

Summary from the reviewer of BfR

BfR's peer review reveals that overall the report is well-written and the approach chosen by RIVM is conceptually reasonable and sound. The report has a high scientific standard and constitutes a remarkable scientific achievement. While putting the theoretical approach into practice a number of assumptions and decisions had to be employed at each step. Some of these introduced a significant level of uncertainty into the assessment.

The main issues raised by BfR are:

- The scientific quality of the report as such is generally very high, with transparent and concise description of investigation details. In certain parts, however, in particular regarding the analytical methodology, several details are missing such that the reliability of some of the analytical results cannot be judged.
- Due to the nature of the strategy for prioritisation, sampling and analysis it cannot be excluded that relevant groups of rubber granulate constituents might have been missed or that their content and/or migration have been underestimated, potentially leading to their exclusion from further risk assessment.
- The assessment was targeted on CMR substances only. The number of established rubber granulate constituents to be considered for further health risk assessment might have been higher, if their selection had been performed based on DNELs/DMELs rather than on CLP GCLs/SCLs and official SVHC status.
- Leaching and migration of hazardous substances from rubber granulate may have been underestimated due to the migration methodology employed, at least for the PAHs.
- For the inhalation route the reported data base, notably on dust exposure, is very small.
- Several potentially exposed groups such as small children playing at the pitch and persons engaged with infill and with maintenance activities were not included in the assessment due to a lack of time.
- The epidemiological methods used to investigate a potential link between synthetic turfs and leukaemia in children and adolescents may have more limitations than acknowledged in the report.

BfR recognises that many of these uncertainties are due to the extremely short time available for this indicative risk assessment. However, in light of these uncertainties BfR finds that the central statement of the report, i.e. "health risk virtually negligible" is currently not sufficiently backed up by the investigations undertaken so far. Further investigations are needed, some of which are already suggested in the report itself in order to gain more certainty.

Considering the task of assessing the risks from rubber turf pitches as a basis for decisions about immediately required actions, the results of the report are substantial enough and can be accepted as a preliminary, indicative assessment.