

**ACCIDENTS  
INVOLVING FLAMMABLE REFRIGERANTS**

Revised: 7 February 2002

| Date       | Location/Description/Summary  |
|------------|---|
| 12/23/2001 | <p>Madison, Wisconsin, USA: Oscar Mayer Foods<br/>Two men were moving a tank of ammonia in a loading dock when a line broke, spilling 50 gallons of ammonia.</p> <p>Injuries/Damage: One person died from ammonia exposure and two others required hospital treatment. Of the two, one was in serious condition.</p> <p>Documentation: Associated Press news release and two newspaper accounts including the Chicago Tribune.</p>   |
| 11/12/2001 | <p>Treviso, Italy: ELECTROLUX<br/>An explosion of Isobutane, R-600a, took place at an ELECTROLUX factory that manufactures refrigerators that use R-600a as a refrigerant. The fire took place in an area used to assemble compressors for refrigerators. Flames blazed up in a 1-meter deep pit, in which welding is normally carried out. It is suspected that there was a leak of Isobutane used to charge the refrigerators and the refrigerant pooled in the welding pit until it was ignited.</p> <p>Injuries/Damage: Eight persons suffered injuries that required a hospital visit. Three were reportedly seriously burned. "The 3 most heavily injured female employees were affected by the shock wave and by the flames, which resulted from the explosion. The other 5 colleagues threw themselves immediately over the 3 women in order to extinguish the flames with their own bodies."</p> <p>Documentation:<br/>- CNN News article dated 12 November 2001</p> |
| 7/12/2001  | <p>New South Wales, Australia: University of New South Wales<br/>Dr. Maclaine-cross, a HC refrigerant researcher, was conducting a demonstration of the safety of HC refrigerants using his own vehicle. The demonstration resulted in an explosion, injuring Dr. Maclaine-cross and one other. Their injuries required medical treatment but not hospitalization.</p>   |
| 7/5/1999   | <p>Adelaide, Australia: Café Grove, Village Shopping Center<br/>Fire incident involving a refrigeration unit containing a Calor Gas "Care" HC refrigerant blends (Propane and butane) during service. A refrigerant pipe ruptured during the recycling process. The escaping gas was</p>   |

reportedly ignited when the service technician pulled the electrical lead out of a power point, causing an arc.

**Injuries/Damage:** Two were reportedly seriously burned - the service technician and café owner, both of them in the vicinity of the refrigeration equipment. A third worker in the café was unharmed. Half of the café was engulfed in flames.

**Documentation:**

- Newspaper article
- Fire Case Notes # 8 - South Australian Metropolitan Fire Service.
- Hazard Alert No. 17, Workplace Services, Australian Department for Administrative and Information Services, September 1999.  
([http://www.eric.sa.gov.au/hazard\\_alerts/hazaler17.pdf](http://www.eric.sa.gov.au/hazard_alerts/hazaler17.pdf))
- Official Report of Accident by Graham Stephens, Inspector, Occupational Health & Safety, Community Services Team, dated 18 January 2000.

1999/2000

Adelaide, Australia

Fire and/or explosion in a refrigerator allegedly from a leaking aerosol container stored in the refrigerator. Investigated by Workplace Service in Adelaide.

**Injuries/Damage:** Not disclosed.

**Documentation:** None available as of 26 March 2000.

1999/2000

Texas, USA:

Alleged news report of an explosion from an ammonia system blowing out the wall of beer brewery in Texas.

**Documentation:** None available as of 26 January 2001

1999

Switzerland:

Fire incident during service of an indirect closed system heat pump. The condenser of an air-water heat pump was leaking. Due to the large pressure drop between heat pump and hydronic heat distribution systems, propane (R-290) was flowing into the hydronic system. After opening a bleeding valve of the circulation pump, unfortunately being illuminated with a lighter, propane ignited with a jet of flame.

**Injuries:** Fortunately no personal injuries resulted.

**Documentation:** Memo from Joel Crespin to Joint Working Group IEC SC61D/ISO TC86/SC1

Unknown      Australia  
Alleged explosion of a propane cylinder in the cab of an HVAC&R service technician.

Injuries: Unknown

Documentation: None on hand at present.

Unknown      Sweden  
Alleged explosion involving a chiller or heat pump while being recharged with isobutane.

Documentation: None available