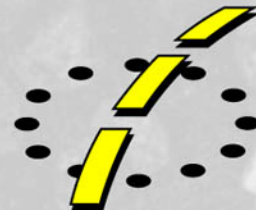


Asphalt in figures

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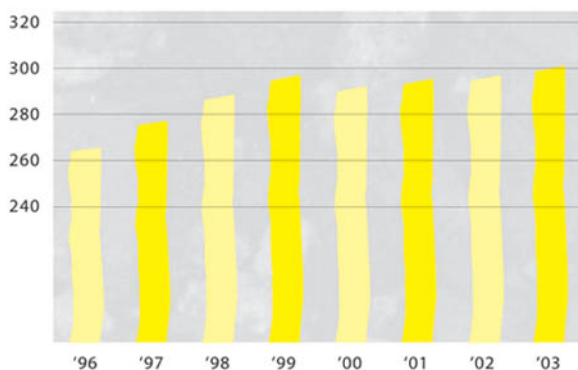
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EUROPEAN ASPHALT PAVEMENT ASSOCIATION

Total Production of Hot Mix Asphalt in Europe (in million tonnes)



Consumption of bitumen in the road Industry (in million tonnes)

Country	Tonnage '03	% Mod. '01	% Mod. '02	% Mod. '03	Emulsions
Austria	0,6		26	50	10
Belgium	0,225	18	20	23	
Croatia	0,185	3,5	3	0,021	
Czech Republic	0,34	17,5	15,4	17,8	0,02
Denmark	0,15	5	5	5	0,02
Estonia	0,05			0	0,002
Finland	0,305	1	1	1	0,01
France	2,9	< 10	<10	< 10	0,98
Germany	2,24	13,7	14	13	
Greece	0,45	0,1		2	2
Hungary	0,15	10,3	17,6	10,3	0,003
Iceland	0,025	0	0		
Ireland	0,26	10	10	11	0,02
Italy	2,08	7,4	7,4	7,7	0,13
Netherlands	0,3	6,7	10		0,03
Norway	0,228	3	1	0	0,003
Poland	0,636	6	3	2	0,1
Portugal		11	11		
Romania		= 0			
Slovakia	0,07	20	19	22	0,013
Slovenia	0,08	9	8	12,5	
Sweden	0,4	2	2	2	0,05
Switzerland	0,26	7	7	7	
Turkey	1,2	0,4	1,3	0,5	0,11
United Kingdom	2	5	6	6	0,15
Israel		0,61			
Australia	0,69	10	12	10	0,048
Japan	2,81		14	17,2	0,14
Canada - Ontario	0,6			10	

Companies in the asphalt industry

Country	Production only	Production & Laying	Laying only
Austria	40	35	10
Belgium	12	20	> 40
Croatia	0	50	13
Czech Republic	20	29	~ 40
Denmark	0	9	~ 10
Estonia	1	11	5
Finland		10	15
France	0	30	> 1.000
Germany	270	150	~ 3.000
Greece	20	80	30
Hungary	3	27	5
Iceland	6	3	14
Ireland	1	27	60
Italy	30	620	> 3.500
Netherlands	25	13	49
Norway	0	15	30
Poland	3	285	35
Portugal			
Slovakia		16	
Slovenia	3	13	> 5
Spain			
Sweden	0	15	60
Switzerland	50	58	> 290
Turkey	3	110	23
United Kingdom	25	25	> 1.000
Europe	492	1.571	> 9.200
Australia	30	30	> 100
Canada - Ontario	56	56	200
Israel	26	26	20
Japan		927	

Interesting sites on the internet:

http://www.eapa.org	European Asphalt Pavement Association
http://www.siteb.it	Italian Asphalt Association
http://www.sdruzeni-silnice.cz	Association of Road Contractors Praha
http://www.vbwASFalt.org	Dutch Asphalt Pavement Association
http://www.asfaltindustrien.dk	Danish Asphalt Pavement Association
http://www.asfaltliito.fi	Finnish Asphalt Association
http://www.usirf.com	French Asphalt Pavement Association
http://www.asphalt.de	German Asphalt Association
http://www.hapa.hu	Hungarian Asphalt Pavement Association
http://www.aef.no	Norwegian Asphalt Contractors Association
http://www.qpa.org	UK Quarry Products Association
http://www.rpl.pt/arpobtet/	Portuguese Asphalt Pavement Association
http://www.zdruzenje-zas.si	Slovenian Asphalt Pavement Association
http://www.asmdug.tr	Turkish Asphalt Contractors Association
http://www.ir.ro/apdp/indexe.htm	Romanian Professional Association of Roads and Bridges
http://www.mischgut-industrie.ch	Schweizerische Mischgut-Industrie
http://www.asphalt.or.at	Gestrata
http://www.ramtech.hr	Croatian company for the Testing, Research & Consulting in Asphalt Technology

Porous Asphalt

Country	Total area in million m ²	% of total annual production in '03	In '03 applied area in million m ²
Austria		0,5	
Belgium		<1	nihil
Czech Republic		1,1	0,4
Denmark	1,5	0,2	0,1
Hungary		0,03	
Greece	1,2	0,1	0,02
Iceland	< 0,1		
Ireland		0,8	0,24
Italy	22		
Netherlands	50	7,2	5,7
Portugal			
Slovakia			0,011
Slovenia			
Sweden		0,5	0,2
Switzerland	15	2,1	2,2
Israël		~0	
Japan	154	4,2	26
New Zealand		9,2	

Hot Rolled Asphalt

Country	% of total production 2001	% of total production 2002	% of total production 2003
Ireland	15	15	16,5
New Zealand			57,9
United Kingdom			7,0

Cold Bituminous Mixes (annual tonnage)

Country	2001 (tonnes)	2002 (tonnes)	2003 (tonnes)
Austria	20.000	50.000	50.000
Belgium		30.000	35.000
Croatia	5.000	5.000	10.000
Czech Republic	5.400	3.380	2.950
Denmark	0	0	0
Estonia		1.400	8.902
Finland	700.000	889.000	715.000
France	1.500.000	1.500.000	1.600.000
Greece	1.000		1.500
Hungary	8.620	17.200	15.437
Ireland	200.000	200.000	200.000
Italy		72.000	75.000
Latvia	0		
Netherlands	35.000	14.000	15.000
Norway	149.000	139.000	67.000
Poland	39.000	41.000	52.000
Portugal	180.615	635.000	
Romania	300.000		
Slovakia	0	0	1.135
Spain			
Sweden	850.000	600.000	600.000
Switzerland	500.000	450.000	430.000
Turkey	715.400	850.000	1.570.000
Israël	15.500	15.000	15.000
Japan	690.000	222.000	193.000
New Zealand	20.000		16.620

Application of Slurry Seal and Micro-Surfacing / Surface Dressing in million m²

Country	SS & MS 2003	Trend '02/'03	SD 2003
Austria	1	<	1
Croatia	0,1	<	
Czech Republic	1,2	<	1,4
Denmark	0,3	=	5
Estonia	0	=	7,9
France	> 26	>	< 330
Greece	0,02		
Hungary	0,62	=	7,9
Iceland			3,2
Ireland	0,15	=	14
Italy	3,05	=	5,5
Netherlands	0,8	=	1
Norway	0	=	0,1
Poland	0,82	>	2,9
Portugal			
Romania			
Slovakia			1
Slovenia	0,08	>	0,08
Sweden	0,5	=	8
Switzerland	0,35	=	0,35
Turkey	0	<<	154
Israël	~ 0,	=	0
Japan	0,027	<	

Recycling

Country	available materials (x 1.000 tonnes)	% actually used in warm recycling	% of the new production which contains reclaimed material
Austria	450.000	5	5
Belgium	1.500	35	30
Croatia	50	25	
Czech Republic	550	10-40	10-15
Denmark	293	65	47
France	5.100	10-45	<10
Germany	14.000	82	21
Greece	20		
Hungary		15	0,48
Ireland	20	30	>1
Italy	14.000	18	5,9
Netherlands	4.000	60	58
Norway	263	17	10
Poland	900	15-30	0,5
Romania			
Slovakia	11		
Slovenia	20	40	3
Sweden	750	15	20
Switzerland	2.100	19	
United Kingdom	5.000		
Japan	29.621	48,7	67,4
Canada - Ontario	2.500	50	30

Key figures of the European asphalt industry in 2003

In this overview, between a number of European countries, data refer to asphalt production, application and the use of binders. Furthermore several reference data on the road in general are given.

The data have been established with the assistance of the members of the European Asphalt Pavement Association, and are at the moment the best available and reliable for the asphalt industry.

(A blank or the omission of reference to a particular country in any table means that no data are supplied or available and not necessarily that the particular product is not produced in that country; '-' means the number is insignificant; "...*"figure not provided).

Total Production of Hot Mix Asphalt in 1998 - 2003 (in million tonnes)

Country	1998	1999	2000	2001	2002	2003
Austria	6,5	6,5	5,9	9,5	10,0	10,0
Belgium	4,2	5,0	4,8	4,5	4,5	4,8
Croatia	1,6	1,7	1,7	1,8	1,9	3,5
Czech Republic	4,3	4,6	4,7	4,3	4,4	5,8
Denmark	3,1	3,3	3,3	2,8	2,8	2,9
Estonia	0,5	0,7	0,7	0,6	1,1	0,9
Finland	3,7	4,1	3,8	3,6	4,1	4,9
France	38,0	39,5	39,9	40,5	39,4	38,7
Germany	63,5	68,5	65,0	63,0	58,0	55,0
Greece	5,8	6,5	6,5	6,5	6,5*	7,2
Hungary	2,8	2,4	2,5	2,9	3,2	3,1
Iceland		0,3	0,3	0,3	0,2	0,2
Ireland	2,4	2,6	2,9	3,1	3,2	3,3
Italy	40,9	41,0	37,3	39,8	39,9	42,4
Latvia	0,4	0,7	0,6	0,6*	0,6*	0,6*
Netherlands	7,5	8,4	7,5	7,7	7,9	7,9
Norway	4,7	4,8	4,5	4,1	3,9	4,1
Poland	8,0	10,0	11,6	11,2	10,8	12,0
Portugal	9,5	7,7	5,6	5,5	6,0	6,0*
Romania	1,5	1,7	2,8	2,5	2,8	2,8*
Slovakia	2,0	2,0	1,1	1,1	1,2	1,2
Slovenia	1,4	1,8	1,8	1,4	1,4	1,6
Spain	25,7	25,7*	30,0	30,0*	30,0*	30,0*
Sweden	6,3	7,3	7,2	6,7	6,7	6,6
Switzerland	4,7	5,1	5,2	5,1	5,0	4,8
Turkey	12,2	9,5	10,7	11,3	14,7	13,2
United Kingdom	27,5	26,0	25,5	26,5	27,8	27,8
Europe	288,7	297,4	293,4	296,9	298,0	301,3
Israël	5,3	5,3	5,1	5,6	6,2	6,1
Australia	6,7	7,0	6,5	6,7	7,0	6,5
Japan	70,1	71,4	71,0	69,4	68,1	63,7
Canada - Ontario	13,5	14,0	14,5	14,0	14,0	13,0
New Zealand	0,7	0,7*	0,7*	0,6		0,8
South Africa						
U.S.A.	465,0	545,0	535,0	520,0	500,0	500,0

Application in surface-, binder- and base courses in % of total annual HMA production

Country	Surface course	Binder course	Base course
Austria			
Belgium	51		49
Croatia	30	15	55
Czech Republic	48	36	16
Denmark	46	5	49
Estonia	65	32	3
Finland	97	*)	3
Germany	31	17	52
Hungary	48	29	23
Iceland	95	5	0
Ireland	40	20	40
Italy	60	20	20
Netherlands	35	7	58
Norway	80	10	10
Poland	52	25	23
Portugal			
Romania			
Slovakia	65	18	17
Slovenia	53	35	12
Sweden	45	20	35
Switzerland	14	31	55
Turkey	59	27	14
United Kingdom	44	*)	56
Japan	79	13	8
Canada - Ontario	55	8	37
New Zealand	89	1	10

* = included in Base course

Stone Mastic Asphalt

Country	Total area in million m ²	% of total annual production in '03	In '03 applied area in million m ²
Austria		10	15
Belgium		16	8,5
Croatia		65	
Czech Republic		10	4
Denmark		4,3	1,4
Estonia	22,4	5	0,4
Finland		6,6	
Germany		9	58
Hungary		4,95	
Iceland		5	
Ireland		2,5	0,74
Netherlands		8,8	
Norway		3	
Poland	33,2	9	10
Portugal			
Romania			
Slovakia		5,7	0,65
Slovenia		5	1
Sweden		20	15
Turkey	2,72	0,01	0,012
Israël		3	
Japan	6,82		1,77
New Zealand		3,1	

Béton Bitumineux Mince

Country	Total area in million m ²	% of total annual production in '03	In '03 applied area in million m ²
Belgium		2	1,5
Croatia		35	
Czech Republic		1,2	0,5
Hungary		1,82	
Netherlands		0,8	
Japan	2,28		0,16
Switzerland	13	1,6	1,8

Number of Production Sites

Country	Stationary plants		Mobile plants		Number fit for warm recycling	
	2002	2003	2002	2003	2002	2003
Austria	125	120	0	0	0	5
Belgium	42	42	0	2	15	16
Croatia	61	64	5	4	1	3
Czech Republic**	99	100	2	2	40	70
Denmark***	46	47	2	2	44	45
Estonia	15	16	9	12	7	9
Finland***	67	55	23	27	23	27
France**	405	408	104	100	>150	>150
Germany	720	710	0			
Greece	50*	50	100*	50		
Hungary***	73	75	7	7	13	14
Iceland	6	6	3	3	1	1
Ireland	52	53	15	16	8	8
Italy***	650	650	10	10	180	180
Latvia	23*		4*		2*	
Netherlands	55	48	0	0	41	47
Norway	85	85	12	12	14	14
Poland	284	288	23	25	16	16
Portugal	131		180		6	
Slovakia	38	41	0		0	
Slovenia	16	16	1	1		0
Spain	300*		120*			
Sweden**	90	90	18	18	40	40
Switzerland	129	132	1	1	36	38
Turkey***	235	241	30	30		
United Kingdom***	300	300	10			
Europe	4.097	3.637	679	322	637	683
Australia	108	109	10	12		23
Canada - Ontario	135	130	28	30	140	135
Israël						
Japan	1.451	1.412	28	18		1.218
New Zealand	30	28	8	7	11	0,8

* Estimation – no figure provided

** A number of plants is operated and owned by the road administration

*** A number of plants is operated and owned by the road administration and municipalities

<http://www.malbik.is>
<http://www.eurobitume.org>
<http://www.oecd.org/cem>
<http://www.aipcr.lcpc.fr>
<http://www.users.skynet.be/erf>
<http://www.fehr.org>
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<http://www.cenorm.be>
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<http://www.asphaltinstitute.org>
<http://www.ohmpa.org>
<http://www.sabita.org>
<http://www.dohkenkyo.or.jp>
<http://www.roadingnz.org.nz>

HOFDI Asphalt Plant
 European Bitumen Association
 World Economic Organisation
 World Road Congress
 European Road Federation
 European Road Research Laboratories
 European Organisation for Technical Approvals
 The European Council for Construction Research, Development and Innovation
 European Committee for Standardization
 European Contractors Organisation
 European Bank for Eastern Europe
 European Investment Bank
 US National Asphalt Pavement Association
 Australian Asphalt Pavement Association
 US Bitumen Organisation
 Ontario Hot Mix Producers Association
 South African Asphalt and Bitumen Association
 Japanese Road Contractors Association
 New Zealand Asphalt and Bitumen Association