

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS

1. A process for continuous preparation of halogenated alkoxyethane of general formula
5 $\text{XClHC-CF}_2\text{OR}$, where X is $-\text{Cl}$ or $-\text{F}$ and OR is C_{1-4} alkoxy, the process comprising a step of introducing in a flow reactor reaction components comprising (i) a compound of general formula XCIC=CF_2 , (ii) a base, and (iii) a C_{1-4} alkanol, wherein
 - a) the flow reactor comprises one or more tubular flow line(s) having an internal cross-sectional area of less than 115 mm^2 through which the reaction components flow as a
10 reaction mixture, and
 - b) the halogenated alkoxyethane is formed at least upon the reaction components mixing, with the so formed halogenated alkoxyethane flowing out of the flow reactor in a reactor effluent.
- 15 2. The process of claim 1, wherein the one or more tubular flow line(s) has/have an internal cross-sectional area of less than 30 mm^2 .
3. The process of claim 1 or 2, wherein the one or more tubular flow line(s) has/have a circular internal cross-section.
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4. The process of claim 3, wherein the one or more tubular flow line(s) has/have a diameter between 0.1 and 6 mm.
5. The process of any one of claims 1-4, wherein the one or more tubular flow line(s)
25 are provided in a coiled arrangement.
6. The process of any one of claims 1-5, wherein the one or more tubular flow line(s) has/have a total internal volume of at least 100 ml.
- 30 7. The process of any one of claims 1-6, wherein the reactor effluent containing the halogenated alkoxyethane exits the reactor at a flow rate of at least 50 ml/min.

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8. The process of any one of claims 1-7, wherein the reactor effluent contains at least 90% by volume of the halogenated alkoxyethane.
- 5 9. The process of any one of claims 1-8, wherein the flow reactor provides a residence time of less than about 5 minutes.
10. The process of any one of claims 1-9, wherein the reaction mixture is obtained by mixing (i) a solution of the C₁₋₄ alkanol and the base with (ii) the compound of general
10 formula XCIC=CF₂.
11. The process of any one of claims 1-10, wherein the mixing is performed by combining (i) a flow of the solution of the C₁₋₄ alkanol and the base with (ii) a flow of the compound of general formula XCIC=CF₂ according to a flow-rate ratio from 1:1 to 10:1.
- 15 12. The process of any one of claims 1-11, wherein the base is used in an amount of between 1% and 30% by weight relative to the total weight of base and C₁₋₄ alkanol.
13. The process of any one of claims 1-12, wherein the compound of general formula
20 XCIC=CF₂ is Cl₂C=CF₂ or FCIC=CF₂.
14. The process of any one of claims 1-13, wherein the C₁₋₄ alkanol is selected from methanol (CH₃OH), ethanol (CH₃CH₂OH), 1-propanol (CH₃CH₂CH₂OH), 2-propanol ((CH₃)₂CHOH), 1-butanol (CH₃CH₂CH₂CH₂OH), 2-butanol (CH₃CH₂CHOHCH₃), 2-
25 methyl-1-propanol ((CH₃)₂CHCH₂OH), 2-methyl-2-propanol ((CH₃)₃COH), and a combination thereof.
15. The process of any one of claims 1-14, wherein the halogenated alkoxyethane is Cl₂HC-CF₂OCH₃ (methoxyflurane) or ClFHC-CF₂OCH₃.

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16. The process of any one of claims 1-15, wherein the base comprises an alkali metal base cation or an ammonium base cation.
17. The process of any one of claims 1-16, wherein the base is used in substoichiometric
5 amount relative to the compound of general formula $\text{XCIC}=\text{CF}_2$.
18. The process of any one of claims 1-17, wherein the base is selected from sodium hydroxide, potassium hydroxide, sodium methoxide, potassium methoxide, tetrabutylammonium hydroxide, benzyl(trimethyl)ammonium hydroxide, *N*-methyl-*N,N,N*-
10 trioctylammonium chloride, tetraethylammonium hydroxide, tetramethylammonium hydroxide, and tetramethylphosphonium hydroxide.
19. The process of any one of claims 1-18, wherein water is added to the reactor effluent.
- 15 20. The process of any one of claims 1-19, further comprising a purification step in which the reactor effluent, or an organic phase derived from the reactor effluent and containing the halogenated alkoxyethane, is treated with an acid.
21. The process of any one of claims 1-19, further comprising a purification procedure
20 that comprises, in the following order, the steps of:
- a) mixing the reactor effluent with a polar solvent to induce phase separation between a polar phase and an organic phase,
 - b) separating the organic phase from the polar phase,
 - c) treating the separated organic phase with an amine,
 - 25 d) washing the organic phase obtained in c) with an acid solution,
 - e) desiccating the organic phase obtained in d), and
 - f) distilling the organic phase obtained in e) to retrieve a purified distillate comprising the halogenated alkoxyethane.
- 30 22. The process of claim 20 or 21, wherein the acid is selected from hydrochloric acid, sulfuric acid, sulphurous acid, methanesulfonic acid, trifluoromethanesulfonic acid,

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phosphoric acid, acetic acid, trifluoroacetic acid, nitric acid, nitrous acid, hypochlorous acid, chlorous acid, chloric acid, perchloric acid, and a combination thereof.

23. The process of claim 20 or 21, wherein the acid is methanesulfonic acid.