

ภาคผนวก

ตารางแสดงชื่อและสูตรของโพลิเมอร์ชนิดต่าง ๆ

Name	Formula
<i>Saturated Hydrocarbons and Their Derivatives</i>	
<i>Saturated hydrocarbons</i>	
Polyethylene	$[-CH_2-CH_2-]_n$
Polypropylene	$\left[\begin{array}{c} -CH_2-CH- \\ \\ CH_3 \end{array} \right]_n$
Polybutene	$\left[\begin{array}{c} -CH_2-CH- \\ \\ C_2H_5 \end{array} \right]_n$
Polyisobutene	$\left[\begin{array}{c} CH_3 \\ \\ -CH_2-C- \\ \\ CH_3 \end{array} \right]_n$
Polyvinylbenzene (polystyrene)	$\left[\begin{array}{c} -CH_2-CH- \\ \\ \text{C}_6\text{H}_5 \end{array} \right]_n$
<i>Haloderivatives of saturated hydrocarbons</i>	
Poly(vinyl chloride)	$[-CH_2-CHCl-]_n$
Poly(vinylidene chloride)	$[-CH_2-CCl_2-]_n$
Polytetrafluoroethylene	$[-CF_2-CF_2-]_n$
<i>Alcohols, ethers, and esters</i>	
Poly(vinyl alcohol)	$\left[\begin{array}{c} -CH_2-CH- \\ \\ OH \end{array} \right]_n$
Poly(allyl alcohol)	$\left[\begin{array}{c} -CH_2-CH- \\ \\ CH_2OH \end{array} \right]_n$
Poly(vinyl ethers)	$\left[\begin{array}{c} -CH_2-CH- \\ \\ OR \end{array} \right]_n$
Poly(vinyl acetate)	$\left[\begin{array}{c} -CH_2-CH- \\ \\ OCOCH_3 \end{array} \right]_n$
Poly(vinyl carbonate)	$\left[\begin{array}{c} -CH-CH- \\ \quad \\ O \quad O \\ \diagdown \quad / \\ CO \end{array} \right]_n$

Name	Formula
<i>Acetals</i> Poly(vinyl formal)	
Poly(vinyl butyral)	
<i>Aldehydes and ketones</i> Polyacrolein	
Polymethylacrolein	
Poly(vinyl methyl ketone)	
<i>Amines and nitro-compounds</i> Polyvinylamine	
Polyvinylmethylamine	
Poly(vinyl carbazole)	

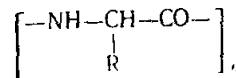
Name	Formula
Poly(vinyl pyrrolidone)	$\left[\begin{array}{c} \text{---CH}_2\text{---CH---} \\ \\ \text{N} \\ / \quad \backslash \\ \text{CH}_2 \quad \text{CO} \\ \quad \\ \text{CH}_2\text{---CH}_2 \end{array} \right]_n$
Polynitroethylene	$\left[\begin{array}{c} \text{---CH}_2\text{---CH---} \\ \\ \text{NO}_2 \end{array} \right]_n$
<i>Acids and /heir derivatives</i>	
Poly(acrylic acid)	$\left[\begin{array}{c} \text{---CH}_2\text{---CH---} \\ \\ \text{COOH} \end{array} \right]_n$
Poly(methacrylic acid)	$\left[\begin{array}{c} \text{---CH}_2\text{---CH---} \\ \\ \text{CH}_3 \\ \\ \text{---CH}_2\text{---C---} \\ \\ \text{COOH} \end{array} \right]_n$
Poly(methyl acrylate)	$\left[\begin{array}{c} \text{---CH}_2\text{---CH---} \\ \\ \text{COOCH}_3 \end{array} \right]_n$
Poly(methyl methacrylate)	$\left[\begin{array}{c} \text{---CH}_2\text{---CH---} \\ \\ \text{CH}_3 \\ \\ \text{---CH}_2\text{---C---} \\ \\ \text{COOCH}_3 \end{array} \right]_n$
Polyacrylamide	$\left[\begin{array}{c} \text{---CH}_2\text{---CH---} \\ \\ \text{CONH}_2 \end{array} \right]_n$
Polyacrylonitrile {poly(vinyl cyanide)	$\left[\begin{array}{c} \text{---CH}_2\text{---CH---} \\ \\ \text{CN} \end{array} \right]_n$
Poly(vinylidene cyanide)	$\left[\begin{array}{c} \text{---CH}_2\text{---C---} \\ \\ \text{CN} \end{array} \right]_n$
<i>Unsaturated Hydrocarbons and Their Derivatives</i>	
<i>Unsaturated hydrocarbons</i>	
Polybutadiene	$\left[\text{---CH}_2\text{---CH=CH---CH}_2\text{---} \right]_n$
Polyisoprene (natural rubber. gutta-percha)	$\left[\begin{array}{c} \text{---CH}_2\text{---C=CH---CH}_2\text{---} \\ \\ \text{CH}_3 \end{array} \right]_n$
<i>Haloderivatives of unsaturated hydrocarbons</i>	
Polychloroprene	$\left[\begin{array}{c} \text{---CH}_2\text{---C=CH---CH}_2\text{---} \\ \\ \text{Cl} \end{array} \right]_n$
<i>Aromatic hydrocarbons</i>	
Polymethylenoxyphenylenes	See p. 360
Polyalkylenephenylenes	$\left[\text{---} \langle \text{benzene ring} \rangle \text{---CH}_2\text{---} \right]_n$

Name	Formula
<i>Oxygen-Containing Polymers</i>	
<i>Polyethers (polyoxycompounds)</i>	
Poly(ethylene oxide) and its derivatives	$\left[\begin{array}{c} \text{R} \\ \\ -\text{CH}_2-\text{C}-\text{O}- \\ \\ \text{R}' \end{array} \right]_n$
Poly(propylene oxide) and its derivatives	$\left[\begin{array}{c} \text{R} \\ \\ -\text{CH}_2-\text{CH}_2-\text{C}-\text{O}- \\ \\ \text{R}' \end{array} \right]_n$
<i>Polyacetals</i>	
Polyformal [poly(methylene oxide)]	$\left[-\text{CH}_2-\text{O}- \right]_n$
Poly(alkyl acetals)	$\left[-(\text{CH}_2)_x-\text{O}-\text{CH}_2-\text{O}- \right]_n$
Polysaccharides	$\left[\begin{array}{c} \text{R} \\ \\ \text{CH}-\text{O} \\ / \quad \backslash \\ -\text{CH} \quad \text{CH}-\text{O}- \\ \quad \\ \text{CH}-\text{CH} \\ \quad \\ \text{OH} \quad \text{OH} \end{array} \right]_n$ <p style="text-align: center;">where R = H or CH₂OH</p>
Poly(uronic acids)	$\left[\begin{array}{c} \text{COOH} \\ \\ \text{CH}-\text{O} \\ / \quad \backslash \\ -\text{CH} \quad \text{CH}-\text{O}- \\ \quad \\ \text{CH}-\text{CH} \\ \quad \\ \text{OH} \quad \text{OH} \end{array} \right]_n$
<i>Polyesters</i>	$\text{H}-\left[-\text{O}-\text{R}-\text{OOC}-\text{R}'-\text{CO}- \right]_n-\text{OH}$ <p style="text-align: center;">where R is a glycol radical and R' is a radical of an unsaturated or aromatic dibasic acid</p>
<i>Polyanhydrides</i>	$\text{H}-\left[\begin{array}{c} \text{O} \\ \\ -\text{OC}-\text{C}_6\text{H}_4- \\ \\ \text{C}_6\text{H}_4-\text{CO}- \end{array} \right]_n-\text{OH}$ <p style="text-align: center;">where R is a bivalent radical $-\text{R}-$ or $-\text{O}-$ or $-\text{O}-\text{CH}_2-\text{O}-$</p>

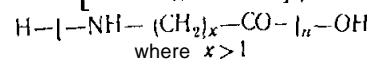
Name	Formula
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Nitrogen-Containing Compounds

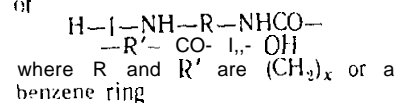
Polypeptides



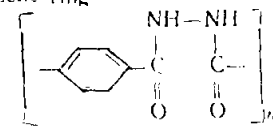
Polyamides



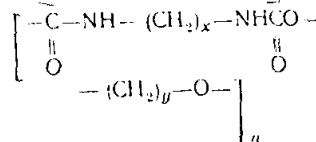
or



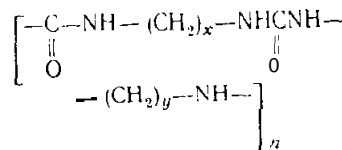
Polyhydrazides



Polyurethanes



Polyureas

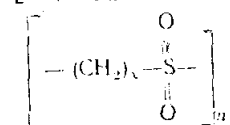
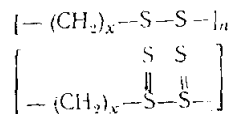


Sulphur-Containing Polymers

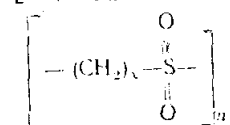
Polythioethers [poly(alkylene sulphides)]

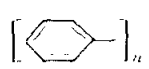
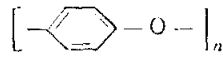
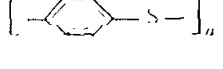
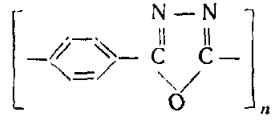
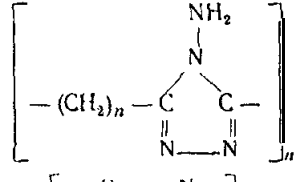
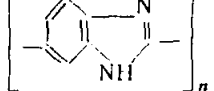
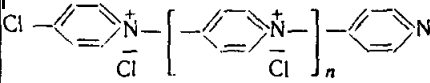
Poly(alkylene disulphides)

Poly(alkylene tetrasulphides)



Polysulphones



Name	Formula
CONJUGATED-BOND POLYMERS	
Polyacetylenes	$\left[\begin{array}{c} -\text{CH}=\text{C}- \\ \\ \text{R} \end{array} \right]_n$
Polyynes	$\left[-\text{C}\equiv\text{C}-\text{R}-\text{C}\equiv\text{C}- \right]_n$
Polynitriles	$\left[\begin{array}{c} -\text{C}\equiv\text{N}- \\ \\ \text{R} \end{array} \right]_n$
Polyphenylenes	
Poly(phenylene oxides)	
Poly(phenylene sulphides)	
Polyoxadiazoles	
Polyaminotriazoles	
Polybenzimidazoles	
Poly(pyridinium chloride)	

Name	Formula
<i>Organoelement Polymers</i>	
Polysiloxanes	$\left[\begin{array}{c} \text{R} \\ \\ -\text{Si}-\text{O}- \\ \\ \text{R} \end{array} \right]_n$
<p>where R = alkyl, phenyl, nitrile, or haloalkyl</p> <p>See also p. 414</p>	
Polyalumoxanes	$\left[\begin{array}{c} -\text{Al}-\text{O}- \\ \\ \text{R} \end{array} \right]_n$
Polytitanoxanes	$\left[\begin{array}{c} \text{R} \\ \\ -\text{Ti}-\text{O}- \\ \\ \text{R} \end{array} \right]_n$
<i>Inorganic Polymers</i>	
Polyphosphates	$\left[\begin{array}{c} \text{O} \\ \\ -\text{P}-\text{O}- \\ \\ \text{OMe} \end{array} \right]_n$
Poly(phosphonitrile chloride)	$\left[\begin{array}{c} \text{Cl} \\ \\ -\text{P}=\text{N}- \\ \\ \text{Cl} \end{array} \right]_n$
Polyarsenates	$\left[\begin{array}{c} \text{O} \\ \\ -\text{As}-\text{O}- \\ \\ \text{OMe} \end{array} \right]_n$