

Title (en)  
A self-heating or self-cooling pack

Title (de)  
Selbsterwärmendes oder selbstkühlends Pack

Title (fr)  
Pack de chauffage ou refroidissement automatique

Publication  
**EP 2896908 A1 20150722 (EN)**

Application  
**EP 14151695 A 20140118**

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Abstract (en)  
The present invention refers to an adaptable device comprising a plurality of elements, each element comprising a first containing means which is delimited by a first surface, and contains a first one or more reagent, in contact with or connected to a second containing means which is delimited by a second surface, and contains a second one or more reagent, wherein said first surface, said second surface or both, comprise rupturable means configured to, while maintaining the integrity of the rest of at least one of said surfaces, break upon pressure so as to produce a temperature changing reaction through contact between said first one or more reagent and said second one or more reagent, characterized in that said device comprises two or more elements and each element is separated by non-rupturable separating means configured to maintain integrity upon said pressure.

IPC 8 full level  
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CPC (source: EP)  
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Citation (applicant)  
• US 3977202 A 19760831 - FORUSZ SAMUEL LAURENCE, et al  
• US 3874504 A 19750401 - VERAKAS JOHN P  
• US 6644383 B2 20031111 - JOSEPH GARY CURTIS [US], et al  
• US 3804077 A 19740416 - WILLIAMS V  
• US 5984953 A 19991116 - SABIN MARTIN W [US], et al  
• WO 2012113479 A1 20120830 - SCALDOPACK SPRL [BE], et al  
• DE 102008015677 A1 20091001 - ZEO TECH GMBH [DE]  
• DE 19860944 A1 20000720 - BLUEMER MIKE [DE]  
• US 8001959 B2 20110823 - FORD JOHN M B [US], et al  
• US 4895135 A 19900123 - HAMASAKI MASAFUMI [JP]  
• ES 2183784 T3 20030401 - THERMOTIC DEV LTD

Citation (search report)  
• [XYI] US 2001008072 A1 20010719 - KOHOUT DANIEL J [US]  
• [XI] US 6524331 B1 20030225 - KOHOUT DANIEL [US], et al  
• [XI] WO 9739708 A2 19971030 - ALLEGIANCE CORP [US]  
• [I] US 2003116452 A1 20030626 - SARIC JERKO [CA], et al  
• [Y] EP 1079773 A1 20010307 - TEMPRA TECH INC [US]  
• [Y] US 3804077 A 19740416 - WILLIAMS V  
• [Y] US 2010126492 A1 20100527 - ST ETIENNE ROSELYN [US]  
• [A] US 2007157921 A1 20070712 - RANKIN RONALD C [US]  
• [A] US 2009090349 A1 20090409 - DONOVAN JAMES A [US]  
• [A] US 2002046566 A1 20020425 - LIAO WEN HU [TW]  
• [A] DE 2219332 A1 19730201 - BOWATER PACKAGING LTD  
• [A] GB 1383536 A 19740212 - KAY LABORATORIES INC  
• [A] US 7021848 B1 20060404 - GRUENBACHER DANA PAUL [US], et al  
• [A] EP 1164092 A2 20011219 - ZANINELLI MAURO [IT]  
• [A] US 2007150033 A1 20070628 - JOHNSON CHERLIN [US], et al  
• [A] US 2003118779 A1 20030626 - FISH JEFFREY E [US], et al  
• [A] US 2006081000 A1 20060420 - TRINH DENNIS S [US], et al  
• [A] US 2006289565 A1 20061228 - MANZO STEPHEN [US], et al  
• [A] WO 2007059122 A1 20070524 - HEAT WAVE TECHNOLOGIES LLC [US], et al

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