L^∞ estimates for fractional resolvent powers

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It is well known in the analysis of partial differential equations that L^∞-estimates are crucial. We will show that they are satisfied for elliptic divergence operators, even if the coefficients are nonsmooth and the boundary conditions are mixed. In particular, no regularity condition has to be demanded on the Dirichlet boundary part, not even continuity. We emphasize the point that these estimates are obtained even for fractional powers of such operators, which gives good perspectives for perturbation theory.