers	100-51-6	Benzyl alcohol	**440**	x	440	450	
glycols, glycoethers	107-21-1	Ethandiol (Ethylenglycol)	**260**		260	400	
glycols, glycoethers	96-49-1	Ethylene carbonate	**370**		370	400	
glycols, glycoethers	7397-62-8	Butyl glycolate	**550**		550	1300	
glycols, glycoethers	111-46-6	Diethylene glycol	**440**	x	440	450	
glycols, glycoethers	57-55-6	Propylene glycol (1,2-Dihydroxypropane)	**2500**		2500	100	

glycols, glycoethers	108-32-7	Propylene carbonate	**250**		250	-	
glycols, glycoethers	623-84-7	Propylene glycol diacetate	**5300**		5300	6500	
glycols, glycoethers	110-98-5	Dipropylene glycol	**670**		670	650	(6)
glycols, glycoethers	25265-71-8						
glycols, glycoethers	110-63-4	1,4-Butanediol	**2000**	x	2000	2000	
glycols, glycoethers	107-41-5	Hexylene glycol	**490**		490	-	
glycols, glycoethers		(2-methyl-2,4-pentanediol)					
glycols, glycoethers	6846-50-0	2,2,4-Trimethylpentanediol diisobutyrate (TXIB)	**450**	x	450	450	
glycols, glycoethers	109-86-4	Ethylene glycol monomethyl ether (2-Methoxyethanol)	**3**		3	20	
glycols, glycoethers	110-49-6	2-Methoxyethyl acetate	**5**		5	90	
glycols, glycoethers	110-71-4	1,2-Dimethoxyethane	**4**		4	20	
glycols, glycoethers	111-96-6	Diethylene glycol dimethyl ether (1-Methoxy-2-(2-methoxy-ethoxy)-ethane)	**28**	x	28	30	
glycols, glycoethers	25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate (Texanol®)	**600**	x	600	600	
glycols, glycoethers	109-59-1	Ethylene glycol isopropylether (2-Methylethoxyethanol)	**220**	x	220	200	
glycols, glycoethers	112-49-2	Triethylene glycol-dimethyl ether	**7**		7	20	
glycols, glycoethers	110-80-5	Ethylene glycol monoethyl ether (2-Ethoxyethanol)	**8**		8	70	
glycols, glycoethers	111-15-9	2-Ethoxyethyl acetate	**11**		11	300	
glycols, glycoethers	629-14-1	1,2-Diethoxyethane	**10**		10	70	
glycols, glycoethers	111-90-0	Diethylene glycol monoethyl ether (2-(2-ethoxyethoxy)ethanol)	**350**	x	350	350	
glycols, glycoethers	2807-30-9	Ethylene glycol monoisopropyl ether (2-Propoxyethanol)	**860**	x	860	850	
glycols, glycoethers	111-76-2	Ethylene glycol monobutylether (2-butoxyethanol)	**1100**	x	490	1000	
glycols, glycoethers	112-07-2	2-Butoxyethyl acetate	**1300**		1300	150	
glycols, glycoethers	112-34-5	Diethylene glycol monobutylether	**670**	x	670	650	
glycols, glycoethers	124-17-4	Diethylene glycol monomethyl ether acetate (Butyldiglykolacetate, 2-(2-butoxyethoxy) ethyl acetate)	**850**	x	850	850	
glycols, glycoethers	122-99-6	2-Phenoxyethanol	**1100**	x	1100	1100	
glycols, glycoethers	112-25-4	Ethylene glycol n-hexyl ether (2-Hexoxyethanol)	**1200**		1200	1000	
glycols, glycoethers	112-59-4	Diethylene glycol n-hexyl ether (2-(2-Hexoxyethoxy)-ethanol)	**740**		740	650	
glycols, glycoethers	107-98-2	Propylene glycol monomethyl ether (1-Methoxy-2-propanol)	**3700**		3700	2000	
glycols, glycoethers	1589-47-5	1-Propylene glycol 2-methyl ether (2-Methoxy-1-propanol)	**19**	x	19	20	
glycols, glycoethers				x			
glycols, glycoethers	70657-70-4	1-Propylene glycol 2-methyl ether acetate (2-Methoxy-1-propyl acetate)	**28**	x	28	30	
glycols, glycoethers	7777-85-0	1,2-Propylene glycol dimethyl ether	**25**		25	20	(7)
glycols, glycoethers	34590-94-8	Dipropylene glycol monomethyl ether	**3100**	x	3100	3100	
glycols, glycoethers	88917-22-0	Dipropylene glycol monomethyl ether acetate	**3900**		3900	3100	

glycols, glycoethers	29911-27-1	Dipropylene glycol mono-n-propylether	**740**		740	650	
glycols, glycoethers	29911-28-2	Dipropylene glycol mono-n(t)-butylether	**810**		810	650	
glycols, glycoethers	35884-42-5						
glycols, glycoethers	132739-31-2						
glycols, glycoethers	20324-33-8	Tripropylene glycol mono-methylether	**2000**		2000	1000	
glycols, glycoethers	25498-49-1						
glycols, glycoethers	63019-84-1	Dipropylene glycol dimethyl ether	**1300**	x	1300	1300	
glycols, glycoethers	89399-28-0			x			
glycols, glycoethers	111109-77-4			x			
glycols, glycoethers	2517-43-3	3-Methoxy-1-butanol	**500**		500	-	
glycols, glycoethers	1569-01-3	1,2-Propylene glycol n-propylether	**1400**		1400	-	
glycols, glycoethers	30136-13-1						
glycols, glycoethers	5131-66-8	1,2-Propylene glycol n-butylether	**1600**		1600	-	
glycols, glycoethers	29387-86-8						
glycols, glycoethers	15821-83-7						
glycols, glycoethers	63716-40-5						
glycols, glycoethers	104-68-7	Diethylene glycol phenylether	**1450**		1450	-	
aldehydes	126-30-7	Neopentyl glycol	**1000**		1000	-	
aldehydes	50-00-0	Formaldehyde	to be determined		-	10	(8)
aldehydes	75-07-0	Acetaldehyde	**1200**	x	-	200	(9) (10)
aldehydes	123-38-6	Propanal	to be determined		-	8	
aldehydes	123-72-8	Butanal	**650**	x	640	650	
aldehydes	110-62-3	Pentanal	**800**	x	1700	1700	
aldehydes	66-25-1	Hexanal	**900**	x	890	650	
aldehydes	111-71-7	Heptanal	**900**	x	1000	650	
aldehydes	123-05-7	2-Ethyl-hexanal	**900**	x	1100	650	
aldehydes	124-13-0	Octanal	**900**	x	1100	650	
aldehydes	124-19-6	Nonanal	**900**	x	1300	650	
aldehydes	112-31-2	Decanal	**900**	x	1400	650	
aldehydes	4170-30-3	2-Butenal (Crotonaldehyde)	**1**		1	6	
aldehydes	123-73-9						
aldehydes	15798-64-8						
aldehydes	1576-87-0	2-Pentenal	**12**		12	6	
aldehydes	764-39-6						
aldehydes	31424-04-1						
aldehydes	6728-26-3						
aldehydes	505-57-7						

aldehydes	16635-54-4	Hexenal	**14**		14	6	
aldehydes	1335-39-3						
aldehydes	73543-95-0						
aldehydes	2463-63-0	2-Heptenal	**16**		16	6	
aldehydes	18829-55-5						
aldehydes	57266-86-1						
aldehydes	29381-66-6						
aldehydes	2363-89-5	2-Octenal	**18**		18	6	
aldehydes	2548-87-0						
aldehydes	25447-69-2						
aldehydes	20664-46-4						
aldehydes	2463-53-8	2-Nonenal	**20**		20	6	
aldehydes	18829-56-6						
aldehydes	60784-31-8						
aldehydes	3913-71-1	2-Decenal	**22**		22	6	
aldehydes	2497-25-8						
aldehydes	3913-81-3						
aldehydes	2463-77-6	2-Undecenal	**24**		24	6	
aldehydes	53448-07-0						
aldehydes	1337-83-3						
aldehydes	98-01-1	Furfural	**20**		20	8	
aldehydes	111-30-8	Glutaraldehyde	**2**		2	0.08	
aldehydes	100-52-7	Benzaldehyde	**90**		90	90	
ketones	78-93-3	2-Butanone (ethylmethylketone)	**5000**	x	6000	5000	
ketones	563-80-4	3-Methyl-2-butanone	**7000**	x	7000	7000	
ketones	108-10-1	4-Methyl-2-pentanone (methylisobutylketone)	**830**		830	3000	
ketones	120-92-3	Cyclopentanone	**900**	x	900	900	
ketones	108-94-1	Cyclohexanone	**410**	x	410	410	
ketones	1120-72-5	2-Methylcyclopentanone	**1000**		1000	900	
ketones	583-60-8	2-Methylcyclohexanone	**2300**	x	2300	2300	
ketones	98-86-2	Acetophenone	**490**	x	490	500	
ketones	116-09-6	1-Hydroxyacetone (1-hydroxy-2-propanone)	**2400**		2400	400	
ketones	67-64-1	Acetone	**-**		-	-	(11)
acids	64-19-7	Acetic acid	**1250**		1250	250	
acids	79-09-4	Propionic acid	**310**	x	310	300	
acids	79-31-2	Isobutyric acid	**370**		370	300	
acids	107-92-6	Butyric acid	**370**		370	300	

acids	75-98-9	2,2-Dimethylpropanoic aicd (pivalic acid)	**420**		420	300	
acids	109-52-4	n-Pentanoic acid (valeric acid)	**420**		420	300	
acids	142-62-1	n-Hexanoic acid (caproic acid)	**490**		490	300	
acids	111-14-8	n-Heptanoic acid	**550**		550	300	
esters	124-07-2	n-Octanoic acid	**600**		600	300	
esters	149-57-5	2-Ethylhexanoic acid	**150**	x	50	5	
esters	108-21-4	Propyl acetate (n-, iso-)	**4200**	x	4200	4200	
esters	108-65-6	2-Methoxy-1-methylethyl acetate	**2700**	x	2700	2700	
esters	107-31-3	Methylformiate	**1200**		1200	1200	(12)
esters	592-84-7	n-Butyl formiate	**2000**		2000	1200	
esters	80-62-6	Methyl methacrylate	**2100**		2100	50	
esters		Other methacrylates	**2100**		2100	50	
esters	110-19-0	Isobutyl acetate	**4800**	x	4800	4800	(13)
esters	123-86-4	n-Butyl acetate	**4800**	x	4800	4800	(14)
esters	103-09-3	2-Ethylhexyl acetate	**690**		690	1100	
esters	96-33-3	Methyl acrylate	**180**	x	180	200	
esters	140-88-5	Ethyl acrylate	**200**	x	210	200	
esters	141-32-2	n-Butyl acrylate	**110**	x	110	100	
esters	103-11-7	2-Ethylhexyl acrylate	**380**	x	380	400	
esters		Other acrylates (acrylic acid esters)	**110**	x	110	100	(15)
esters	627-93-0	Dimethyl adipate	**50**	x	50	50	
esters	106-65-0	Dimethyl succinate	**50**	x	50	50	
esters	1119-40-0	Dimethyl glutarate	**50**	x	50	50	
esters	71195-64-7	Diisobutyl diglutarate	**100**		100	-	
esters	925-06-4	Diisobutyl disuccinate	**100**		100	-	
esters	105-75-9	Dibutyl fumarate	**50**	x	50	50	
esters	105-76-0	Maleic acid dibutylester	**50**	x	50	50	
esters	13048-33-4	Hexamethylene diacrylate	**10**	x	10	10	
chlorinated hydrocarbons	96-48-0	Butyrolactone	**2700**		2700	1800	
chlorinated hydrocarbons	115-95-7	Linalool acetate	to be determined		-	200	
chlorinated hydrocarbons	127-18-4	Tetrachloroethene	to be determined		-	250	
others	56-23-5	Tetrachloromethane	to be determined		-	35	
others	106-46-7	1,4-Dichlorobenzene	**150**	x	-	60	
others	123-91-1	1,4-Dioxane	**73**		73	3000	
others	105-60-2	ε-Caprolactam	**300**	x	240	100	
others	872-50-4	N-Methyl-2-pyrrolidon	**400**		400	800	(16)

others	556-67-2	Octamethylcyclotetrasiloxane (D4)	**1200**	x	1200	1200
others	541-02-6	Decamethylcyclopentasiloxane (D5)	**1500**		1500	-
others	540-97-6	Dodecamethylcyclohexa-siloxane (D6)	**1200**		1200	-
others	100-97-0	Hexamethylenetetramine	**30**	x	30	30
others	96-29-7	2-Butanonoxime	**20**		20	90
others	126-73-8	Tributyl phosphate	to be determined		-	2
others	78-40-0	Triethyl phosphate	**75**		75	2
others	26172-55-4	5-Chloro-2-methyl-2H-isothiazol-3-one (CIT)	**1**	x	1	1
others	2682-20-4	2-Methyl-4-isothiazolin-3-one (MIT)	**100**	x	100	100
others	121-44-8	Triethylamine	**42**		42	7
	109-99-9	Tetrahydrofuran	**1500**		1500	-
	68-12-2	Dimethylformamide	**15**		15	-

The document of reference for the AgBB values can be found via following link:
http://www.umweltbundesamt.de/sites/default/files/medien/355/dokumente/agbb_evaluation_scheme_2012.pdf

(0) AgBB will update the 2012 list end of 2014. It is expected that they will adopt the EU-LCI values.

(1) The Royal Decree has an additional individual limit for toluene of 300 µg/m³ (not for calculation of the R-value). This is due to the limit in the Flemish indoor air decree.

(2) The AgBB Value might be changed in future towards 300.

(3) In the ECA report n°29 the AgBB value is wrongly referenced as 1100 instead of 500. This means that a EU-LCI value needs to be established.

(4) In the ECA report n°29 the AgBB value is wrongly referenced as 1100 instead of 500. As there was no EU-LCI value, the Belgian list takes over the correct AgBB value.

(5) This substance might be added to the AgBB list with an LCI value of 1600.

(6) The AgBB Value might be changed in future towards 1000. This might need revision of the EU-LCI value.

(7) This CAS number is not consistent with the AgBB number.

(8) The Royal Decree has an additional individual limit for formaldehyde of 100 µg/m³ (not for calculation of the R-value). This is due to the limit in the Flemish indoor air decree.

(9) The Royal Decree has an additional individual limit for acetaldehyde of 200 µg/m³ (not for calculation of the R-value). This is due to the limit in the Flemish indoor air decree.

(10) The AgBB Value might be changed in future towards 1200. This might need revision of the EU-LCI value.

(11) The AgBB Value might be changed in future towards 1200.

(12) In the ECA report n°29 the AgBB value is wrongly referenced as 1200 even though it is not on the AgBB list. This means that a new EU-LCI value needs to be established.

(13) The AgBB Value might be changed in future towards 3000.

(14) The AgBB Value might be changed in future towards 3000.

(15) In the ECA report n°29 the Anses value is wrongly referenced as 110 instead of 100. This has no influence on the EU-LCI value.

(16) In the ECA report n°29 the Anses value is wrongly referenced as 400 instead of 800. This causes the need for a new EU-LCI value.