

Title (en)
CIGARETTE WITH CARBON ON TOW FILTER

Title (de)
ZIGARETTE MIT KOHLENSTOFF AUF FILTERTOW

Title (fr)
CIGARETTE MUNIE D'UN FILTRE CARBONE SUR ETOUPE

Publication
EP 1845811 B1 20150520 (EN)

Application
EP 05824620 A 20051214

Priority
• IB 2005004001 W 20051214
• US 63626204 P 20041215

Abstract (en)
[origin: WO2006064371A1] A cigarette (10) comprises a tobacco rod (12) and a carbonon-tow filter (14) comprising a fiber tow (18) with flavored or unflavored carbon particles (20) distributed throughout the tow. The carbon particles have high activity in the range of 90 to 115%, preferably 95%. As mainstream smoke is drawn through the filter (14), gas phase smoke constituents are removed and flavor is released when the particles are flavored. Ventilation (24) is provided to limit the amount of tobacco being combusted during each puff and such ventilation is arranged at a location near the downstream end of the carbon-on-tow filter to lower mainstream smoke velocity through the filter. The filter achieves significant reductions in gas phase constituents of mainstream smoke, including 90% reductions or greater in at least one of 1, 3 butadiene, acrolein, isoprene, propionaldehyde, acrylonitrile, benzene, toluene, and 80% reductions or greater in acetaldehyde over extended shelf life of the cigarettes.

IPC 8 full level
A24D 3/16 (2006.01)

CPC (source: EP KR US)
A24D 1/002 (2013.01 - KR); **A24D 3/0225** (2013.01 - KR); **A24D 3/061** (2013.01 - KR); **A24D 3/14** (2013.01 - KR);
A24D 3/163 (2013.01 - EP KR US)

Citation (opposition)
Opponent : British American Tobacco
• WO 2004103099 A2 20041202 - LORILLARD LICENSING COMPANY LL [US], et al
• US 2004187881 A1 20040930 - JUPE RICHARD [US], et al
• US 5714126 A 19980203 - FRUND ZANE N [US]
• EP 1279435 A1 20030129 - 3M INNOVATIVE PROPERTIES CO [US]
• US 5228464 A 19930720 - OWENS JR WILLIAM F [US]
• US 2003159703 A1 20030828 - YANG ZUYIN [US], et al
• US 5568819 A 19961029 - GENTRY JEFFERY S [US], et al
• EP 0532329 A2 19930317 - REYNOLDS TOBACCO CO R [US]
• TECHNICAL MEMORANDUM, 19 August 1988 (1988-08-19), XP055258685
Opponent : British American Tobacco (Investments) Limited
• EP 1466882 A1 20041013 - AIR PROD & CHEM [US]
• WO 03106543 A1 20031224 - KAPPLER INC [US], et al
• US 5144967 A 19920908 - CARTWRIGHT WILLIAM F [US], et al
• EP 2630879 A1 20130828 - JAPAN TOBACCO INC [JP]
• "Menthol", WIKIPEDIA, THE FREE ENCYCLOPEDIA, XP055373383, Retrieved from the Internet <URL:https://en.wikipedia.org/wiki/Menthol>

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WO 2006064371 A1 20060622; WO 2006064371 A8 20070518; WO 2006064371 A8 20070802; AU 2005315243 A1 20060622;
AU 2005315243 B2 20110908; BR PI0519090 A2 20081223; CN 101094597 A 20071226; CN 101094597 B 20111109;
DK 1845811 T3 20150824; DK 1845811 T4 20180903; EA 009755 B1 20080428; EA 200701278 A1 20071026; EP 1845811 A1 20071024;
EP 1845811 B1 20150520; EP 1845811 B2 20180704; ES 2545455 T3 20150911; ES 2545455 T5 20181029; HK 1109998 A1 20080704;
HU E025226 T2 20160229; JP 2008523800 A 20080710; JP 5398143 B2 20140129; KR 20070089855 A 20070903; MX 2007007232 A 20070814;
PL 1845811 T3 20151130; PL 1845811 T5 20181130; PT 1845811 E 20150915; RS 54104 B1 20151030; RS 54104 B2 20181130;
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HU E05824620 A 20051214; JP 2007546228 A 20051214; KR 20077016137 A 20070713; MX 2007007232 A 20051214;
PL 05824620 T 20051214; PT 05824620 T 20051214; RS P20150472 A 20051214; SI 200531987 T 20051214; UA A200707747 A 20051214;
US 29947505 A 20051212; ZA 200704410 A 20070529