CLAIMS

1. A mixing device (1) comprising at least one feed opening (2) for at least one liquid and at least one further feed opening (3) for at least one liquid curing or cross-linking agent, wherein the liquid and/or the liquid curing or cross-linking agent is or are mixed with a gas, and a discharge opening (4) for discharge of a mixture which can be produced in the mixing device and comprises the at least one liquid and the at least one liquid curing or cross-linking agent, wherein there is provided a pressure holding device for holding a predeterminable pressure greater than that pressure at which foaming-out of the gas in the mixing device (1) occurs, characterised in that the pressure holding device includes an adjusting member which is arranged displaceably in the mixing device (1) relative to the discharge opening (4).

2. A mixing device as set forth in claim 1 wherein the pressure which can be predetermined by the pressure holding device is variable by means of an adjusting device (5), or being adjustable in steps or steplessly.

3. A mixing device as set forth in claim 1 or 2 wherein the pressure holding device includes an aperture (14) arranged in the region of the discharge opening (4).

4. A mixing device as set forth in one of claims 1 through 3 wherein by means of the adjusting member a gap (6) remaining between the adjusting member and the discharge opening (4) is adjustable.

5. A mixing device as set forth in claim 4 wherein the mixing device (1) has a rotating agitator (7) for mixing the at least one liquid and the at least one liquid curing or cross-linking agent.

6. A mixing device as set forth in claim 4 and 5 wherein the agitator (7) is adapted to be displaceable and forms the adjusting member.

7. A mixing device as set forth in one of claims 4 through 6 wherein the displaceable adjusting member is biased in the direction of the discharge opening (4) by a force storage means (8).

8. A mixing device as set forth in claim 7 wherein there is provided a device for adjusting the strength of the force storage means (8).

9. A mixing device as set forth in one of claims 1 through 3 wherein the discharge opening (4) is displaceable relative to an axially immovable agitator (7) for adjusting the gap remaining between the discharge opening (4) and the axially immovable agitator (7).

10. A mixing device as set forth in one of claims 1 through 9 wherein the mixing device (1) is of an elongated configuration and the at least one feed opening (2) for the at least one liquid and the at least one further feed opening (3) for the at least one liquid curing or cross-linking agent are arranged at different axial positions of the mixing device (1).

11. A mixing device as set forth in one of claims 1 through 10 wherein the discharge opening (4) of the mixing device (1) is connected to a nozzle (9).

12. A mixing device as set forth in one of claims 1 through 11 wherein a seal (15) is provided for sealingly closing off a mixing chamber (12) of the mixing device (1) in the region of a shaft (16) of an agitator (7).

13. A mixing device as set forth in claim 12 wherein the seal (15) is in the form of a rotational and translational seal.

14. An arrangement comprising a mixing device (1) as set forth in one of claims 1 through 13, further comprising

(a) a source (10) for at least one liquid, that is connected to the at least one feed opening (2) for the at least one liquid, and

(b) a source (11) for at least one liquid curing or cross-linking agent, that is connected to the at least one further feed opening (3) for the at least one liquid curing or cross-linking agent.

15. An arrangement as set forth in claim 14 wherein the at least one liquid is mixed with a gas and/or wherein the at least one liquid curing or cross-linking agent is mixed with a gas.

16. A method of producing a foamed material, wherein at least one liquid is mixed with a gas is or are mixed with at least one liquid curing or cross-linking agent – wherein the liquid and/or the liquid curing or cross-linking agent is or are mixed with a gas – in a mixing device (1) as set forth in one of claims 1 through 13, and is then discharged through a discharge opening (4) of the mixing device (1) and expanded upon or after discharge, characterised in that the at least one liquid and the at least one liquid curing or cross-linking agent are mixed in the mixing device (1) at a pressure in which degassing of the gas out of the at least one liquid and/or out of the liquid curing or cross-linking agent is avoided and the pressure is maintained in the mixing device (1) by virtue of the pressure holding device at least until discharge in the discharge opening (4).

17. A method as set forth in claim 16 wherein mixing is effected at intervals and the discharge opening (4) is closed between the intervals.