

Fatal and non-fatal accidents in plastics products in Japan in 1999-2021

plastics products industry Code No.010805

Type of accidents in plastics products in 1999-2021

[illegible]

contact to harmful substance	2	3	3	5	6	5	7	5	9	6	4	1	5	3	2	1	3	5	9	6	4	1		95	harmful substance
electric shock	1	1	3	2	2	4		2	2		3	1	2	3		4	2	3	2	2	1	3	1	44	electric shock
explosion		3	1	2		1			2	1	1				2							2		15	explosion
burst		1					1						1	2	1			1	1	1				9	burst
fire	3	4	2	4	2	1		1	1	1		1		1	2		1		1	1	1	4	1	32	fire
traffic accident (public road)	9	5	11	7	9	8	6	1	15	1	9	10	7	13	7	3	4	5	6	5	16	9	3	169	traffic accident (public road)
traffic accident (others)								1				1					2		3					7	traffic accident (others)
reaction to motion/improper motion	78	70	69	57	81	76	64	73	80	90	64	69	86	79	72	76	81	81	88	87	89	85	104	1,799	reaction to motion/improper motion
others	3	2	1		3	3	3	3	3	3	1	7	3	1	1	3	4	2	4	7	3	16	39	115	others
unclassifiable	1			1	1	2	1		5	1	1		1	2	2						1	2		21	unclassifiable
total	1,205	1,165	1,197	988	1,074	1,025	1,039	1,023	1,080	1,069	828	839	940	888	830	867	853	892	908	972	884	861	971	22,398	total

Causal agents (large) of fatal and non-fatal accidents in plastics products in 1999-2021

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	total	Causal (L) agents
machine	577	542	566	462	501	470	471	432	453	434	361	339	362	352	332	307	327	317	302	337	301	293	303	9,141	machine
crane, conveying machine	99	104	113	100	102	93	115	97	118	109	74	93	85	84	87	80	74	107	84	95	99	81	89	2,182	crane, conveying machine

																									machine
other equipment	204	156	173	171	152	163	169	169	191	192	136	147	172	148	145	180	152	172	188	190	165	179	200	3,914	other equipment
temporary buildings, establishments	134	147	138	96	129	117	141	154	127	159	111	109	150	139	107	151	132	160	147	168	161	140	161	3,178	temporary buildings, establishments
substance, material	79	95	80	70	78	82	56	62	80	67	60	53	57	49	62	44	59	45	74	44	50	50	57	1,453	substance, material
load	70	77	95	61	65	48	47	61	64	56	52	63	66	69	54	52	67	52	55	67	51	54	67	1,413	load
environment	3	3	7	4	9	7	6	7	3	9	4	9	11	9	6	17	4	11	20	18	9	7	11	194	environment
others	39	41	25	24	38	45	34	41	44	43	30	26	37	38	37	36	38	28	38	53	48	57	83	923	others
total	1,205	1,165	1,197	988	1,074	1,025	1,039	1,023	1,080	1,069	828	839	940	888	830	867	853	892	908	972	884	861	971	22,398	total

Causal agents (middle) of fatal and non-fatal accidents in plastics products in 1999-2021

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	total	Causal (M) agents
engine						1			1	1						1							1	5	engine
power transmission mechanism	18	12	5	12	12	9	17	8	8	9	8	7	11	7	4	13	8	5	8	6	6	7	6	206	power transmission mechanism
woodworking machine	28	28	18	17	30	18	26	22	22	10	12	12	23	20	21	13	20	17	12	15	14	11	12	421	woodworking machine
construction machine			1		1	1				1				1				1			1			7	construction machine

metal manufacturing machine	79	62	59	54	52	44	54	41	46	34	25	30	33	36	36	36	33	31	30	32	30	29	29	935	metal manufacturing machine
general machine	452	440	483	379	406	397	374	361	376	379	316	290	295	288	271	244	266	263	252	284	250	246	255	7,567	general machine
mobile silviculture machine																									mobile silviculture machine
crane	15	25	15	17	19	16	21	18	15	15	10	8	16	12	13	9	14	16	8	14	15	14	15	340	crane
conveying machine	75	74	90	76	71	65	85	75	92	91	55	75	58	60	66	69	56	87	67	78	70	59	68	1,662	conveying machine
vehicle	9	5	8	7	12	12	9	4	11	3	9	10	11	12	8	2	4	4	9	3	14	8	6	180	vehicle
pressure vessel	1	1	2	2					1				2	1				3			1		3	17	pressure vessel
chemical facilities		1		2		1	2	3	2										1	1	1	1	1	16	chemical facilities
welding equipment	5		1			1	1					2						2	1	2		2		17	welding equipment
kiln, caldron	3	2	1	3	1		3	2		1	5		1	1	1	4	2	1		1	2	1	3	38	kiln, caldron
electric equipment	4	3	1	4	5	1	1	1	1	1	3	2	1	3		1		1	2	2	2	5	1	45	electric equipment
human power machine, tools	71	49	73	65	53	66	56	61	67	66	46	60	67	54	57	58	56	61	71	59	66	58	60	1,400	human power machine, tools
tools	98	76	67	74	72	71	81	77	91	98	65	60	78	63	66	85	70	82	97	98	81	86	94	1,830	tools
other equipments,	22	24	28	21	21	23	25	25	29	26	17	23	23	26	21	32	24	22	16	27	12	26	38	551	other equipments,

facilities																									facilities
temporary buildings, establishments	134	147	138	96	129	117	141	154	127	159	111	109	150	139	107	151	132	160	147	168	161	140	161	3,178	temporary buildings, establishments
hazards, harmful substances	8	8	9	8	10	12	6	6	13	11	7	2	7	5	7	3	7	7	17	10	9	5	4	181	hazards, harmful substances
materials	71	87	71	62	68	70	50	56	67	56	53	51	50	44	55	41	52	38	57	34	41	45	53	1,272	materials
load	70	77	95	61	65	48	47	61	64	56	52	63	66	69	54	52	67	52	55	67	51	54	67	1,413	load
natural environment	3	3	7	4	9	7	6	7	3	9	4	9	11	9	6	17	4	11	20	18	9	7	11	194	natural environment
other causal agent	15	15	6	1	11	16	6	8	9	8	4	7	7	5	7	3	5	4	5	9	9	20	41	221	other causal agent
no causal agent	24	25	18	21	24	26	27	31	28	32	25	19	29	32	29	32	33	24	31	43	39	37	41	670	no causal agent
unclassifiable		1	1	2	3	3	1	2	7	3	1		1	1	1	1			2	1			1	32	unclassifiable
total	1,205	1,165	1,197	988	1,074	1,025	1,039	1,023	1,080	1,069	828	839	940	888	830	867	853	892	908	972	884	861	971	22,398	total

Causal agents (small) of fatal and non-fatal accidents in plastics products in 1999-2021

[illegible]

circular sawing machine			14		17		21	18	13	7	7	9	19	11	12	8	18	12	12	13	9	9	10	239	circular sawing machine
band sawing machine			1		3		2	1	2			1		3	4	1	2	2		2	3	1	2	30	band sawing machine
wood planer machine			3		3		3	1	4	2	2		3	3	3	1		1			2			31	wood planer machine
hollow chisel mortiser, wood borer								1			1		1		1							1		5	hollow chisel mortiser, wood borer
chamfering machine, router, woodworking milling machine					1				1		1	1		1										5	chamfering machine, router, woodworking milling machine
chain saw																1								1	chain saw
other woodworking machines					6			1	2	1	1	1		2	1	2		2						19	other woodworking machines
leveling, transporting or loading machine			1																					1	leveling, transporting or loading machine
excavating machine					1																			1	excavating machine
foundation work machine																									foundation work machine
hardening machine																									hardening machine
demolition machine																									demolition machine
vehicle for high lift										1											1			2	vehicle for high lift

work																									work
other construction machines													1				1							2	other construction machines
lathe			12		8		9	4	3	7	4	5	5	6	3	7	2	7	4	2		4	7	99	lathe
drill press, milling machine			13		10		5	5	4	9	6	4	6	8	7	6	8	6	2	9	7	9	8	132	drill press, milling machine
grinding machine, buffing machine			4		3		7	9	6	3	2	2	3	3	3	5	3	3	5	4	4	5	3	77	grinding machine, buffing machine
power press			13		12		13	10	13	8	8	9	6	10	6	7	11	5	10	9	10	4	6	170	power press
forging pressure hammer																									forging pressure hammer
shearing machine			2		4		4	4	4	2	2		1	4	3	2		3		2	2	2		41	shearing machine
other metal manufacturing machines			15		15		16	9	16	5	3	10	12	5	14	9	9	7	9	6	7	5	5	177	other metal manufacturing machines
centrifugal machine									2								1	1					1	5	centrifugal machine
mixer, grinder			46		36		31	30	32	22	23	18	22	29	24	17	21	29	21	28	20	20	24	493	mixer, grinder
roll machine (except printingroll machine)			58		46		37	37	42	52	41	43	43	34	46	34	36	27	36	36	36	35	30	749	roll machine (except printingroll machine)
injection molding machine			111		111		96	84	84	57	65	63	46	56	48	42	46	42	35	43	35	39	46	1,149	injection molding machine
food manufacturing machine							1	1			1		1				1							5	food manufacturing machine
printing machine			8		10		11	6	8	7	9	5	7	12	6	5	5	6	7	8	3	4	8	135	printing machine

roof, beam, haze, crossbeam, principal rafter					2		3	2	2	2	2	1	1	1	1	2	3	1	1	3	1		1	29	roof, beam, haze, crossbeam, principal rafter
working platform, boot board			22		30		23	23	25	31	17	23	34	26	17	32	21	22	19	26	26	15	16	448	working platform, boot board
passage			44		42		52	68	47	60	37	39	51	59	46	51	48	65	55	84	65	64	82	1,059	passage
building, establishment			19		13		7	17	9	20	14	16	18	16	10	10	15	22	16	13	13	14	13	275	building, establishment
other temporary buildings, establishments			14		4		18	14	12	11	9	7	17	7	8	17	12	11	18	13	16	9	11	228	other temporary buildings, establishments
explosive substance			1						1						1								1	4	explosive substance
inflammable substance			1		6		1		5	3	1			1			2	1	3		3	3	1	31	inflammable substance
inflammable gas					2						1				2	1	1		1	2	1			11	inflammable gas
harmful substance			2		2		3	4	4	4	3		3	2	2	1	4	5	5	2	4			50	harmful substance
radiation																									radiation
other hazards, harmful substances			5				2	2	3	4	2	2	4	2	2	1		1	8	6	1	2	2	49	other hazards, harmful substances
metal material			32		36		26	27	30	16	26	21	20	19	26	18	23	15	23	15	20	22	22	437	metal material
lumber, bamboo			6		4		2	4	2	3	1	1	3	2	2	2	2	4	3	3		1	2	47	lumber, bamboo
stone, sand, substance			2												1	1				1	1			6	stone, sand, substance
other materials			31		28		22	25	35	37	26	29	27	23	26	20	27	19	31	15	20	22	29	492	other materials
load			79		58		40	53	59	52	46	58	61	60	47	46	64	47	53	64	48	53	62	1,050	load

machine/equipment as load			16		7		7	8	5	4	6	5	5	9	7	6	3	5	2	3	3	1	5	107	machine/equipment as load	
natural ground, rock			1					1															1	3	natural ground, rock	
standing tree										1	1				1								1		4	standing tree
water									1							2	1								4	water
abnormal environment			1		2		1												1						5	abnormal environment
high/cold temperature environment			1		1		2	3		3	1	6	3	1	2	6	2	4	8	7	6	4	5	65	high/cold temperature environment	
other environments			4		6		3	3	2	5	2	3	8	8	3	9	1	7	11	11	3	2	5	96	other environments	
other causal agent			6		11		6	8	9	8	4	7	7	5	7	3	5	4	5	9	9	20	41	174	other causal agent	
no causal agent			18		24		27	31	28	32	25	19	29	32	29	32	33	24	31	43	39	37	41	574	no causal agent	
unclassifiable			1		3		1	2	7	3	1		1	1	1	1			2	1			1	26	unclassifiable	
total			1,197		1,074		1,039	1,023	1,080	1,069	828	839	940	888	830	867	853	892	908	972	884	861	971	18,015	total	

Workers age of fatal and non-fatal accidents in plastics products in 1999-2021

[illegible]

40-49	267	232	249	175	203	173	201	197	221	222	160	190	213	198	215	208	211	210	240	245	228	202	232	4,892	40-49
50-59	317	306	312	234	252	251	244	231	243	249	182	162	209	174	147	180	167	192	203	234	178	204	247	5,118	50-59
60 years old or more	110	112	97	92	102	130	95	109	124	127	110	100	126	117	111	95	120	118	125	126	149	142	144	2,681	60 years old or more
total	1,205	1,165	1,197	988	1,074	1,025	1,039	1,023	1,080	1,069	828	839	940	888	830	867	853	892	908	972	884	861	971	22,398	total

Workers' number of workplace of fatal and non-fatal accidents in plastics products in 1999-2021

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	total	Workers scale
9 workers or less	246	247	252	208	229	212	201	194	173	137	138	120	121	107	102	111	104	107	91	90	75	77	93	3,435	9 workers or less
10-29	365	360	350	286	325	278	327	317	304	290	218	211	249	250	247	258	246	216	255	239	217	218	219	6,245	10-29
30-49	200	191	200	175	172	193	175	168	182	210	137	130	152	166	139	137	167	161	159	196	157	145	175	3,887	30-49
50-99	194	179	198	159	178	173	168	171	197	185	146	150	213	170	153	160	130	157	181	194	194	164	172	3,986	50-99
100-299	170	152	158	128	139	128	139	129	181	185	150	177	161	148	150	158	172	200	174	195	206	196	252	3,848	100-299
300 workers or more	30	36	39	32	31	41	29	44	43	62	39	51	44	47	39	43	34	51	48	58	35	61	60	997	300 workers or more
total	1,205	1,165	1,197	988	1,074	1,025	1,039	1,023	1,080	1,069	828	839	940	888	830	867	853	892	908	972	884	861	971	22,398	total

Month of fatal and non-fatal accidents in plastics products in 1999-2021

[illegible]

April	100	83	119	93	96	93	85	79	88	95	59	66	73	85	85	82	67	69	61	88	73	66	93	1,898	April
May	92	87	98	86	95	73	78	102	106	89	61	61	71	75	69	64	61	73	67	73	64	61	77	1,783	May
June	112	99	112	79	82	105	102	88	88	94	69	86	84	79	66	77	98	75	65	79	75	62	93	1,969	June
July	108	101	110	73	104	101	104	95	93	110	85	71	93	74	83	59	86	69	92	94	84	63	85	2,037	July
August	115	83	87	76	89	75	87	72	88	87	65	77	68	76	71	68	77	79	87	67	73	78	78	1,823	August
September	101	134	81	90	94	85	82	73	82	78	61	73	76	73	72	70	59	75	73	81	91	79	74	1,857	September
October	92	96	114	84	97	83	72	75	91	81	75	72	90	69	62	73	79	82	88	76	58	90	79	1,878	October
November	94	94	90	92	97	83	81	86	91	72	71	62	66	79	64	72	66	73	66	81	72	73	72	1,797	November
December	83	67	80	70	77	65	76	81	73	57	68	53	78	59	66	62	55	66	68	65	70	71	74	1,584	December
total	1,205	1,165	1,197	988	1,074	1,025	1,039	1,023	1,080	1,069	828	839	940	888	830	867	853	892	908	972	884	861	971	22,398	total

Prefecture of fatal and non-fatal accidents in plastics products in 1999-2021

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Prefecture
Hokkaido	20	9	20		12		9	5	16	14	6	12	9	12	14	17	10	16	14	7	8	9	18	257	Hokkaido
Aomori	2	1	4					3	1	1		1	1	3		2	3	1	4			1	5	33	Aomori
Iwate	7	13	7		9		7	10	13	4	6	3	15	9	6	5	8	13	6	9	5	11	9	175	Iwate
Miyagi	14	11	6		18		18	14	8	14	12	9	8	11	9	7	8	12	11	8	7	14	6	225	Miyagi
Akita	5	2	4		5		1	3	5	3	4	3	1	3		4	3		1	6	7	6	2	68	Akita
Yamagata	5	13	10		10		10	9	9	7	8	5	15	7	9	3	8	4	16	10	6	5	8	177	Yamagata
Fukushima	14	9	11		13		17	15	10	18	13	11	10	9	10	16	7	10	15	13	14	11	14	260	Fukushima
Ibaraki	53	52	58		34		57	51	56	48	42	30	48	37	23	30	39	30	43	47	48	62	40	928	Ibaraki
Tochigi	41	48	48		50		35	38	34	38	33	24	33	47	36	28	21	35	34	42	35	27	32	759	Tochigi
Gunma	37	29	42		53		38	35	48	42	31	39	37	40	40	37	37	50	23	38	32	39	42	809	Gunma

Saitama	68	55	77		80		76	68	70	58	44	68	52	56	50	57	54	56	49	53	51	42	57	1,241	Saitama
Chiba	39	38	34		18		35	41	39	44	47	41	24	41	33	36	28	30	30	40	41	35	37	751	Chiba
Tokyo	46	32	46		31		21	25	25	25	19	21	19	14	13	13	8	18	12	13	16	17	8	442	Tokyo
Kanagawa	39	48	36		29		41	22	32	30	19	22	24	21	23	20	14	20	22	20	21	15	29	547	Kanagawa
Niigata	22	18	20		21		24	19	21	14	14	11	13	10	13	21	11	9	13	16	16	14	14	334	Niigata
Toyama	16	26	21		36		22	18	19	20	25	16	15	16	6	20	17	21	22	24	12	16	15	403	Toyama
Ishikawa	3	3	7		11		1	5	4	7	6	6	6	5	5	6	5	7	8	6	7	7	11	126	Ishikawa
Fukui	13	13	24		7		13	6	17	25	12	15	13	17	12	7	11	16	17	10	11	15	22	296	Fukui
Yamanashi	9	10	8		12		12	14	14	10	18	5	8	7	4	10	8	6	7	9	9	6	15	201	Yamanashi
Nagano	24	25	20		17		21	17	16	18	9	16	26	15	9	18	32	29	18	16	12	24	18	400	Nagano
Gifu	40	64	56		30		48	44	47	35	23	38	36	24	34	26	29	41	28	36	36	44	41	800	Gifu
Shizuoka	64	78	77		57		48	65	74	74	53	69	74	57	52	48	53	74	67	61	48	54	68	1,315	Shizuoka
Aichi	139	117	100		99		86	97	72	92	65	83	82	75	69	82	91	66	81	89	80	91	99	1,855	Aichi
Mie	32	23	39		25		18	36	34	24	20	21	24	22	31	33	27	20	22	32	23	24	35	565	Mie
Shiga	32	30	33		45		26	34	32	43	25	21	32	32	37	25	26	33	32	34	34	32	28	666	Shiga
Kyoto	16	10	10		17		14	10	15	12	7	3	12	11	11	5	8	7	7	8	14	10	10	217	Kyoto
Osaka	124	116	115		105		96	117	93	90	78	52	82	76	72	77	77	72	85	89	79	57	73	1,825	Osaka
Hyogo	63	68	43		43		44	29	34	47	21	23	33	34	32	33	29	25	23	31	28	25	25	733	Hyogo
Nara	40	44	58		40		51	47	51	42	45	41	43	49	46	41	33	33	54	36	32	29	35	890	Nara
Wakayama	14	11	7		11		11	10	9	7	3	7	10	4	4	5	8	4	9	8	7	7	5	161	Wakayama
Tottori	2	2	7		3		6	4	7	5	5	3	5		1	1	4	2	1	4	3	2	5	72	Tottori
Shimane	4	5	3		5		6	1	7	2	3	1	7	4	2	4	4	7	9	8	4	8	10	104	Shimane
Okayama	16	16	8		18		18	13	20	22	14	28	17	20	18	25	21	18	14	21	23	18	17	385	Okayama

Hiroshima	18	23	20		28		18	15	22	23	18	24	22	26	21	21	12	20	18	16	28	9	25	427	Hiroshima
Yamaguchi	13	10	15		13		12	5	12	17	9	4	14	8	5	9	12	8	9	14	13	9	7	218	Yamaguchi
Tokushima	5	2	4		1		13	4	3	7	10	4	8	7	1		5	4	7	1	6	1	6	99	Tokushima
Kagawa	24	14	19		8		6	5	9	8	4	8	11	13	10	9	13	11	8	22	10	9	8	229	Kagawa
Ehime	5	5	13				2	7	6	6	4	2	4	8	9	5	2	10	5	5	2	4	5	109	Ehime
Kochi	1	2	3						5	1	4	1	1	1	3	2	1	3	1		1	2	6	38	Kochi
Fukuoka	42	38	31		35		30	30	28	29	25	24	20	17	23	26	32	25	28	28	20	20	28	579	Fukuoka
Saga	7	6	6		7		9	5	8	13	5	9	5	4	8	7	8	3	9	11	11	12	8	161	Saga
Nagasaki	5	1	2		2			3		3	1	2	2	1	1	2	2	1	2	1	2	1	2	36	Nagasaki
Kumamoto	9	8	6		6		11	8	23	8	10	6	8	6	12	12	9	11	8	9	8	5	5	188	Kumamoto
Oita	5	6	7		6		2	6	4	8	2	4	4	5	3	7	7	6	11	10	3	1	5	112	Oita
Miyazaki	3	4	8		1		3	3	5	6	4	1	3	1	5	3	6	3	2	4	6	4	3	78	Miyazaki
Kagoshima	4	5	4		2		3	4	1	2		1	3	1	1	2	1	1		5	3	7	4	54	Kagoshima
Okinawa	1	2			1			3	2	3	2	1	1	2	4		1	1	3	2	2		6	37	Okinawa
total	1,205	1,165	1,197		1,074		1,039	1,023	1,080	1,069	828	839	940	888	830	867	853	892	908	972	884	861	971	20,385	total

Fatal and non-fatal accidents mean fatal and non-fatal injuries and occupational diseases with work absence of 4 days and more. 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.htm> (MHLW, Japan)

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Fatal accidents in plastics products in Japan in 1999-2021

Type of fatal accidents in plastics products in 1999-2021

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	total	Type of accidents
fall from height	2					1	2	1	1	3			1	1	1						1	1	1	16	fall from height
falling to same level					1			1						2			1			1				6	falling to same level
crash															1									1	crash
struck by flying or falling object	1	1	1	1		2	2		1		1			1	2			1			1			15	struck by flying or falling object
collapse	1						1		1	1		1		1	2					1				9	collapse
crashed by						2			2	1													1	6	crashed by
caught in/between	5	3	2	5	3	2	3	5	3	2	4	1	4	2	2	1	4	2		3		3	4	63	caught in/between
cut																									cut
injury to the sole of the foot																									injury to the sole of the foot
drown																									drown
contact to high/low-temperature						1											1			1				3	contact to high/low-temperature
contact to harmful substance								1																1	contact to harmful substance

electric shock											1													1	electric shock
explosion				1																				1	explosion
burst																									burst
fire	1																	1			2			4	fire
traffic accident (public road)		1	1						1								1		2		1			7	traffic accident (public road)
traffic accident (others)																									traffic accident (others)
reaction to motion/improper motion																									reaction to motion/improper motion
others																	1		1	2				4	others
unclassifiable										1														1	unclassifiable
total	10	5	4	7	4	8	8	8	9	8	6	2	5	7	8	1	8	3	4	8	3	6	6	138	total

Causal agents (large) of fatal accidents in plastics products in 1999-2021

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	total	Causal (L) agents
machine	5	2	2	5	2	3	3	3	2	5	4	1	3	3	3	1	4	2		2		5	3	63	machine
crane, conveying machine	2	3	1		1	2	1	2	5		1		1		1		2	1	2	2	1	1	2	31	crane, conveying machine
other equipment			1			1	2			2	1				1									8	other equipment

temporary buildings, establishments	1						1	2					1	1	1								1	8	temporary buildings, establishments
substance, material				1	1			1	1						2				1					7	substance, material
load	1			1		1	1		1			1		2					1	1				10	load
environment						1											1		1					3	environment
others	1									1				1			1		1	2	1			8	others
total	10	5	4	7	4	8	8	8	9	8	6	2	5	7	8	1	8	3	4	8	3	6	6	138	total

Causal agents (middle) of fatal accidents in plastics products in 1999-2021

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	total	Causal (M) agents
engine																									engine
power transmission mechanism														1										1	power transmission mechanism
woodworking machine																									woodworking machine
construction machine										1														1	construction machine
metal manufacturing machine			1																					1	metal manufacturing machine

general machine	5	2	1	5	2	3	3	3	2	4	4	1	3	2	3	1	4	2		2		5	3	60	general machine
mobile silviculture machine																									mobile silviculture machine
crane	1	1					1		1				1		1									6	crane
conveying machine	1	2	1		1	2		2	4		1						2	1	2	2		1	2	24	conveying machine
vehicle																					1			1	vehicle
pressure vessel																									pressure vessel
chemical facilities																									chemical facilities
welding equipment																									welding equipment
kiln, caldron																									kiln, caldron
electric equipment											1													1	electric equipment
human power machine, tools			1				1																	2	human power machine, tools
tools						1				1														2	tools
other equipments, facilities							1			1					1									3	other equipments, facilities
temporary buildings,	1						1	2					1	1	1								1	8	temporary buildings,

establishments																									establishments	
hazards, harmful substances				1				1											1						3	hazards, harmful substances
materials					1				1						2										4	materials
load	1			1		1	1		1			1		2						1	1				10	load
natural environment						1											1			1					3	natural environment
other causal agent	1																								1	other causal agent
no causal agent														1			1		1	2					5	no causal agent
unclassifiable										1											1				2	unclassifiable
total	10	5	4	7	4	8	8	8	9	8	6	2	5	7	8	1	8	3	4	8	3	6	6	138	total	

Causal agents (small) of fatal accidents in plastics products in 1999-2021

[illegible]

																								machine
wood planer machine																								wood planer machine
hollow chisel mortiser, wood borer																								hollow chisel mortiser, wood borer
chamfering machine, router, woodworking milling machine																								chamfering machine, router, woodworking milling machine
chain saw																								chain saw
other woodworking machines																								other woodworking machines
leveling, transporting or loading machine																								leveling, transporting or loading machine
excavating machine																								excavating machine
foundation work machine																								foundation work machine
hardening machine																								hardening machine
demolition machine																								demolition machine
vehicle for high lift work										1													1	vehicle for high lift work
other construction machines																								other construction machines

lathe			1																				1	lathe	
drill press, milling machine																								drill press, milling machine	
grinding machine, buffing machine																								grinding machine, buffing machine	
power press																								power press	
forging pressure hammer																								forging pressure hammer	
shearing machine																								shearing machine	
other metal manufacturing machines																								other metal manufacturing machines	
centrifugal machine																								centrifugal machine	
mixer, grinder									1	1				1	2			2				1	1	9	mixer, grinder
roll machine (except printingroll machine)	1	1	1					1	1		1					1	1							8	roll machine (except printingroll machine)
injection molding machine	2	1		2					1		1	2		1	1	1		1			1		1	15	injection molding machine
food manufacturing machine																									food manufacturing machine
printing machine																									printing machine
industrial robot					1						1													2	industrial robot
other general power machines	2			3	1	3	2	1	1	1	1	1	2				2			1		4	1	26	other general power machines

[illegible]

[illegible]

[illegible]

[illegible]

																										rock	
standing tree																										standing tree	
water																										water	
abnormal environment																										abnormal environment	
high/cold temperature environment						1											1				1					3	high/cold temperature environment
other environments																										other environments	
other causal agent	1																								1	other causal agent	
no causal agent														1			1		1	2					5	no causal agent	
unclassifiable										1											1				2	unclassifiable	
total	10	5	4	7	4	8	8	8	9	8	6	2	5	7	8	1	8	3	4	8	3	6	6	138		total	

Workers age of fatal accidents in plastics products in 1999-2021

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Age
19 years old or less							1				1													2	19 years old or less
20-29	1	1	3		1	2	1	2	3	2	3				2		1	1		1	1	2		27	20-29
30-39	4	3	1	3				3	1	1	1	1	2	1	2	1			1	2		1	3	31	30-39
40-49	2			2		1	1	1	1	2	1		3	1	2		2	2	1	3				25	40-49
50-59	2	1		2	3	3	3	1	1	2				3	1		3			1	1	2	1	30	50-59
60 years old or more	1					2	2	1	3	1		1		2	1		2		2	1	1	1	2	23	60 years old or more
total	10	5	4	7	4	8	8	8	9	8	6	2	5	7	8	1	8	3	4	8	3	6	6	138	total

Workers' number of workplace of fatal accidents in plastics products in 1999-2021

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	total	Workers scale
9 workers or less	2					1	2	1	1	1					2		1	2	1	2		3	3	22	9 workers or less
10-29	3	3	2	2	1	1	3	1	3		1	1	1	3	1		4	1		2				33	10-29
30-49	2		1	1	1	1		1		3		1	2		1		1			2			2	19	30-49
50-99	2	1		2	1	1	1	4	2	2	3			3	2				2		2			28	50-99
100-299	1		1		1	4	1	1	2	2	2		1		2	1	2		1	1	1		1	25	100-299
300 workers or more		1		2			1		1				1	1						1		3		11	300 workers or more
total	10	5	4	7	4	8	8	8	9	8	6	2	5	7	8	1	8	3	4	8	3	6	6	138	total

Month of fatal accidents in plastics products in 1999-2021

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Month
January		1	1		1		2	2	1	1			1	1	1		1			1	1	1		16	January
February	1	1						1	1	2			1	1	2		1		1				1	13	February
March	2			2		1								2	1		1							9	March
April			1	1		2	1			1	2		1							3		1	1	14	April
May	1									1		1			2		1		1					7	May
June				2	1	1	1		1		1							1						8	June
July	1					1		2			3									2	1		2	12	July
August	2		1			1	3	1	1	1				1		1	1	1	1					15	August
September		1	1		1				5				1		2		1	1			1	2	2	18	September

[illegible]

Fukuoka				1						2		1					2			1				7	Fukuoka
Saga																									Saga
Nagasaki																									Nagasaki
Kumamoto																									Kumamoto
Oita																				1				1	Oita
Miyazaki																									Miyazaki
Kagoshima																									Kagoshima
Okinawa																									Okinawa
total	10	5	4	7	4	8	8	8	9	8	6	2	5	7	8	1	8	3	4	8	3	6	6	138	total

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

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