



# RESEARCH

**HOME STRUCTURE FIRES  
IN WHICH LP-GAS WAS THE TYPE OF MATERIAL FIRST IGNITED  
AND THE TYPE OF MATERIAL FIRST IGNITED  
IN ALL HOME STRUCTURE FIRES**

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## **Acknowledgements**

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## Home Structure Fires in which LP-Gas Was the Type of Material First Ignited and the Type of Material First Ignited in all Home Structure Fires

Table 1 shows annual estimates of home structure fires reported to local fire departments that began with the ignition of LP-Gas. Table 2 shows estimated annual averages for the type of material first ignited in all reported home structure fires. Categories of type of material first ignited are shown in descending order.

### Definitions and Methods

- **National Fire Incident Reporting System (NFIRS):** The U.S. Fire Administration maintains NFIRS, a system that allows fire departments around the country to document fire circumstances and causes as well as other incidents. Participation in NFIRS is voluntary at the federal level. States set their own requirements for participation in NFIRS, ranging from mandatory for all incidents to completely voluntary.
- **NFPA Fire Experience Survey (FES):** The FES collects summary data from fire departments about fires, casualties, and losses as well as other fire department incidents. Population data are also collected. Each January, NFPA sends the FES to all local (including county) fire departments protecting populations of 5,000 or more and a random sample of the smaller departments. “Big picture” national estimates of types of fires and associated losses are obtained from the survey.
- **Home:** NFPA uses the term “home” to encompass one- or two-family homes, including manufactured housing, and apartments or other multi-family housing (NFIRS property use codes 419 and 429).
  - **Residential:** The term “residential” includes homes, hotels and motels, dormitories, rooming houses, residential board and care facilities, and unclassified residential properties (NFIRS property use codes 400-499).
- **Structure fire:** In general, any fire in or on a structure or mobile property used as a fixed structure (NFIRS incident type code 111-123) is considered a structure fire even if there was no damage to the structure itself.
  - **Confined fires:** NFIRS 5.0 includes a category of structure fire scenarios collectively referred to as “confined fires,” identified by NFIRS incident type codes 113-118. These include confined cooking fires, confined chimney or flue fires, confined trash fires, confined fuel burner or boiler fires, confined commercial compactor fires, and confined incinerator fires. Losses are generally minimal in these fires, which by definition, are assumed to have been limited to the object of origin. Although causal data is not required for these fires, it is sometimes present.
  - **Non-confined fires:** Fires with incident types indicating a building fire other than a confined fire defined above, a structure other than a building, or in mobile property used as a fixed structure such as manufactured homes or portable buildings (NFIRS incident type codes 111, 112, and 120-123) are collectively referred to as non-confined fires. Most casualties and losses result from these fires. Note that in some cases, fire spread in a non-confined fire can still be limited or confined to the object of origin.
- **National estimates of specific problems:** Estimates are projections based on the detailed information collected in Version 5.0 of the U.S. Fire Administration’s National Fire Incident Reporting System (NFIRS 5.0) and the National Fire Protection Association’s (NFPA’s) annual fire

department experience survey. Fires reported only to federal or state agencies or industrial fire brigades are excluded from these estimates.

To compensate for fires reported to local departments that did not get into NFIRS, multipliers are calculated by dividing the FES estimates by totals in NFIRS. Separate multipliers are calculated for residential and non-residential structure fires, vehicle fires, and outside and unclassified fires, and for fires, civilian deaths, civilian injuries, and direct property loss. These are then applied to the NFIRS data. Casualty and loss projections can be heavily influenced by the inclusion or exclusion of one unusually serious fire.

- **Compensating for unknown or missing data in NFIRS:** Investigation results are often not available when NFIRS reports are completed. Many causal factors are coded as “undetermined” and are often not updated. Some are truly unknown. In some situations, such as confined structure fires, causal information is not required. Collectively, missing or undetermined information is referred to as unknowns. NFPA allocates unknown data proportionally. In effect, we take the percentages for fires with known data and apply those percentages to all fires for that question.
- **Rounding:** Fires are rounded to the nearest hundred, civilian deaths and injuries are rounded to the nearest ten, and direct property damage is rounded to the nearest million dollars. Estimates of zero may be true zeroes or may have rounded to zero. Percentages were calculated before rounding. Consequently, estimates that appear the same may be associated with different percentages. Sums may not equal totals due to rounding.
- **Inflation:** The Consumer Price Index Purchasing Power of the Dollar was used to calculate inflation adjusted property loss estimates for trend tables. No adjustments were made in tables with annual averages.

### Special Issues in Fields relevant to this analysis

**Type of Material First Ignited:** According to the [NFIRS 5.0 Complete Reference Guide](#), the type of material first ignited (TMI) describes “the composition of the material in the item first ignited...” It “refers to the raw, common, or natural state of the material.” While this is the intent, it is not always so clear. There are examples in which the material first ignited was an exterior wall and the TMI was LP-Gas.

NFIRS also has a skip pattern that complicates things further. TMI is only required when the NFIRS material first ignited codes were between 00 and 69. This means that TMI was not required for organic materials such as food or vegetation, and general materials such as electrical wire, dust or lint, rubbish, etc. However, information is sometimes provided. While it is possible to separate the results for fires where TMI would or would not be required based on material first ignited, material first ignited is not required for confined fires.

In this analysis, unknowns were allocated separately for confined and non-confined data but no adjustments were made based on the material first ignited.

LP-Gas is identified by NFIRS TMI code 12. LP-Gas includes butane, butane and air mixtures, and propane gas.

**Table 1.**  
**Home Structure Fires that Began with the Ignition of LP-Gas, by Year**  
**2003-2015**

Year	Fires		Civilian Deaths		Civilian Injuries		Direct property loss in millions		
							As Reported	In 2015 Dollars	
2003	2,400	(1,300)	60	(60)	180	(180)	\$76	(\$76)	\$98
2004	2,100	(1,100)	20	(20)	130	(120)	\$32	(\$32)	\$40
2005	2,100	(1,000)	30	(30)	180	(170)	\$34	(\$34)	\$41
2006	2,500	(1,100)	40	(40)	150	(110)	\$39	(\$39)	\$46
2007	2,400	(1,100)	30	(30)	150	(130)	\$75	(\$73)	\$86
2008	2,400	(1,000)	20	(20)	130	(110)	\$71	(\$71)	\$79
2009	2,000	(900)	30	(30)	110	(90)	\$50	(\$50)	\$55
2010	2,200	(900)	30	(30)	150	(140)	\$56	(\$56)	\$61
2011	2,600	(1,100)	60	(60)	140	(120)	\$43	(\$43)	\$45
2012	2,900	(1,000)	20	(20)	130	(80)	\$55	(\$54)	\$56
2013	2,700	(900)	30	(30)	140	(130)	\$52	(\$51)	\$52
2014	2,800	(1,100)	20	(20)	230	(210)	\$49	(\$49)	\$49
2015	3,200	(1,000)	30	(30)	120	(110)	\$72	(\$72)	\$72

Note: Numbers in parentheses exclude confined fires. NFIRS includes a category of structure fire scenarios collectively referred to as “confined fires,” identified by NFIRS incident type codes 113-118. These include confined cooking fires, confined chimney or flue fires, confined trash fires, confined fuel burner or boiler fires, confined commercial compactor fires, and confined incinerator fires. Confined and non-confined fires were analyzed separately. National estimates are projections. Casualty and loss projections can be heavily influenced by the inclusion or exclusion of one unusually serious fire. Inflation adjustment to 2015 dollars is done using the consumer price index purchasing power of the dollar. Unknowns have been allocated proportionally.

Source: NFIRS and NFPA fire experience survey.

**Table 2.**  
**Home Structure Fires by Type of Material First Ignited**  
**2011-2015 Annual Averages**

Type of Material First Ignited	Fires		Civilian Deaths		Civilian Injuries		Direct Property Loss (in Millions)	
<i>Processed wood or paper</i>	<b>98,600</b>	<b>(28%)</b>	<b>460</b>	<b>(18%)</b>	<b>1,970</b>	<b>(16%)</b>	<b>\$3,010</b>	<b>(45%)</b>
<i>Non-confined fire</i>	<b>70,600</b>	<b>(20%)</b>	<b>460</b>	<b>(18%)</b>	<b>1,900</b>	<b>(15%)</b>	<b>\$3,003</b>	<b>(45%)</b>
<i>Confined fire</i>	<b>28,000</b>	<b>(8%)</b>	<b>0</b>	<b>(0%)</b>	<b>70</b>	<b>(1%)</b>	<b>\$7</b>	<b>(0%)</b>
Sawn wood or finished lumber	39,900	(11%)	240	(9%)	800	(6%)	\$1,733	(26%)
Non-confined fire	35,300	(10%)	240	(9%)	790	(6%)	\$1,731	(26%)
Confined fire	4,600	(1%)	0	(0%)	10	(0%)	\$2	(0%)
Paper, including cellulose and waxed paper	9,700	(3%)	50	(2%)	280	(2%)	\$149	(2%)
Non-confined fire	5,300	(1%)	50	(2%)	270	(2%)	\$149	(2%)
Confined fire	4,400	(1%)	0	(0%)	10	(0%)	\$1	(0%)
Fiberboard, particleboard or hardboard	9,500	(3%)	50	(2%)	290	(2%)	\$302	(4%)
Non-confined fire	8,600	(2%)	50	(2%)	280	(2%)	\$301	(4%)
Confined fire	1,000	(0%)	0	(0%)	10	(0%)	\$1	(0%)
Plywood	8,100	(2%)	40	(1%)	140	(1%)	\$279	(4%)
Non-confined fire	7,200	(2%)	40	(1%)	140	(1%)	\$278	(4%)
Confined fire	900	(0%)	0	(0%)	0	(0%)	\$1	(0%)
Cardboard	5,200	(1%)	10	(1%)	130	(1%)	\$75	(1%)
Non-confined fire	2,100	(1%)	10	(1%)	100	(1%)	\$75	(1%)
Confined fire	3,100	(1%)	0	(0%)	30	(0%)	\$0	(0%)
Round timber, including round posts and poles	4,100	(1%)	10	(0%)	20	(0%)	\$34	(0%)
Non-confined fire	700	(0%)	10	(0%)	10	(0%)	\$33	(0%)
Confined fire	3,400	(1%)	0	(0%)	0	(0%)	\$1	(0%)
Wood chips, sawdust or shavings	2,900	(1%)	0	(0%)	30	(0%)	\$46	(1%)
Non-confined fire	1,100	(0%)	0	(0%)	30	(0%)	\$46	(1%)
Confined fire	1,800	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Wood pulp	1,800	(1%)	0	(0%)	10	(0%)	\$24	(0%)
Non-confined fire	600	(0%)	0	(0%)	10	(0%)	\$23	(0%)
Confined fire	1,200	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Unclassified processed wood or paper	17,400	(5%)	60	(2%)	280	(2%)	\$368	(5%)
Non-confined fire	9,700	(3%)	60	(2%)	270	(2%)	\$366	(5%)
Confined fire	7,700	(2%)	0	(0%)	10	(0%)	\$2	(0%)

*Home Structure Fires in which LP-Gas Was the Type of Material First Ignited and the Type of Material First Ignited in all Home Structure Fires, 5/18*

**Table 2.**  
**Home Structure Fires by Type of Material First Ignited**  
**2011-2015 Annual Averages (Continued)**

Type of Material First Ignited	Fires		Civilian Deaths		Civilian Injuries		Direct Property Loss (in Millions)	
<i>Natural product</i>	<b>48,900</b>	<b>(14%)</b>	<b>70</b>	<b>(3%)</b>	<b>730</b>	<b>(6%)</b>	<b>\$234</b>	<b>(3%)</b>
<i>Non-confined fire</i>	<b>8,200</b>	<b>(2%)</b>	<b>70</b>	<b>(3%)</b>	<b>450</b>	<b>(4%)</b>	<b>\$229</b>	<b>(3%)</b>
<i>Confined fire</i>	<b>40,700</b>	<b>(11%)</b>	<b>0</b>	<b>(0%)</b>	<b>280</b>	<b>(2%)</b>	<b>\$5</b>	<b>(0%)</b>
Food or starch, excluding fat and grease	35,500	(10%)	30	(1%)	550	(4%)	\$57	(1%)
Non-confined fire	2,900	(1%)	30	(1%)	290	(2%)	\$54	(1%)
Confined fire	32,600	(9%)	0	(0%)	260	(2%)	\$3	(0%)
Hay or straw	1,300	(0%)	0	(0%)	10	(0%)	\$21	(0%)
Non-confined fire	700	(0%)	0	(0%)	10	(0%)	\$21	(0%)
Confined fire	600	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Rubber, excluding synthetic rubbers	1,000	(0%)	0	(0%)	20	(0%)	\$14	(0%)
Non-confined fire	600	(0%)	0	(0%)	20	(0%)	\$14	(0%)
Confined fire	400	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Coal, coke, briquettes or peat	700	(0%)	10	(0%)	10	(0%)	\$10	(0%)
Non-confined fire	200	(0%)	10	(0%)	0	(0%)	\$10	(0%)
Confined fire	500	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Tobacco	600	(0%)	10	(0%)	30	(0%)	\$8	(0%)
Non-confined fire	400	(0%)	10	(0%)	30	(0%)	\$8	(0%)
Confined fire	200	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Grain or natural fiber (pre-process)	300	(0%)	0	(0%)	0	(0%)	\$3	(0%)
Non-confined fire	100	(0%)	0	(0%)	0	(0%)	\$2	(0%)
Confined fire	200	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Leather	100	(0%)	0	(0%)	0	(0%)	\$2	(0%)
Non-confined fire	100	(0%)	0	(0%)	0	(0%)	\$2	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Cork	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Non-confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Unclassified natural product	9,300	(3%)	20	(1%)	110	(1%)	\$118	(2%)
Non-confined fire	3,200	(1%)	20	(1%)	100	(1%)	\$117	(2%)
Confined fire	6,000	(2%)	0	(0%)	20	(0%)	\$1	(0%)

*Home Structure Fires in which LP-Gas Was the Type of Material First Ignited and the Type of Material First Ignited in all Home Structure Fires, 5/18*

**Table 2.**  
**Home Structure Fires by Type of Material First Ignited**  
**2011-2015 Annual Averages (Continued)**

Type of Material First Ignited	Fires		Civilian Deaths		Civilian Injuries		Direct Property Loss (in Millions)	
<i>Flammable or combustible liquid</i>	<b>44,600</b>	<b>(12%)</b>	<b>190</b>	<b>(7%)</b>	<b>2,500</b>	<b>(20%)</b>	<b>\$536</b>	<b>(8%)</b>
<i>Non-confined fire</i>	<b>15,000</b>	<b>(4%)</b>	<b>190</b>	<b>(7%)</b>	<b>1,890</b>	<b>(15%)</b>	<b>\$526</b>	<b>(8%)</b>
<i>Confined fire</i>	<b>29,600</b>	<b>(8%)</b>	<b>0</b>	<b>(0%)</b>	<b>620</b>	<b>(5%)</b>	<b>\$10</b>	<b>(0%)</b>
Cooking oil, transformer or lubricating oil	34,000	(9%)	50	(2%)	1,950	(16%)	\$328	(5%)
Non-confined fire	10,500	(3%)	50	(2%)	1,360	(11%)	\$319	(5%)
Confined fire	23,500	(7%)	0	(0%)	590	(5%)	\$9	(0%)
Kerosene, No.1 and 2 fuel oil, diesel type	3,200	(1%)	10	(1%)	30	(0%)	\$12	(0%)
Non-confined fire	300	(0%)	10	(1%)	30	(0%)	\$11	(0%)
Confined fire	2,900	(1%)	0	(0%)	10	(0%)	\$0	(0%)
Gasoline	2,000	(1%)	80	(3%)	240	(2%)	\$95	(1%)
Non-confined fire	1,900	(1%)	80	(3%)	240	(2%)	\$95	(1%)
Confined fire	200	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Cottonseed oil, creosote oil type combustible liquid	1,200	(0%)	0	(0%)	10	(0%)	\$3	(0%)
Non-confined fire	100	(0%)	0	(0%)	0	(0%)	\$3	(0%)
Confined fire	1,200	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Turpentine or butyl alcohol type flammable liquid	200	(0%)	0	(0%)	30	(0%)	\$5	(0%)
Non-confined fire	100	(0%)	0	(0%)	30	(0%)	\$5	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Ether or pentane type flammable liquid	100	(0%)	0	(0%)	10	(0%)	\$2	(0%)
Non-confined fire	100	(0%)	0	(0%)	10	(0%)	\$2	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Ethanol	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Non-confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
JP-4 jet fuel & methyl ethyl ketone type flammable liquid	0	(0%)	0	(0%)	0	(0%)	\$6	(0%)
Non-confined fire	0	(0%)	0	(0%)	0	(0%)	\$6	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Unclassified flammable or combustible liquid	3,800	(1%)	40	(2%)	240	(2%)	\$84	(1%)
Non-confined fire	2,000	(1%)	40	(2%)	220	(2%)	\$84	(1%)
Confined fire	1,800	(0%)	0	(0%)	20	(0%)	\$0	(0%)

*Home Structure Fires in which LP-Gas Was the Type of Material First Ignited and the Type of Material First Ignited in all Home Structure Fires, 5/18*



**Table 2.**  
**Home Structure Fires by Type of Material First Ignited**  
**2011-2015 Annual Averages (Continued)**

Type of Material First Ignited	Fires		Civilian Deaths		Civilian Injuries		Direct Property Loss (in Millions)	
<b><i>Fabric, textile or fur</i></b>	<b>44,300</b>	<b>(12%)</b>	<b>1,170</b>	<b>(47%)</b>	<b>3,500</b>	<b>(28%)</b>	<b>\$1,193</b>	<b>(18%)</b>
<b><i>Non-confined fire</i></b>	<b>37,300</b>	<b>(10%)</b>	<b>1,170</b>	<b>(47%)</b>	<b>3,440</b>	<b>(28%)</b>	<b>\$1,191</b>	<b>(18%)</b>
<b><i>Confined fire</i></b>	<b>7,100</b>	<b>(2%)</b>	<b>0</b>	<b>(0%)</b>	<b>60</b>	<b>(0%)</b>	<b>\$1</b>	<b>(0%)</b>
Fabric, fiber, cotton, blend, rayon or wool	37,800	(11%)	1,010	(40%)	3,010	(25%)	\$1,029	(15%)
Non-confined fire	31,900	(9%)	1,010	(40%)	2,970	(24%)	\$1,028	(15%)
Confined fire	5,900	(2%)	0	(0%)	50	(0%)	\$1	(0%)
Plastic coated fabric	800	(0%)	10	(1%)	40	(0%)	\$15	(0%)
Non-confined fire	600	(0%)	10	(1%)	40	(0%)	\$15	(0%)
Confined fire	200	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Fur, silk or other fabric	200	(0%)	0	(0%)	10	(0%)	\$4	(0%)
Non-confined fire	100	(0%)	0	(0%)	10	(0%)	\$4	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Human hair	0	(0%)	0	(0%)	10	(0%)	\$0	(0%)
Non-confined fire	0	(0%)	0	(0%)	10	(0%)	\$0	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Wig	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Non-confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Unclassified fabric, textile or fur	5,400	(2%)	150	(6%)	420	(3%)	\$144	(2%)
Non-confined fire	4,600	(1%)	150	(6%)	410	(3%)	\$144	(2%)
Confined fire	800	(0%)	0	(0%)	10	(0%)	\$0	(0%)
<b><i>Volatile solid or chemical, including grease</i></b>	<b>26,900</b>	<b>(7%)</b>	<b>30</b>	<b>(1%)</b>	<b>900</b>	<b>(7%)</b>	<b>\$137</b>	<b>(2%)</b>
<b><i>Non-confined fire</i></b>	<b>5,900</b>	<b>(2%)</b>	<b>30</b>	<b>(1%)</b>	<b>650</b>	<b>(5%)</b>	<b>\$133</b>	<b>(2%)</b>
<b><i>Confined fire</i></b>	<b>21,000</b>	<b>(6%)</b>	<b>0</b>	<b>(0%)</b>	<b>250</b>	<b>(2%)</b>	<b>\$4</b>	<b>(0%)</b>
Fat, grease, butter, margarine or lard	22,300	(6%)	20	(1%)	780	(6%)	\$96	(1%)
Non-confined fire	4,600	(1%)	20	(1%)	540	(4%)	\$92	(1%)
Confined fire	17,700	(5%)	0	(0%)	240	(2%)	\$4	(0%)
Adhesive, resin, tar, glue, asphalt or pitch	1,900	(1%)	0	(0%)	20	(0%)	\$12	(0%)
Non-confined fire	300	(0%)	0	(0%)	20	(0%)	\$12	(0%)
Confined fire	1,700	(0%)	0	(0%)	0	(0%)	\$0	(0%)

Home Structure Fires in which LP-Gas Was the  
Type of Material First Ignited and the Type of Material  
First Ignited in all Home Structure Fires, 5/18

**Table 2.**  
**Home Structure Fires by Type of Material First Ignited**  
**2011-2015 Annual Averages (Continued)**

Type of Material First Ignited	Fires		Civilian Deaths		Civilian Injuries		Direct Property Loss (in Millions)	
Polish, paraffin or wax	700	(0%)	0	(0%)	30	(0%)	\$5	(0%)
Non-confined fire	300	(0%)	0	(0%)	30	(0%)	\$5	(0%)
Confined fire	400	(0%)	0	(0%)	10	(0%)	\$0	(0%)
Applied paint or varnish	500	(0%)	0	(0%)	20	(0%)	\$13	(0%)
Non-confined fire	400	(0%)	0	(0%)	20	(0%)	\$13	(0%)
Confined fire	100	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Combustible meta	500	(0%)	0	(0%)	10	(0%)	\$2	(0%)
Non-confined fire	100	(0%)	0	(0%)	10	(0%)	\$2	(0%)
Confined fire	400	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Petroleum jelly and non-food grease	100	(0%)	0	(0%)	10	(0%)	\$2	(0%)
Non-confined fire	100	(0%)	0	(0%)	10	(0%)	\$2	(0%)
Confined fire	100	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Solid chemical, including explosives	100	(0%)	0	(0%)	10	(0%)	\$1	(0%)
Non-confined fire	0	(0%)	0	(0%)	10	(0%)	\$1	(0%)
Confined fire	100	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Radioactive material	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Non-confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Unclassified volatile or solid chemical	700	(0%)	0	(0%)	20	(0%)	\$5	(0%)
Non-confined fire	100	(0%)	0	(0%)	20	(0%)	\$5	(0%)
Confined fire	500	(0%)	0	(0%)	0	(0%)	\$0	(0%)
<b>Plastic</b>	<b>37,500</b>	<b>(10%)</b>	<b>110</b>	<b>(4%)</b>	<b>1,090</b>	<b>(9%)</b>	<b>\$503</b>	<b>(7%)</b>
<b>Non-confined fire</b>	<b>22,600</b>	<b>(6%)</b>	<b>110</b>	<b>(4%)</b>	<b>990</b>	<b>(8%)</b>	<b>\$499</b>	<b>(7%)</b>
<b>Confined fire</b>	<b>14,900</b>	<b>(4%)</b>	<b>0</b>	<b>(0%)</b>	<b>100</b>	<b>(1%)</b>	<b>\$5</b>	<b>(0%)</b>
<b>Flammable gas</b>	<b>8,700</b>	<b>(2%)</b>	<b>110</b>	<b>(4%)</b>	<b>490</b>	<b>(4%)</b>	<b>\$153</b>	<b>(2%)</b>
<b>Non-confined fire</b>	<b>3,700</b>	<b>(1%)</b>	<b>110</b>	<b>(4%)</b>	<b>430</b>	<b>(3%)</b>	<b>\$152</b>	<b>(2%)</b>
<b>Confined fire</b>	<b>5,100</b>	<b>(1%)</b>	<b>0</b>	<b>(0%)</b>	<b>60</b>	<b>(1%)</b>	<b>\$1</b>	<b>(0%)</b>
Natural gas	4,200	(1%)	40	(2%)	160	(1%)	\$60	(1%)
Non-confined fire	1,500	(0%)	40	(2%)	130	(1%)	\$59	(1%)
Confined fire	2,700	(1%)	0	(0%)	30	(0%)	\$1	(0%)

Home Structure Fires in which LP-Gas Was the Type of Material First Ignited and the Type of Material First Ignited in all Home Structure Fires, 5/18

**Table 2.**  
**Home Structure Fires by Type of Material First Ignited**  
**2011-2015 Annual Averages (Continued)**

<b>Type of Material First Ignited</b>	<b>Fires</b>		<b>Civilian Deaths</b>		<b>Civilian Injuries</b>		<b>Direct Property Loss (in Millions)</b>	
LP gas	2,800	(1%)	30	(1%)	150	(1%)	\$54	(1%)
Non-confined fire	1,000	(0%)	30	(1%)	130	(1%)	\$54	(1%)
Confined fire	1,800	(1%)	0	(0%)	20	(0%)	\$0	(0%)
Acetylene	100	(0%)	0	(0%)	0	(0%)	\$1	(0%)
Non-confined fire	0	(0%)	0	(0%)	0	(0%)	\$1	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Anesthetic gas	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Non-confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Hydrogen	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Non-confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Unclassified flammable gas	1,600	(0%)	30	(1%)	170	(1%)	\$38	(1%)
Non-confined fire	1,000	(0%)	30	(1%)	170	(1%)	\$38	(1%)
Confined fire	500	(0%)	0	(0%)	10	(0%)	\$0	(0%)
<b>Material compounded with oil</b>	<b>1,700</b>	<b>(0%)</b>	<b>10</b>	<b>(0%)</b>	<b>40</b>	<b>(0%)</b>	<b>\$47</b>	<b>(1%)</b>
<b>Non-confined fire</b>	<b>1,100</b>	<b>(0%)</b>	<b>10</b>	<b>(0%)</b>	<b>30</b>	<b>(0%)</b>	<b>\$47</b>	<b>(1%)</b>
<b>Confined fire</b>	<b>600</b>	<b>(0%)</b>	<b>0</b>	<b>(0%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(0%)</b>
Asphalt treated material	600	(0%)	0	(0%)	10	(0%)	\$26	(0%)
Non-confined fire	600	(0%)	0	(0%)	10	(0%)	\$26	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Oilcloth	200	(0%)	0	(0%)	0	(0%)	\$3	(0%)
Non-confined fire	100	(0%)	0	(0%)	0	(0%)	\$3	(0%)
Confined fire	100	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Linoleum	100	(0%)	0	(0%)	10	(0%)	\$2	(0%)
Non-confined fire	100	(0%)	0	(0%)	10	(0%)	\$2	(0%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Unclassified material compounded with oil	800	(0%)	0	(0%)	20	(0%)	\$16	(0%)
Non-confined fire	300	(0%)	0	(0%)	10	(0%)	\$16	(0%)
Confined fire	500	(0%)	0	(0%)	0	(0%)	\$0	(0%)

Home Structure Fires in which LP-Gas Was the Type of Material First Ignited and the Type of Material First Ignited in all Home Structure Fires, 5/18

**Table 2.**  
**Home Structure Fires by Type of Material First Ignited**  
**2011-2015 Annual Averages (Continued)**

Type of Material First Ignited	Fires		Civilian Deaths		Civilian Injuries		Direct Property Loss (in Millions)	
<i>Other material</i>	<b>47,300</b>	<b>(13%)</b>	<b>370</b>	<b>(15%)</b>	<b>1,070</b>	<b>(9%)</b>	<b>\$910</b>	<b>(14%)</b>
<i>Non-confined fire</i>	<b>22,400</b>	<b>(6%)</b>	<b>370</b>	<b>(15%)</b>	<b>960</b>	<b>(8%)</b>	<b>\$905</b>	<b>(13%)</b>
<i>Confined fire</i>	<b>24,900</b>	<b>(7%)</b>	<b>0</b>	<b>(0%)</b>	<b>110</b>	<b>(1%)</b>	<b>\$5</b>	<b>(0%)</b>
Unclassified type of material	29,600	(8%)	130	(5%)	430	(4%)	\$323	(5%)
Non-confined fire	10,600	(3%)	130	(5%)	360	(3%)	\$320	(5%)
Confined fire	19,000	(5%)	0	(0%)	70	(1%)	\$3	(0%)
Multiple types of material	17,700	(5%)	240	(10%)	640	(5%)	\$587	(9%)
Non-confined fire	11,800	(3%)	240	(10%)	600	(5%)	\$585	(9%)
Confined fire	5,900	(2%)	0	(0%)	30	(0%)	\$2	(0%)
<b>Total</b>	<b>358,500</b>	<b>(100%)</b>	<b>2,510</b>	<b>(100%)</b>	<b>12,300</b>	<b>(100%)</b>	<b>\$6,723</b>	<b>(100%)</b>
<i>Non-confined fire</i>	<b>186,700</b>	<b>(52%)</b>	<b>2,510</b>	<b>(100%)</b>	<b>10,730</b>	<b>(87%)</b>	<b>\$6,684</b>	<b>(99%)</b>
<i>Confined fire</i>	<b>171,900</b>	<b>(48%)</b>	<b>0</b>	<b>(0%)</b>	<b>1,560</b>	<b>(13%)</b>	<b>\$38</b>	<b>(1%)</b>

Note: Subtotals for each broad category are shown at the top of each section. (There are no subcategories for plastics.) Totals may not equal sums due to rounding errors. Unknowns have been allocated proportionally.

Source: NFIRS 5.0 and NFPA fire experience survey.