



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 16 86 68 96

Classification of the application (IPC):

C07D 233/04, C07D 233/08, C07D 233/12, C02F 5/12, C02F 5/14, C02F 103/02, C02F 103/10

Technical fields searched (IPC):

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	US 6303079 B1 (MEYER GEORGE RICHARD [US]) 16 October 2001 (2001-10-16) * column 1, line 1 - line 12 * * column 3, line 10 - column 20, line 13 *	1-9, 15-20
X	US 7951754 B2 (NALCO CO [US]) 31 May 2011 (2011-05-31) * column 1, line 9 - line 16 * * column 3, line 5 - column 11, line 55 * * examples 1-5 *	1-9, 15-20
X	US 2003030034 A1 (MEYER GEORGE RICHARD [US]) 13 February 2003 (2003-02-13) * paragraph [0001] * * paragraph [0009] - paragraph [0087] *	1-9, 15-20
X	US 2015225351 A1 (CONTRERAS JOSE IGNACIO REGLA [MX] ET AL) 13 August 2015 (2015-08-13) * figures 1-4 * * paragraph [0002] - paragraph [0037] * * paragraph [0058] *	1-9, 15-20
A	US 4497702 A (MILLER RICHARD F [US] ET AL) 05 February 1985 (1985-02-05) * the whole document *	1-9, 15-20
X	GB 1332959 A (AJINOMOTO KK) 10 October 1973 (1973-10-10) * page 1, line 10 - page 6, line 67 *	1-7, 15-20
X	GB 671141 A (AMERICAN VISCOSE CORP) 30 April 1952 (1952-04-30) * page 1, line 13 - page 3, line 71 *	1-20

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 20 March 2020	Examiner Zsigmond, Zoltán
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CATEGORY OF CITED DOCUMENTS

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| X: particularly relevant if taken alone | P: intermediate document |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention |
| A: technological background | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure | D: document cited in the application |
| &: member of the same patent family, corresponding document | L: document cited for other reasons |

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Application number:
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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	WO 2005079541 A2 (UNIV YALE [US]; HAMILTON ANDREW D [US]; YIN HANG [US]) 01 September 2005 (2005-09-01) * page 4, line 16 - page 8, line 6 * * page 21, line 20 - page 24, line 30 *	1-7, 15-20

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 20 March 2020	Examiner Zsigmond, Zoltán
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LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 8, 9(completely); 1-7, 15-20(all partially)

Functionalized imidazoline compound (I)

2. claims: 1-7, 15-20(all partially)

1,4-substituted benzene with functionalized imidazoline(II) (V) and imidazolinium (IV)

3. claims: 1-7, 15-20(all partially)

1,4-substituted benzene with bis-alkylamide groups (III) and (VI)

4. claims: 10-14

Reaction product of terephthalic acid, neoacid, acrylic acid and diethylenetriamine

All further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for all claims.

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search	Date of completion of the search	Examiner
The Hague	20 March 2020	Zsigmond, Zoltán

CATEGORY OF CITED DOCUMENTS

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ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 16 86 68 96

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 20-03-2020
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6303079	B1	16-10-2001	CA 2291417 A1	15-09-2000
			GB 2353793 A	07-03-2001
			NO 321351 B1	02-05-2006
			US 6303079 B1	16-10-2001
US 7951754	B2	31-05-2011	US 2009149356 A1	11-06-2009
			WO 2009076258 A1	18-06-2009
US 2003030034	A1	13-02-2003	CA 2300725 A1	15-09-2000
			GB 2351285 A	27-12-2000
			NO 321420 B1	08-05-2006
			US 6488868 B1	03-12-2002
			US 2003030034 A1	13-02-2003
US 2015225351	A1	13-08-2015	MX 360320 B	05-10-2018
			US 2015225351 A1	13-08-2015
US 4497702	A	05-02-1985	NONE	
GB 1332959	A	10-10-1973	GB 1332959 A	10-10-1973
			JP S4911701 B1	19-03-1974
GB 671141	A	30-04-1952	NONE	
WO 2005079541	A2	01-09-2005	AU 2005215051 A1	01-09-2005
			CA 2556447 A1	01-09-2005
			EP 1723100 A2	22-11-2006
			JP 2008505850 A	28-02-2008
			US 2007123592 A1	31-05-2007
			WO 2005079541 A2	01-09-2005