

Title (en)  
PNEUMATIC VEHICLE TIRE FOR UTILITY VEHICLES

Title (de)  
FAHRZEUGLUFTREIFEN FÜR NUTZFAHRZEUGE

Title (fr)  
BANDAGE PNEUMATIQUE POUR VÉHICULES UTILITAIRES

Publication  
**EP 4164897 A1 20230419 (DE)**

Application  
**EP 21736969 A 20210609**

Priority  
• DE 102020207242 A 20200610  
• DE 2021200079 W 20210609

Abstract (en)  
[origin: WO2021249596A1] The invention relates to a utility vehicle tire with a radial design, in particular for trucks, buses, and truck trailers, having a four-ply or multi-ply belt (4) with a blocking ply (5), two working plies (6, 8), and a 0° ply (7), wherein steel cords (10) with at least two strands (11), each strand comprising at least six steel filaments (12), are arranged in the 0° ply (7), and by means of a twisting process, each strand has an identical first twist angle  $\alpha$  and the steel cord has a second twist angle  $\beta$ . The invention is characterized in that the steel cord (10) of the 0° ply (7) has a 2 to 4 x n x d structure, where n = 6 to 8 and d = 0.15mm to 0.29mm, wherein the aforementioned structure signifies that the steel cord (10) has two to four strands (11) which are twisted together, each strand (10) contains six to eight steel filaments (12), each steel filaments (12) of the steel cord (10) has the same filament diameter (13), and the sum of the twist angle  $\alpha$  of a strand (11) and the twist angle  $\beta$  of the steel cord ranges between 37° and 50°, preferably between 37° and 45°, particularly preferably between 38.5° and 42.5°, most preferably between 39.3° and 41.3°.

IPC 8 full level  
**B60C 9/20** (2006.01); **B60C 9/00** (2006.01); **B60C 9/22** (2006.01)

CPC (source: EP US)  
**B60C 9/0007** (2013.01 - EP US); **B60C 9/2006** (2013.01 - EP US); **B60C 9/22** (2013.01 - EP); **D07B 1/0613** (2013.01 - EP US); **D07B 1/062** (2013.01 - US); **B60C 2009/0092** (2013.01 - US); **B60C 2009/2077** (2013.01 - EP US); **B60C 2009/2285** (2013.01 - EP US); **B60C 2200/06** (2013.01 - EP US); **D07B 2201/1032** (2013.01 - EP); **D07B 2201/1044** (2013.01 - EP); **D07B 2201/1068** (2013.01 - EP); **D07B 2201/2009** (2013.01 - US); **D07B 2201/2025** (2013.01 - EP US); **D07B 2205/3025** (2013.01 - US); **D07B 2501/2046** (2013.01 - US)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**DE 102020207242 A1 20211216**; BR 112022022783 A2 20221220; CN 115916552 A 20230404; EP 4164897 A1 20230419; US 2023234399 A1 20230727; WO 2021249596 A1 20211216

DOCDB simple family (application)  
**DE 102020207242 A 20200610**; BR 112022022783 A 20210609; CN 202180040954 A 20210609; DE 2021200079 W 20210609; EP 21736969 A 20210609; US 202118001467 A 20210609