Fatal and non-fatal accidents in rubber products in Japan in 1999-2022

rubber products industry Code No.010806

Type of accidents in rubber products in 1999-2022

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
fall from height	22	22	27	22	31	21	27	24	18	33	11	13	16	18	19	11	18	15	10	13	20	17	12	17	457
falling to same level	36	34	30	37	38	43	38	32	37	40	22	15	36	33	28	34	24	30	36	37	25	35	28	42	790
crash	9	17	12	13	9	11	14	16	9	13	7	10	9	11	5	4	10	7	9	8	9	12	8	5	237
struck by flying or falling object	35	21	27	21	20	23	20	18	17	18	15	19	17	28	14	10	15	10	9	15	9	20	10	16	427
collapse	7	6	4	5	8	3	3	4	2	3	3	4	1	3	5	3	7	2	3	2	4	1	3	5	91
crashed by	10	9	6	12	10	5	11	9	14	14	7	8	6	7	11	6	7	12	5	10	9	9	4	7	208
caught in/between	187	231	175	171	181	179	161	169	150	153	93	109	107	121	98	89	85	75	80	88	111	86	90	79	3,068
cut	42	49	43	46	43	34	33	33	35	39	20	20	26	19	24	22	23	27	17	29	17	20	19	21	701
injury to the sole of the foot			1	1			1		3		1		1							1					9
drown													1												1
contact to high/low-	6	10	12	8	7	9	11	10	11	8	2	11	5	10	8	6	12	4	6	11	7	8	5	6	193

temperature																									
contact to harmful substance			4	5	3	1	2	3	1	5	1	3	1	3		1	1	2	1	3	2	2	1	1	46
electric shock			2		1	1									1						1				6
explosion	1									6		1				1				1					10
burst				1	2		1			2															6
fire		2			1				2	1		1				2						1			10
traffic accident (public road)	6	2		4	7	2	6	8	2	1	4	2	2	1	3	1	2		4	3	2		1	3	66
traffic accident (others)									1			1													2
reaction to motion/improper motion	28	25	25	17	20	28	38	30	38	26	24	27	46	35	26	29	24	22	41	21	22	22	23	37	674
others	1	1	2	2	1		1		2		1	1	1		2	1				1		7	10	2	36
unclassifiable			2		1		1						1							1	1				7
total	390	429	372	365	383	360	368	356	342	362	211	245	276	289	244	220	228	206	221	244	239	240	214	241	7,045

Causal agents (large) of fatal and non-fatal accidents in rubber products in 1999-2022

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
machine	203	242	184	171	189	195	170	169	165	159	101	107	113	128	112	96	94	83	87	104	102	91	89	86	3,240

crane, conveying machine	34	39	20	40	47	37	36	37	31	34	19	23	20	19	15	8	20	14	14	18	27	23	16	18	609
other equipment	56	56	63	64	49	46	56	50	46	83	31	41	47	38	39	38	45	52	42	45	32	51	39	44	1,153
temporary buildings, establishments	39	32	39	38	35	39	47	34	34	36	25	19	35	39	31	29	31	35	26	33	31	31	28	38	804
substance, material	23	25	35	27	29	12	20	23	34	19	15	26	17	22	17	19	18	10	17	16	17	12	14	21	488
load	24	16	17	10	19	23	17	27	14	19	11	11	24	20	16	15	8	2	14	10	11	12	7	14	361
environment	2	1	3	2	2	2	4	2	1	2	1	5	2	7	2	5	3		3	9	5	3	3	6	75
others	9	18	11	13	13	6	18	14	17	10	8	13	18	16	12	10	9	10	18	9	14	17	18	14	315
total	390	429	372	365	383	360	368	356	342	362	211	245	276	289	244	220	228	206	221	244	239	240	214	241	7,045

Causal agents (middle) of fatal and non-fatal accidents in rubber products in 1999-2022

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
engine	1		1			1					1														4
power transmission mechanism	6	5	5	2	3	7	2	4	6	4	4	1	4	4	5	4	2	2	1	6	3		1	3	84
woodworking machine	1	1			2			2		3	3	1				1	3	1			1				19

construction machine			1							1					2										4
metal manufacturing machine	36	43	33	26	33	25	29	22	18	13	3	14	19	14	13	13	11	15	11	17	11	25	12	21	477
general machine	159	193	144	143	151	162	139	141	141	138	90	91	90	110	92	78	78	65	75	81	87	66	76	62	2,652
mobile silviculture machine																									
crane	7	3	5	3	7	5	5	3	6	4	1	2	6	1	2	1	4		4	2		5	2	2	80
conveying machine	24	32	15	33	33	29	24	27	22	28	15	19	12	17	12	6	15	13	7	12	23	15	13	13	459
vehicle	3	4		4	7	3	7	7	3	2	3	2	2	1	1	1	1	1	3	4	4	3	1	3	70
pressure vessel	1	2	2	1	3	2	3	2	2	7	1	1	1	2	1		4	2			1			2	40
chemical facilities	3	1		1	1								1	1					1	1					10
welding equipment																		1							1
kiln, caldron	1	1	2	1	1	1			1	3	1	1			1	5			1						20
electric equipment			2		1	1				1				1		1			2			4			13
human power machine, tools	26	28	25	29	18	15	18	23	15	26	11	21	23	13	15	12	13	25	17	18	13	19	15	20	458
tools	19	17	23	18	19	23	23	20	22	32	8	10	16	12	20	12	18	17	13	17	15	17	16	16	423
other equipments,																									

facilities	6	7	9	14	6	4	12	5	6	14	10	8	6	9	2	8	10	7	8	9	3	11	8	6	188
temporary buildings, establishments	39	32	39	38	35	39	47	34	34	36	25	19	35	39	31	29	31	35	26	33	31	31	28	38	804
hazards, harmful substances	1	5	5	5	6	3	2	3	7	4		3	1	2	2	4	2	3	1	3	2	3	3	1	71
materials	22	20	30	22	23	9	18	20	27	15	15	23	16	20	15	15	16	7	16	13	15	9	11	20	417
load	24	16	17	10	19	23	17	27	14	19	11	11	24	20	16	15	8	2	14	10	11	12	7	14	361
natural environment	2	1	3	2	2	2	4	2	1	2	1	5	2	7	2	5	3		3	9	5	3	3	6	75
other causal agent		9	1	2	4		1	4		1		2		2	2	2	2		2	1	3	5	5	1	49
no causal agent	7	9	8	9	8	6	16	10	17	7	8	11	17	14	10	8	7	10	15	7	10	11	13	13	251
unclassifiable	2		2	2	1		1			2			1						1	1	1	1			15
total	390	429	372	365	383	360	368	356	342	362	211	245	276	289	244	220	228	206	221	244	239	240	214	241	7,045

Causal agents (small) of fatal and non-fatal accidents in rubber products in 1999-2022

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
engine			1								1														2
power transmission mechanism			5		3		2	4	6	4	4	1	4	4	5	4	2	2	1	6	3		1	3	64

circular sawing machine					1			2		1	3	1					1				1				10
band sawing machine					1												1								2
wood planer machine																									
hollow chisel mortiser, wood borer										1															1
chamfering machine, router, woodworking milling machine																									
chain saw																1									1
other woodworking machines										1							1	1							3
leveling, transporting or loading machine			1																						1
excavating machine										1					2										3
foundation work machine																									
hardening machine																									

demolition machine																									
vehicle for high lift work																									
other construction machines																									
lathe			6		8		5	2	3	5	1	2	4	4	1	3	2	4	2	6	5	4	3	5	75
drill press, milling machine			3		2		1		3	2		1	1		1	1	2	3	1	2	1	3			27
grinding machine, buffing machine			1		1		3	4	5			1	4	3	2	2	1		2	1	2		1	4	37
power press			9		12		8	9	2	5	1	4	5	4	6	2	4	2	4	5	1	11	5	8	107
forging pressure hammer							1																		1
shearing machine			5		6		5	1	1			4	1	2	1	3	1	3	2	1	1	3	2	2	44
other metal manufacturing machines			9		4		6	6	4	1	1	2	4	1	2	2	1	3		2	1	4	1	2	56
centrifugal machine								1					1					1							3
mixer, grinder			8		8		7	11	8	5	5	2	3	7	3	5	8	4	2	2	5	7	5	4	109
roll machine (except printingroll machine)			38		28		19	31	17	28	20	25	24	28	20	21	10	15	21	14	33	15	24	17	448

injection molding machine			17		15		17	14	18	13	6	14	9	8	5	6	4	6	8	7	5	2	4	3	181
food manufacturing machine									1																1
printing machine					2						1														3
industrial robot								1				1	1							1				1	5
other general power machines			81		98		96	83	97	92	58	49	52	67	64	46	56	39	44	57	44	42	43	37	1,245
felling machine																									
mobile logging machine																									
skyline yarding machine																									
other mobile silviculture machine																									
crane			3		6		5		4	2		1	3	1	2	1	4		2	2		4	1	1	42
mobile crane								1																	1
derrick crane																									
elevator, lift			2		1			2	2				3						1				1		12
cargo lifting appliance																									
gondola																									

lumberyard equipment, logging cableway																									
simple skyline yarding equipment																									
other powered crane										2	1	1							1			1		1	7
truck			1		5		5	7	1	1	3	4	2	7	2	2	2		4	2	2	1	1	2	54
forklift			6		12		8	10	8	13	7	7	4	5	1	3	5	8	2	3	7	5	1	5	120
railway equipment																				1					1
conveyor			7		12		7	9	9	13	4	5	5	5	8	1	7	4	1	5	10	6	8	6	132
loader																									
straddle carrier																									
rough terrain hauler																									
other powered conveying machines			1		4		4	1	4	1	1	3	1		1		1	1		1	4	3	3		34
cars, bus, motorcycle					7		7	6	3	2	3	2	1	1	1	1	1	1	3	3	4	3	1	3	53
railway vehicle																									
other vehicles								1					1							1					3
boiler										1		1					2				1				5

pressure vessel			2		3		1	2	1	6	1		1	2	1		2	2						2	26
other pressure vessels							2		1																3
chemical facilities					1								1	1					1	1					5
gas welding equipment																									
arc welding equipment																									
other welding equipment																		1							1
kiln, caldron			1							1		1			1	4									8
industrial dryer			1		1					1	1					1			1						6
other kiln, caldron									1	1															2
transmission			1		1											1			2						5
electric power facilities																						1			1
other electrical equipment			1							1				1								3			6
human power cranes							1	1	2			1										1		5	11
human power hauling equipment			10		10		6	7	5	15	4	8	12	8	7	6	8	12	9	5	6	9	4	6	157

human power machine			2						1					1	1	2	2			1	1	1	1	1	14
hand tool			13		8		11	15	7	11	7	12	11	4	7	4	3	13	8	12	6	8	10	8	178
ladder			10		9		7	8	7	13	3	3	8	5	8	6	4	7	2	8	8	5	5	4	130
slinging tool			2					1		1	1	2	2			1	1	3	2	2			1	2	21
other tools			11		10		16	11	15	18	4	5	6	7	12	5	13	7	9	7	7	12	10	10	195
other equipment, facilities			9		6		12	5	6	14	10	8	6	9	2	8	10	7	8	9	3	11	8	6	157
scaffolding																					1				1
timbering																									
stairs, landing stage			10		10		14	9	6	8	5	3	8	7	3	5	7	7	5	7	6	7	8	11	146
opening					1					1	1		1	2				2	1		2		2		13
roof, beam, haze, crossbeam, principal rafter			1		1			1	1	1	1				2		1				1				10
working platform, boot board			8		4		6	4	4	7	3	3	4	7	5	4	5	10	3	5	8	2		3	95
passage			13		13		19	13	17	12	8	9	16	14	13	13	14	11	12	17	6	18	16	15	269
building, establishment			1		5		4	6	3	5	5	2	4	4	3	5	1	4	3	4	4	3	1	6	73
other temporary buildings,			6		1		4	1	3	2	2	2	2	5	5	2	3	1	2		3	1	1	3	49

establishments																									
explosive substance																									
inflammable substance			1		1				5					1		1									9
inflammable gas																									
harmful substance			1		2		2	2		1		3	1	1		1	1	2		2	1	1	2	1	24
radiation																									
other hazards, harmful substances			3		3			1	2	3					2	2	1	1	1	1	1	2	1		24
metal material			16		15		9	9	16	8	9	9	10	12	8	6	12	4	5	10	9	7	5	10	189
lumber, bamboo			1		3		1		1				1						1				1		9
stone, sand, substance									1								1								2
other materials			13		5		8	11	9	7	6	14	5	8	7	9	3	3	10	3	6	2	5	10	144
load			15		15		15	20	14	16	10	10	20	15	14	12	8	2	12	10	8	11	7	14	248
machine/equipment as load			2		4		2	7		3	1	1	4	5	2	3			2		3	1			40
natural ground, rock			1		1															1					3
standing tree																			1						1
water													1		1						1	1			4
abnormal																									

environment																									
high/cold temperature environment			2		1		3	1	1			4	1	5	1	2	3		1	5	4	1	2	2	39
other environments							1	1		2	1	1		2		3			1	3		1	1	4	21
other causal agent			1		4		1	4		1		2		2	2	2	2		2	1	3	5	5	1	38
no causal agent			8		8		16	10	17	7	8	11	17	14	10	8	7	10	15	7	10	11	13	13	220
unclassifiable			2		1		1			2			1						1	1	1	1			11
total	390	429	372	365	383	360	368	356	342	362	211	245	276	289	244	220	228	206	221	244	239	240	214	241	7,045

Workers age of fatal and non-fatal accidents in rubber products in 1999-2022

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
19 years old or less	18	18	4	15	8	10	8	7	13	13	7	8	4	5	9	6	5	3	1	6	4	5	8	6	191
20-29	80	84	90	68	83	77	75	84	79	70	42	50	54	48	47	39	42	31	38	38	40	37	31	42	1,369
30-39	56	89	63	74	69	93	88	74	83	78	45	61	72	70	56	55	53	50	38	55	55	42	45	56	1,520
40-49	82	82	72	76	76	60	75	67	61	71	36	43	58	63	52	51	54	46	53	56	68	69	53	60	1,484
50-59	123	120	100	103	104	90	90	87	70	81	53	52	60	54	46	38	41	47	54	49	43	50	44	33	1,632
60 years old or more	31	36	43	29	43	30	32	37	36	49	28	31	28	49	34	31	33	29	37	40	29	37	33	44	849
total	390	429	372	365	383	360	368	356	342	362	211	245	276	289	244	220	228	206	221	244	239	240	214	241	7,045

Workers' number of workplace of fatal and non-fatal accidents in rubber products in 1999-2022

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
9 workers or less	61	75	58	65	73	85	62	74	50	47	25	36	29	34	32	30	22	29	33	30	24	17	20	22	1,033
10-29	85	116	108	98	103	88	93	73	67	77	72	58	59	64	58	42	54	49	42	57	41	50	49	38	1,641
30-49	70	69	43	65	49	49	51	49	56	40	19	31	38	52	31	31	36	20	42	31	39	33	35	43	1,022
50-99	54	41	50	40	57	41	52	50	48	45	25	26	45	31	39	36	28	43	33	35	45	39	42	44	989
100-299	63	67	62	51	61	48	50	68	68	89	37	56	63	50	48	46	55	29	34	45	46	53	35	46	1,270
300 workers or more	57	61	51	46	40	49	60	42	53	64	33	38	42	58	36	35	33	36	37	46	44	48	33	48	1,090
total	390	429	372	365	383	360	368	356	342	362	211	245	276	289	244	220	228	206	221	244	239	240	214	241	7,045

Month of fatal and non-fatal accidents in rubber products in 1999-2022

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
January	29	41	21	35	24	23	21	25	28	39	28	16	19	24	13	12	22	25	20	21	23	21	16	25	571
February	41	31	35	32	33	31	45	36	38	29	13	19	18	26	26	20	27	14	16	22	11	23	19	25	630
March	40	45	48	30	32	33	25	29	25	25	16	25	24	24	15	13	14	11	30	24	18	18	23	24	611
April	29	35	27	35	35	27	25	21	39	29	11	23	24	30	18	18	21	18	15	14	22	19	20	11	566
May	24	45	29	25	38	28	28	29	28	24	14	18	21	28	30	14	17	15	16	20	18	16	9	22	556
June	35	36	34	27	36	32	33	27	22	29	11	19	21	24	23	27	21	10	18	26	23	22	12	12	580

July	34	33	37	43	31	35	32	28	31	31	20	22	30	19	21	15	22	15	12	17	23	15	19	17	602
August	30	31	28	30	37	26	25	38	25	35	14	20	27	19	18	14	14	25	25	17	15	22	13	22	570
September	32	36	25	26	44	31	35	34	28	31	30	19	19	18	20	25	22	14	15	19	21	25	26	25	620
October	31	32	31	32	32	38	36	37	29	38	20	21	22	26	23	33	12	18	17	15	24	22	18	23	630
November	37	37	32	25	19	24	33	29	20	28	19	23	26	25	24	17	19	24	20	28	26	16	25	19	595
December	28	27	25	25	22	32	30	23	29	24	15	20	25	26	13	12	17	17	17	21	15	21	14	16	514
total	390	429	372	365	383	360	368	356	342	362	211	245	276	289	244	220	228	206	221	244	239	240	214	241	7,045

Prefecture of fatal and non-fatal accidents in rubber products in 1999-2022

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
Hokkaido	6	4	7		9		5	3	6	4	4	1	2	6	3	1	2	4	2	6	3	7	6	2	93
Aomori		1	3		1					1															6
Iwate		1					3	4	3	1		3	2		1				1				3		22
Miyagi	5	2	6		14		5	2	5	9	8	7	6	2	3	8	9		3	5	3	8	7	3	120
Akita	2	3	3		2		2		1	4		1	1	1	1					1	2	1	1		26
Yamagata	2	4	2		4		1	3		1	2	1	1		1		2			1		1		1	27
Fukushima	9	9	6		2		8	6	6	5	1	3	8	11	6	2	5	2	8	13	7	7	8	7	139
Ibaraki	14	11	13		8		17	10	14	13	10	9	15	3	12	7	5	5	5	5	5	7	8	10	206
Tochigi	16	9	12		7		16	15	12	11	12	7	11	7	7	4	10	9	7	6	13	2	9	5	207
Gunma	7	18	5		9		8	4	5	9	1	5	2	2	5	3	6	5	6	8	8	5	5	4	130

Saitama	27	38	26		35		17	20	31	27	14	19	12	22	17	15	15	9	16	10	19	17	14	19	439
Chiba	12	17	9		10		9	9	15	12	8	11	6	8	6	8	9	4	4	5	13	8	7	8	198
Tokyo	15	18	22		21		22	15	11	11	8	7	12	6	12	6	7	10	11	5	6	3	5	5	238
Kanagawa	18	15	18		10		8	12	6	5	4	3	10	10	8	6	9	9	5	6	8	7	1	9	187
Niigata	3	1	5		2		2	9	6	4	1	2	4	3	5	4	1	1		4	5	5	4	4	75
Toyama	3	4	6		3		3	4	10	3	2	3	2	5	2	3	6	1	2	1	1	3	2	2	71
Ishikawa			2		2		1		2	1			1		1	2			3	2	1	1	2	2	23
Fukui	1				2				2			2		1		1	1	1		2		1	1	1	16
Yamanashi		2			1		3			1			1		2	1	1	1	3		1			1	18
Nagano	2	4	1				1	1	1	4	2	2	2	2	1	5			2	2	3	1	1		37
Gifu	13	14	16		18		12	20	16	12	7	13	12	6	11	14	8	7	9	12	6	11	10	9	256
Shizuoka	21	19	18		16		25	14	17	22	13	15	15	19	11	7	7	9	16	11	8	10	9	8	310
Aichi	34	47	27		37		36	25	24	26	20	11	23	36	25	19	23	24	16	33	15	22	21	28	572
Mie	21	15	14		28		19	22	17	32	11	17	12	11	24	16	16	15	9	11	8	10	6	11	345
Shiga	6	6	7		4		5	4	2	6		2	1	4	5	6	1	3	9	2	5	4	5	7	94
Kyoto	3	1	3		4		1	4	2	1			2	1	2		3	1	3	1	3	4		1	40
Osaka	36	29	22		29		24	35	21	31	23	31	18	25	13	17	10	13	11	21	13	15	6	19	462
Hyogo	32	31	23		36		26	28	28	22	5	22	26	22	16	17	23	18	15	20	11	20	14	17	472
Nara	13	16	12		11		12	18	8	7	8	8	9	8	7	6	6	7	9	5	10	10	6	8	204
Wakayama	5	1	4		3		1	1	3	3	3	3	3	4	2	2	1	1	1	2	5	2	2		52
Tottori	2	4	2		1		1		1				1	1	1	1	1	1		1	2		2	2	24

Shimane	3		2		1		6	4	3			1	6	4	1	1		1			2		2	2	39
Okayama	14	9	6		9		14	15	19	19	10	8	8	9	5	6	8	8	6	9	13	12	10	15	232
Hiroshima	13	21	26		9		12	9	15	20	11	8	14	16	8	7	10	10	9	10	8	10	9	11	266
Yamaguchi	6	12	7		5		9	6	6	6	3	3	5	4	4	7	3	9		3	8	7	4		117
Tokushima	6	3	5		4		4	4	2	5	3	1		2		4	2	1	1	1	1				49
Kagawa	1	2	4		2		1	2	1				1	1	1	1	3			1	4	2	5	1	33
Ehime	2	2	4				3	1			2		3	1	1		1	3	2		1				26
Kochi																									
Fukuoka	7	20	9		14		16	11	10	10	9	9	12	16	7	6	5	5	10	9	11	8	9	6	219
Saga		4	3		4		3	4	2	6	3	3	6	1	5		1	5	3	6	4	1	3	6	73
Nagasaki		1							1								2	1							5
Kumamoto	2	5	2		1		2	5	4	2	2	1	1	3		2	2	1	4	2	1		1	2	45
Oita	1		1					1	2	2	1			1	1	2	1	1	2		2	2	2	3	25
Miyazaki	6	5	8		5		5	6	2	4		3		5	1	3	3	1	7	1		6	4	2	77
Kagoshima	1	1	1																1	1					5
Okinawa																									
total	390	429	372	365	383	360	368	356	342	362	211	245	276	289	244	220	228	206	221	244	239	240	214	241	7,045

Fatal and non-fatal accidents mean fatal and non-fatal injuries and occupational diseases with work absence of 4 days and more.

Data of 2022 year do not include Covid-19 cases. Data of 2020 & 2021 year include Covid-19 cases. Fatal and non-fatal data are same situation.

Data of 2011 year include fatal and non-fatal accidents caused by Great East Japan Earthquake in 2011.

Data sources: https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.html (MHLW, Japan)

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Fatal accidents in rubber products in Japan in 1999-2022

rubber products industry Code No.010806

Type of fatal accidents in rubber products in 1999-2022

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
fall from height					2					1							1				1				5
falling to same level	1						1			1															3
crash																									
struck by flying or falling object	1		1		1																				3
collapse			1					1																	2
crashed by																	1								1
caught in/between	1	4	1	2		2	2	1	1	4		1	1	1	1	1	1				1	1	2		28
cut																									
injury to the sole of the foot																									

drown													1												1
contact to high/low-temperature																									
contact to harmful substance												1													1
electric shock																									
explosion																									
burst																									
fire																									
traffic accident (public road)				1	1						1		1		1									1	6
traffic accident (others)																									
reaction to motion/improper motion																									
others																									
unclassifiable							1																		1
total	3	4	3	3	4	2	4	2	1	6	1	2	3	1	2	1	3				2	1	2	1	51

Causal agents (large) of fatal accidents in rubber products in 1999-2022

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
machine	1	3	1	1	1	1	1	1	1	2		1	1		1	1	1					1			19
crane, conveying machine	2	1		2	3	1	2			2	1		1		1		1						2	1	20
other equipment			1							1				1							1				4
temporary buildings, establishments										1							1				1				3
substance, material			1									1													2
load								1																	1
environment													1												1
others							1																		1
total	3	4	3	3	4	2	4	2	1	6	1	2	3	1	2	1	3				2	1	2	1	51

Causal agents (middle) of fatal accidents in rubber products in 1999-2022

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
engine																									
power transmission mechanism																									

woodworking machine																									
construction machine															1										1
metal manufacturing machine										1															1
general machine	1	3	1	1	1	1	1	1	1	1		1	1			1	1					1			17
mobile silviculture machine																									
crane																							1		1
conveying machine	2	1		2	2	1	2			2	1				1		1						1	1	17
vehicle					1								1												2
pressure vessel																									
chemical facilities																									
welding equipment																									
kiln, caldron																									
electric equipment																									
human power machine, tools										1															1
tools			1																						1
other equipments,																									

facilities														1							1				2
temporary buildings, establishments										1							1				1				3
hazards, harmful substances												1													1
materials			1																						1
load								1																	1
natural environment													1												1
other causal agent																									
no causal agent																									
unclassifiable							1																		1
total	3	4	3	3	4	2	4	2	1	6	1	2	3	1	2	1	3				2	1	2	1	51

Causal agents (small) of fatal accidents in rubber products in 1999-2022

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
engine																									
power transmission mechanism																									

circular sawing machine																									
band sawing machine																									
wood planer machine																									
hollow chisel mortiser, wood borer																									
chamfering machine, router, woodworking milling machine																									
chain saw																									
other woodworking machines																									
leveling, transporting or loading machine																									
excavating machine															1										1
foundation work machine																									
hardening machine																									

demolition machine																									
vehicle for high lift work																									
other construction machines																									
lathe										1															1
drill press, milling machine																									
grinding machine, buffing machine																									
power press																									
forging pressure hammer																									
shearing machine																									
other metal manufacturing machines																									
centrifugal machine																									
mixer, grinder	1			1			1		1							1									5
roll machine (except printingroll machine)		1										1													2

injection molding machine																									
food manufacturing machine																									
printing machine																									
industrial robot													1												1
other general power machines		2	1		1	1		1		1							1					1			9
felling machine																									
mobile logging machine																									
skyline yarding machine																									
other mobile silviculture machine																									
crane																									
mobile crane																									
derrick crane																									
elevator, lift																							1		1
cargo lifting appliance																									
gondola																									

lumberyard equipment, logging cableway																									
simple skyline yarding equipment																									
other powered crane																									
truck				1							1														2
forklift	2				2	1	1			1							1							1	9
railway equipment																									
conveyor		1		1			1			1					1								1		6
loader																									
straddle carrier																									
rough terrain hauler																									
other powered conveying machines																									
cars, bus, motorcycle					1								1												2
railway vehicle																									
other vehicles																									
boiler																									

pressure vessel																									
other pressure vessels																									
chemical facilities																									
gas welding equipment																									
arc welding equipment																									
other welding equipment																									
kiln, caldron																									
industrial dryer																									
other kiln, caldron																									
transmission																									
electric power facilities																									
other electrical equipment																									
human power cranes																									
human power hauling equipment										1															1

human power machine																									
hand tool																									
ladder																									
slinging tool			1																						1
other tools																									
other equipment, facilities														1							1				2
scaffolding																									
timbering																									
stairs, landing stage																									
opening																									
roof, beam, haze, crossbeam, principal rafter																	1				1				2
working platform, boot board																									
passage																									
building, establishment										1															1
other temporary buildings,																									

establishments																									
explosive substance																									
inflammable substance																									
inflammable gas																									
harmful substance												1													1
radiation																									
other hazards, harmful substances																									
metal material																									
lumber, bamboo																									
stone, sand, substance																									
other materials			1																						1
load								1																	1
machine/equipment as load																									
natural ground, rock																									
standing tree																									
water													1												1
abnormal																									

environment																									
high/cold temperature environment																									
other environments																									
other causal agent																									
no causal agent																									
unclassifiable							1																		1
total	3	4	3	3	4	2	4	2	1	6	1	2	3	1	2	1	3				2	1	2	1	51

Workers age of fatal accidents in rubber products in 1999-2022

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
19 years old or less												1	1			1									3
20-29		1		1	1	1		1	1														1		7
30-39				1			2			2		1									1			1	8
40-49	2	3	2	1	1		2														1		1		13
50-59			1		2	1		1		2			1	1	1		3					1			14
60 years old or more	1									2	1		1		1										6
total	3	4	3	3	4	2	4	2	1	6	1	2	3	1	2	1	3				2	1	2	1	51

Workers' number of workplace of fatal accidents in rubber products in 1999-2022

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
9 workers or less			1					1				1													3
10-29	1			3	1				1	1	1						1				1			1	11
30-49						1		1		1		1	1				1								6
50-99	1				1	1									1										4
100-299					2		1			1			1		1										6
300 workers or more	1	4	2				3			3			1	1		1	1				1	1	2		21
total	3	4	3	3	4	2	4	2	1	6	1	2	3	1	2	1	3				2	1	2	1	51

Month of fatal accidents in rubber products in 1999-2022

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
January	1				1				1		1														4
February			1							1				1											3
March	1			2								1	1												5
April		1				1		1																1	4
May		1	1														2								4
June	1	1																			1	1			4

July		1					1									1									3
August				1	1		1	1																	4
September					1	1	1			1					1						1		1		7
October							1			2		1			1										5
November													1												1
December			1		1					2			1				1						1		7
total	3	4	3	3	4	2	4	2	1	6	1	2	3	1	2	1	3				2	1	2	1	51

Prefecture of fatal accidents in rubber products in 1999-2022

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
Hokkaido																									
Aomori																									
Iwate												1													1
Miyagi													1				1								2
Akita																									
Yamagata																									
Fukushima				1		1																			2
Ibaraki	1									1														1	3
Tochigi			1								1														2
Gunma	1	1	1																						3

Saitama																									
Chiba												1													1
Tokyo		1																							1
Kanagawa			1												1						1				3
Niigata																									
Toyama																					1				1
Ishikawa				1																					1
Fukui																									
Yamanashi																									
Nagano																									
Gifu																	1								1
Shizuoka					1		1																		2
Aichi					1		1		1	1					1							1			6
Mie					1	1							1			1									4
Shiga		1					1							1											3
Kyoto																									
Osaka										1															1
Hyogo								1															1		2
Nara	1	1																							2
Wakayama																									
Tottori																									

Shimane							1						1												2
Okayama																	1								1
Hiroshima								1		2															3
Yamaguchi																							1		1
Tokushima																									
Kagawa																									
Ehime																									
Kochi																									
Fukuoka										1															1
Saga																									
Nagasaki				1																					1
Kumamoto																									
Oita																									
Miyazaki					1																				1
Kagoshima																									
Okinawa																									
total	3	4	3	3	4	2	4	2	1	6	1	2	3	1	2	1	3				2	1	2	1	51

Data sources: https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.html (MHLW, Japan)

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