

Rail transport of dangerous goods in 2013-2022

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Rail transport plays a huge role in transport of dangerous goods. Poland is the second country in Europe in terms of the volume of potentially hazardous materials transported by rail.

Transporting dangerous goods by rail is incomparably safer than road transport. Moreover, it has much greater potential. In 2022 36 rail carriers transported dangerous goods and the share of this type of cargo reached 17.2% of the transport performance. An upward trend in rail transport of dangerous goods is evident, with transport performance rising in Poland by 81% in 10 years. In Europe, only Germany fares better in terms of the volume of hazardous materials transported by rail.

In 2022 rail freight companies carried a total of 248.5 m tonnes of goods, which accounted for 62.5 bn tonne-km of the transport performance. The total weight of dangerous goods in rail transport reached 31 m tonnes, which is 4.7% more than in 2021. The transport performance for this commodity group is 10.7 bn tonne-km. It almost doubled in 10 years (5.93 bn tonne-km in 2013).

The average transport distance of 1 tonne of freight in 2022 was 347 km. An upward trend is also visible here. Compared to 2021, the average transport distance is 17 km longer. In 2013-2022 the share of domestic transport of dangerous goods (versus international) ranged between 64 and 68.6% with the highest value in 2020.

Rail transport is a natural choice when considering transport of dangerous goods, as it is less likely to collide with other traffic participants. In the carriage of this commodity group, liquid ignitable materials retained the largest share for years. In 2022 they accounted for 66% of the weight and 73% of the transport performance against total dangerous goods transported. The second group for both parameters was the miscellaneous hazardous materials and objects group (13.25% in weight and 10.66% in transport performance). This class of hazardous materials includes, for example, substances emitting noxious vapours or containing allergens. Rail transport is mostly chosen for transport of bulk goods, such as liquid fuels, due to the possibility of using specialised rolling stock and the benefits of economies of scale.

What other dangerous goods are being transported? How is the market developing? The answers to these questions can be found in our first report focusing only on transport of dangerous goods in Poland. Its scope covers 10 years – from 2013 to 2022. In the report we present cross-sectional statistics on the transport of dangerous goods, as well as changes in this segment over 10 years. The report also shows the impact of carriage of hazardous materials on the freight market in Poland. The data also illustrates how the market for the carriage of dangerous goods has evolved in both domestic and international transport.

Further details you will find in our new [study](#) (in Polish).