CLAIMS

1. A mixing device (1) for mixing a liquid plastics component with a gas, comprising at least one liquid feed (2), at least one gas feed (3) and a discharge opening (11) for the mixture produced in the mixing device (1), which are respectively connected to a mixing chamber (4) in which a rotatable agitator device (5) is arranged, wherein a shaft (6) for driving the agitator device (5) projects out of the mixing chamber (4) and the mixing chamber (4) is sealed off in the region of the shaft (6) by at least one seal (7), characterised in that arranged on the side (10) of the at least one seal (7), that is remote from the mixing chamber, is a reservoir (8) which is connected to the at least one liquid feed (2) and which is connected to the mixing chamber (4) by way of a line (9), wherein the seal (7) delimits the reservoir (8).

2. A mixing device as set forth in claim 1 characterised in that the seal (7) is of an annular configuration.

3. A mixing device as set forth in at least one of the preceding claims characterised in that the mixing device (1) includes at least one further – preferably annular – seal (13) which seals off the reservoir (8) with respect to the shaft (6).

4. A mixing device as set forth in at least one of the preceding claims characterised in that a non-return valve (14) is arranged in the line (9).

5. A mixing device as set forth in at least one of the preceding claims characterised in that a housing (16) delimiting the mixing chamber (4) is surrounded by a cooling casing (12), wherein the cooling casing (12) delimits a cooling chamber (15) through which a fluid for cooling the mixing chamber (4) can flow.