

Title (en)  
LOW-MOLECULAR AND HIGH-MOLECULAR EMULSIFIERS, PARTICULARLY BASED ON POLYISOBUTYLENE, AND MIXTURES THEREOF

Title (de)  
NIEDER- UND HOCHMOLEKULARE EMULGATOREN, INSBESONDERE AUF BASIS VON POLYISOBUTYLEN, SOWIE DEREN MISCHUNGEN

Title (fr)  
EMULSIFIANTS DE MASSES MOLECULAIRES FAIBLES ET ELEVEES A BASE DE POLYISOBUTYLENE, ET MELANGES DE CES EMULSIFIANTS

Publication  
**EP 1404726 A2 20040407 (DE)**

Application  
**EP 02750949 A 20020517**

Priority  
• DE 10125158 A 20010522  
• EP 0205516 W 20020517

Abstract (en)  
[origin: WO02094889A2] The invention relates to low-molecular and high-molecular diblock emulsifiers, particularly based on polyisobutylene, of general formulas (Ia) and (Ib), and to mixtures thereof, whereby: L<a> represents a polyisobutylene group having a numerical average molecular weight Mn ranging from 300 to 1000; L<b> represents a polyisobutylene group having a numerical average molecular weight Mn ranging from 2000 to 20000; A- represents -O-, -N(H)- or N(R<1>)-; M<+> represents H<+>, an alkali metal ion, 0.5 alkaline-earth metal ions or NH4<+>, whereby in NH4<+>, one or more H's can be substituted by alkyl radicals; R represents a linear or branched saturated hydrocarbon radical, which supports at least one substituent selected from the group consisting of OH, NH2 or NH3<+> and optionally supports one or more C(O)H groups while optionally containing one or more non-adjacent -O- and/or secondary amines and/or tertiary amines and, in the NH2 or NH3<+> groups, one or more H's can be substituted by alkyl radicals, and; R<1> represents a linear or branched saturated hydrocarbon radical, which optionally supports one or more substituents selected from the group consisting of OH, NH2, NH3<+> or C(O)H while optionally containing one or more non-adjacent -O- and/or secondary amines and/or tertiary amines and, in the NH2 or NH3<+> groups, one or more H's can be substituted by alkyl radicals, and the proportion of A-R on the compound of general formula (Ib) equals at least 20 wt. %.

IPC 1-7  
**C08F 8/14; C08F 8/32; B01F 17/00; C10L 1/18; C10L 1/22; C10L 1/32; C10M 133/54; C10M 133/56; C10M 129/95; C10M 145/38; C11D 1/04**

IPC 8 full level  
**C07C 69/602** (2006.01); **C07C 233/20** (2006.01); **C08F 8/14** (2006.01); **C08F 8/46** (2006.01); **C08F 110/10** (2006.01); **C08G 65/28** (2006.01);  
**C09K 23/00** (2022.01); **C09K 23/52** (2022.01); **C10L 1/10** (2006.01); **C10L 1/198** (2006.01); **C10L 1/238** (2006.01); **C10L 1/2383** (2006.01);  
**C10L 1/2387** (2006.01); **C10L 1/32** (2006.01); **C10L 10/00** (2006.01); **C10L 10/02** (2006.01); **C10L 10/04** (2006.01); **C10M 129/76** (2006.01);  
**C10M 129/95** (2006.01); **C10M 133/16** (2006.01); **C10M 133/56** (2006.01); **C10M 141/02** (2006.01); **C10M 141/06** (2006.01);  
**C10M 173/00** (2006.01); **C11D 7/26** (2006.01); **C11D 7/32** (2006.01); **C10L 1/12** (2006.01); **C10L 1/18** (2006.01); **C10L 1/22** (2006.01)

CPC (source: EP US)

**C08F 8/14** (2013.01 - EP US); **C08F 110/10** (2013.01 - EP US); **C09K 23/017** (2022.01 - EP US); **C09K 23/018** (2022.01 - EP US);  
**C09K 23/16** (2022.01 - EP US); **C10L 1/10** (2013.01 - EP US); **C10L 1/198** (2013.01 - EP US); **C10L 1/1985** (2013.01 - EP US);  
**C10L 1/238** (2013.01 - EP US); **C10L 1/2383** (2013.01 - EP US); **C10L 1/2387** (2013.01 - EP US); **C10L 1/328** (2013.01 - EP US);  
**C10L 10/02** (2013.01 - EP US); **C10L 10/04** (2013.01 - EP US); **C10L 10/08** (2013.01 - EP US); **C10M 129/76** (2013.01 - EP US);  
**C10M 129/95** (2013.01 - EP US); **C10M 133/16** (2013.01 - EP US); **C10M 133/56** (2013.01 - EP US); **C10M 141/02** (2013.01 - EP US);  
**C10M 141/06** (2013.01 - EP US); **C10M 173/00** (2013.01 - EP US); **C11D 1/008** (2013.01 - EP US); **C11D 3/3715** (2013.01 - EP US);  
**C11D 3/3757** (2013.01 - EP US); **C08F 2810/20** (2013.01 - EP US); **C09K 23/42** (2022.01 - EP US); **C10L 1/125** (2013.01 - EP US);  
**C10L 1/1266** (2013.01 - EP US); **C10L 1/1824** (2013.01 - EP US); **C10L 1/1826** (2013.01 - EP US); **C10L 1/1852** (2013.01 - EP US);  
**C10L 1/1857** (2013.01 - EP US); **C10L 1/191** (2013.01 - EP US); **C10L 1/2222** (2013.01 - EP US); **C10M 2207/288** (2013.01 - EP US);  
**C10M 2215/12** (2013.01 - EP US); **C10M 2215/28** (2013.01 - EP US); **C10N 2010/02** (2013.01 - EP US); **C10N 2010/04** (2013.01 - EP US);  
**C10N 2020/04** (2013.01 - EP US); **C10N 2030/04** (2013.01 - EP US); **C10N 2030/06** (2013.01 - EP US); **C10N 2030/12** (2013.01 - EP US);  
**C10N 2050/013** (2020.05 - EP US)

C-Set (source: EP US)  
**C08F 110/10 + C08F 2500/02 + C08F 2500/03**

Cited by  
**WO2023051747A1**

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

**WO 02094889 A2 20021128; WO 02094889 A3 20031127;** AU 2002338977 A1 20021203; CA 2448033 A1 20021128; CN 1511167 A 20040707;  
DE 10125158 A1 20021205; EP 1404726 A2 20040407; JP 2004531614 A 20041014; US 2004154216 A1 20040812

DOCDB simple family (application)

**EP 0205516 W 20020517;** AU 2002338977 A 20020517; CA 2448033 A 20020517; CN 02810580 A 20020517; DE 10125158 A 20010522;  
EP 02750949 A 20020517; JP 2002592363 A 20020517; US 47847603 A 20031121