



Division of the History of Chemistry
American Chemical Society

Citation for Chemical Breakthroughs

The invention of Teflon®



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UNITED STATES PATENT OFFICE

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TETRAFLUOROETHYLENE POLYMERS

Roy J. Plunkett, Wilmington, Del., assignor to
Kinetic Chemicals, Inc., Wilmington, Del., a cor-
poration of Delaware

No Drawing. Application July 1, 1939,
Serial No. 282,437

3 Claims. (Cl. 260-94)

Table

Ex-ample	Parts C ₂ F ₄	Time, days	Temp., °C.	Catalyst, and solvent for monomer	Yield, parts	Yield, percent
I	2.5	10	25	None	0.6	7.1
II	7.8	21	20	do	0.05	0.64
III	7.3	21	20	0.1 pt. SnCl ₄	0.1	1.37
IV	2.4	3	25	0.1 pt. AgNO ₃	0.05	0.97
V	6.8	10	25	0.1 pt. AgNO ₃	9.2	4.4
VI	7.0	21	25	0.1 pt. AgNO ₃	2.8	28
VII	4.0		25	0.1 pt. AgNO ₃ , 2.5 methyl alcohol	Jelly	
VIII	4.5	3	25	0.1 pt. AgNO ₃ , 2.5 methyl alcohol	1.8	29
IX	7.4		25	0.1 pt. AgNO ₃ , 2.5 methyl alcohol	2.0	27
X	2.2	21	25	0.1 benzoyl perox.	0.05	0.57
XI	2.5		50	None		

I claim:

1. Polymerized tetrafluoroethylene.
2. The process of polymerizing tetrafluoroethylene which comprises subjecting it to super-atmospheric pressure.
3. The process of polymerizing tetrafluoroethylene which comprises subjecting it to super-atmospheric pressure in the presence of a catalyst.

Presented to E.I. du Pont de Nemours and Company

2006