"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

[illegible] EPF(c)/EPR/EWP[illegible] Pe-/Peb
WW/RM

[illegible]SSION NR AP5008114 S/0062/65/000/002/0367/0368

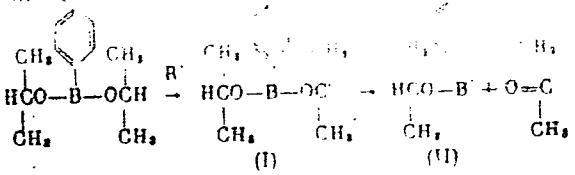
[illegible]: Bochvar, D. A., Sosin, S. L., Korshak, [illegible], Lutkevich, A. V., Vasnev, V. A.

[illegible] Reaction of diisopropylphenylborate with free radicals

[illegible] AN SSSR Izvestiya. Seriya khimicheskikh [illegible]

TOPIC TAGS: alkylphenylborate, diisopropylphenylborate, free radical, tertiary [illegible] gas liquid chromatography, heteroorganic compound, organoboron [illegible]

ABSTRACT: Experimental results on the interaction of diisopropylphenylborate with [illegible] peroxide and a computation of the stability of borate ester radical are [illegible] the high hydrolytic [illegible] [illegible] chromatography of [illegible] [illegible] proved the [illegible] of free radicals:



Card 1/3

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[illegible]-65

ACCESSION NR: AP5008114

[illegible]mers are probably formed by multiple interaction of type I and II radical [illegible] links corresponding to those formed by the [illegible] of disubstituted [illegible]. The latter have been [illegible] stability [illegible] of radical II and its [illegible] systems [illegible] B-R was shown by computing the [illegible] and [illegible] diagram of the radical [illegible] has 9 formulas and 1 figure.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR [illegible] of Heteroorganic Compounds, Academy of Sciences, SSSR)

SUBMITTED: 15Jun64 ENCL: 01 SUB CODE: OC

NO REF SOV: 002 OTHER: 001

Card 2/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

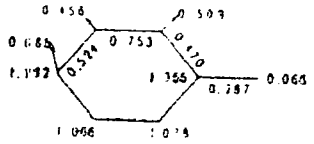

Fig. 1. Molecular diagram of the phenyl-boron R radical

Card 3/3

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 57055-65 EPF(c)/EPR/EWT(m)/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/RM

ACCESSION NR: AP5013980 UR/0183/65/000/003/0016/0019
678.744

35
28
B

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Siling, S. A.

15

TITLE: Heat resistant films from thermoreactive polyarylates

SOURCE: Khimicheskiye volokna, no. 3, 1965, 16-19

TOPIC TAGS: heat resistance, organic synthesis, polycondensation, mechanical property, strengthening

ABSTRACT: The authors previously studied a number of polyarylates and the effect of structuration on their heat resistance. In the present study of polyarylates from phenophthalein, an attempt was made to introduce into the chain a small number of radicals of a compound containing double bonds, to study the properties of the resulting polyarylates, and to investigate the possibility of preparing films of high heat resistance from these. Initial materials for the synthesis were isophthaloyl chloride, phenophthalein, and 4,4'-dioxy-3,3'-diallyldiphenyl-2,2'-propane (= diallyldian). The polyarylates were obtained by polycondensation in chlorinated biphenyl at high temperatures (up to 250C). Polyarylates containing various quantities of diallyldian show almost no difference in strength

Card 1/2

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L 57055-65

ACCESSION NR: AP5013980

7

properties, but with increase in content of diallyldian radicals in the chai the deformability of the films at high temperatures increases. Change in composition of the polyarylate affects the strength properties, the best strength properties being obtained from a combination with the ratio of isophthaloyl chloride : phenophthalein : diallyldian = 1 : 0.950 : 0.50. It was found that films of the studied polyarylates may be strengthened at high temperature with and without initiator and also by copolymerization with various vinyl monomers. Films of these strengthened polyarylates have high heat resistance. "In conclusion, the authors consider it their duty to express their thanks to G. L. Slonimskiy for consultations on the physical and mechanical properties of the films and to Ye. N. Prilezhayeva, G. S. Kolesnikov, T. A. Sakharova, and T. A. Isaeva for preparing the vinyl monomers used as cross-linking agents." Orig. art. has: 2 figures and 5 tables.

ASSOCIATION: INEOS AN SSSR; VNIIV

SUBMITTED: 03Feb64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 003 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 20374-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/JW/JWD/RM

ACC NR: AP6006539 (A) SOURCE CODE: UR/0191/65/000/011/0016/0018

B 82

AUTHORS: Akimov, B. A.; Bekasova, N. I.; Zhigach, A. F.; Zamyatina, V. A.; Korshak, V. V.; Sarishvili, I. G.; Sobolevskiy, M. V.

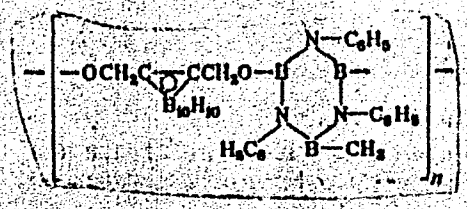
ORG: none

TITLE: Synthesis of thermostable polymers on the basis of borazole and carborane compounds

SOURCE: Plasticheskiye massy, no. 11, 1965, 16-18

TOPIC TAGS: copolymerization, boron compound, organoboron compound, thermal stability, polymer, organic synthetic process, thermomechanical property

ABSTRACT: The following polymers were synthesized:



Card 1/3 UDC: 678.86

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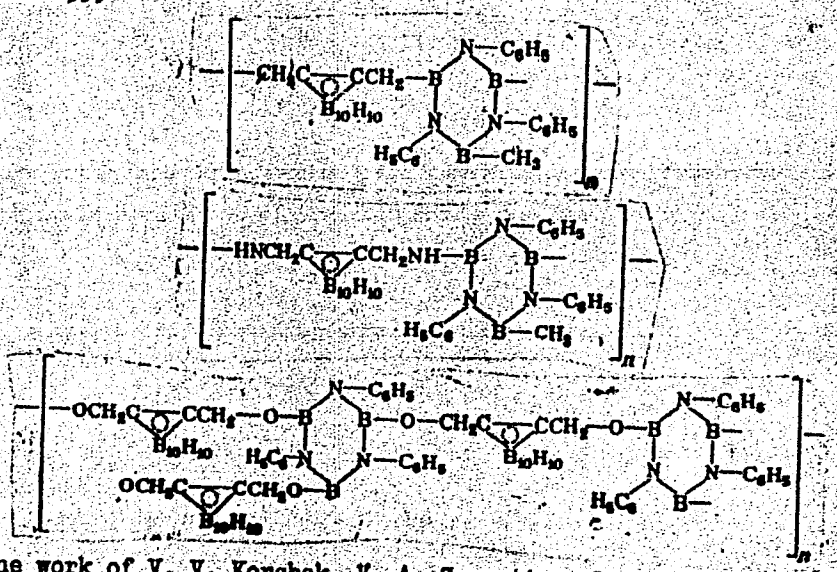
"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 20374-66

ACC NR: AP6006539



to extend the work of V. V. Korshak, V. A. Zamyatina, L. M. Chursina, and N. I. Bekasova (Vysokomolek. soyed., 5, No. 8, 1963). The thermomechanical properties and the thermal stability of the synthesized polymers were determined. The experimental

Card 2/3

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L 20374-66
ACC NR: AP6006539

results are presented graphically (see Fig. 1).

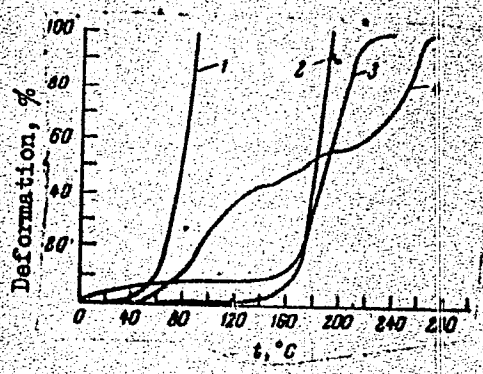


Fig. 1. Thermomechanical curves for the polymers obtained by the polymerization of: 1 - B-methyl-N-triphenylborazole and dichlorodimethylcarborane; 2 - B-methyl-N-triphenylborazole and bishydroxymethylcarborane; 3 - N-triphenylborazole and bishydroxymethylcarborane; 4 - B-methyl-N-triphenylborazole and diaminodimethylcarborane.

It was found that polymers synthesized from N-triphenyl and B-methyl-N-triphenylborazoles and di-(oxymethyl)-carborane possessed the highest thermal stability. It is suggested that the increased stability is due to the presence of the highly stable B-O bond in the molecule. Orig. art. has: 2 graphs and 4 equations.

SUB CODE: 07,11/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 007

Card 3/3 vmb

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 51079-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/EWA(c) Pc-4/Pr-4/Ps-4 WW/RM
ACCESSION NR: AP5012455 UR/0062/65/000/004/0726/0728

AUTHOR: Korshak, V. V.; Krongauz, Ye. S.; Rusanov, A. L.

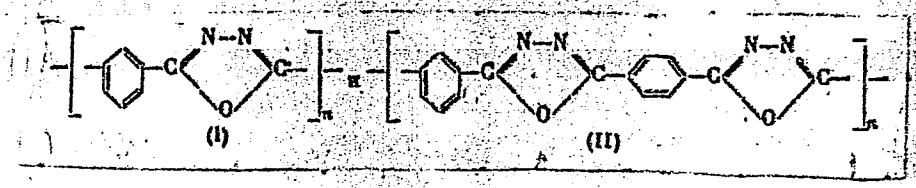
33
32
B

TITLE: Synthesis of straight chain poly-1,3,4-oxadiazines

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1965, 726-728

TOPIC TAGS: polyoxadiazole, heat resistant polymer, polyhydrazide

ABSTRACT: In a search for new types of heat-resistant polymers, poly-1,3,4-oxadiazines having the following structure,



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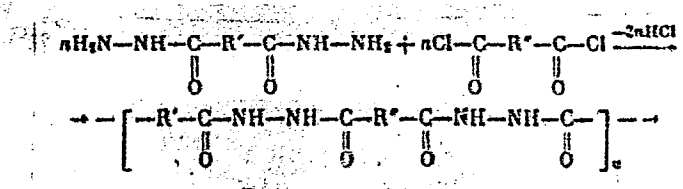
"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

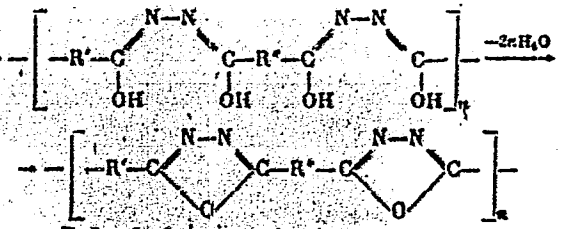
L 51079-65

ACCESSION NR: AP5012455

were prepared by a two-step synthesis:



Polyhydrazide



Poly-1,3,4-oxadiazine

Card 2/3

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L 51079-65
ACCESSION NR: AP5012455

Of three methods of polyhydrazide synthesis attempted (interfacial, high-temperature, and low-temperature polycondensation), low-temperature polycondensation in hexamethylphosphoramide gave the best results (highest polymer yields and viscosities). The poly-1,3,4-oxadiazines were prepared from the polyhydrazides at 300C under vacuum. The poly-1,3,4-oxadiazines were powders infusible up to 420C, soluble only in conc. H_2SO_4, and having a reduced viscosity of 0.3—0.4. Polymer structures were confirmed by IR spectroscopy. Orig. art. has: 5 formulas and 4 figures. [SM]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences SSSR)

SUBMITTED: 13Jul64 ENCL: 00 SUB CODE: dc,GC

NO REF SOV: 001 OTHER: 009 ATD PRESS: 4007

mel
Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

35533-65 EWT(m)/EWP(j) Pc-4 RM

ACCESSION NR: AP5008238 S/0286/65/000/005/0130/0130

Ultanov, A. S.; Korshak, V. V.; Abduvaliyev, A. A.; Kutyrova, S. A.

Method for obtaining modified urea formaldehyde resin, No.

Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 130

TOPIC TAGS: resin, urea formaldehyde resin, methylfuran, physicochemical property

This Author Certificate introduces a method for obtaining modified urea-formaldehyde resin. To obtain a resin which is stable in storage, produces an [illegible] and dries at a normal temperature, urea-formaldehyde resin is modified [illegible]

ASSOCIATION: none

SUBMITTED: 15Dec61 ENCL: 00 SUB CODE: MI

NO REF SOV: 000 OTHER: 000

Card 1/1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 42069-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/RM

ACCESSION NR: AP5010909 UR/0286/65/000/007/0101/0101

33

AUTHORS: Krylova, G. D.; Kamenskiy, I. V.; Korshak, V. V.; Fel'dshteyn, N. S.

TITLE: A method for modifying phenolformaldehyde resins. Class 39, No. 169775

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 101

TOPIC TAGS: resin, phenolformaldehyde resin, glycidic ester, furan acid, fiberglass, plastic

ABSTRACT: This Author Certificate presents a method for modifying phenolformaldehyde resins with glycidic esters. Glycidic esters of furan acids are used. Phenolformaldehyde resin so modified may be utilized as a binder for fiberglass-reinforced plastics.

ASSOCIATION: none

SUBMITTED: 09Jun64 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 000 OTHER: 000

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Card 1/1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 54629-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL WW/RM
ACCESSION NR: AP5010915 UR/0286/65/000/007/0102/0102

AUTHOR: Korshak, V. V.; Kogan, A. M.; Frunze, T. M.; Sergeyev, V. A.; Karashev, V. V.; Shleyfman, R. B.; Danilevskaya, L. B.

TITLE: A method of obtaining styrene-ε-caprolactam copolymers. Class 39, No. 169782

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 102

TOPIC TAGS: copolymer, styrene caprolactam copolymer, polymerization catalyst, caprolactam

ABSTRACT: This method of forming copolymers of ε-caprolactam and styrene by copolymerization of the corresponding monomers in the presence of N-acryloylcaprolactams is characterized by the use of ε-caprolactam as solvent, and the use of anionic catalysts or a mixture of anionic and free radical catalysts. The two types of catalysts are added either simultaneously or sequentially. This procedure enhances formation of graft copolymers with desirable properties. A mixture of the sodium derivative of caprolactam and N-acylamide co-catalyst containing unsaturated substituents, can be used as the anionic catalyst. [VS]

Card 1/2

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 54629-65

ACCESSION NR: AP5010915

ASSOCIATION: none

SUBMITTED: 07Mar64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3231

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 12710-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL WW/RM

ACCESSION NR: AP5003837 S/0190/65/007/001/0150/0155

AUTHORS: Korchevoy, M. G.; Korshak, V. V.; Vinogradova, S. V.

32
31
B

TITLE: Block polymerization of some allylic and acrylic monomers

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 1, 1965, 150-155

TOPIC TAGS: methyl methacrylate, styrene, dian diacrylate, dian dimethacrylate, block polymerization, dilatometric analysis, gravimetric analysis

ABSTRACT: The block polymerization of monomers named in Figs. 1-5 (see Figs. 1-5 on the Enclosure) were investigated gravimetrically and dilatometrically. The kinetics were studied at 80C with benzoil peroxide (0.2% by weight for vinyl derivatives and 2% for diallylphthalates) and at 137C with tertiary butyl peroxide (0.14% for vinyl derivatives and 1.4% for allylic monomers). The kinetic curves obtained for the monomers are shown in Figs. 1-5 on the Enclosure. The residual nonsaturation of polydiallylphthalate, polydiallylisophthalate, and polydiallylterephthalate was measured by IR spectroscopy and found to be 11-12, 35-40, and 33-37% respectively. It was found (see Figs. 1-5 on the Enclosure) that the diatometric and gravimetric results agreed well and that dimethacrylate and methyl methacrylate were most susceptible to polymerization respectively.

Card 1/6

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 32710-65

ACCESSION NR: AP5003837

The relative reaction rates of the other monomers can be obtained from Figs. 1-5 on the Enclosure. Analogous to the results of A. A. Berlin et al (Sb. statey obshch. khimii, 2, 1554, 1953) it was found that polymerization of diacrylic derivatives produced γ-polymers almost directly. Orig. art. has: 5 figures and 3 tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy, AN SSSR (Institute Elementoorganic Reactions, AN SSSR)

SUBMITTED: 26Mar65 ENCL: 04 SUB CODE: OC

NO REF SOV: 007 OTHER: 019

Card 2/6

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 39762-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5005591 S/0190/65/007/002/0232/0238

AUTHORS: Korshak, V. V.; Sosin, S. L.

TITLE: Synthesis of polymers from 1,2-ditolylethane and n-diisopropylbenzene

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 2, 1965, 232-238

TOPIC TAGS: polymer synthesis, polymer, polytetramethylquinodimethane, diisopropylbenzene, ditolylethane, poly n xylylene / UR 10 infrared apparatus, KYS 25NMR apparatus

ABSTRACT: Reactions of tert-butyl peroxide with 1,2-ditolylethane (DE) and n-diisopropylbenzene (DPB) yielded high-molecular weight polymers with structures corresponding to poly-n-xylylene and poly-tetramethylquinodimethane. The synthesis was performed as previously described by V. V. Korshak, G. S. Kolesnikov, and A. V. Kharchevnikova (Dokl. AN SSSR, 56, 169, 1947) by adding tertbutyl peroxide in drops to the hydrocarbon (at 200C) and by mixing in a nitrogen atmosphere. The resulting insoluble (in benzene) polymer was filtered; the soluble part was vacuum-distilled and treated with alcohol to separate the dimers and oligomers. Crystallization produced the dimer of n-diisopropylbenzene (III), while freezing to -80C produced 1,4-dicumyl-2,3-dimethylbutane (IV).

Card 1/2

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 39762-65

ACCESSION NR: AP5005591

IR spectra of the polymers and oligomers were taken on apparatus UR-10 with KBr tablets, and NMR spectra of the oligomers and dimer III were obtained on apparatus KYS-25 at 25 mcps. Using 1.1 moles of peroxide per mole of hydrocarbon (DE) gave 60% oligomer (M. W. 3000) and 30% low molecular weight products (400-500). The oligomer had the structure $(-CH_2C_6H_4CH_2-)_n$.

Addition of up to 1.3 moles of peroxide produced a high-molecular weight polymer (200 000) of the same structure. The polymer obtained with DPB was found to be insoluble in benzene and other solvents, but soluble in benzyl benzoate, had a melting temperature of 300C, a crystalline structure (particularly for reaction temperature of 180C), and a molecular weight of $4-5 \times 10^5$. A scheme for the synthesis of both types of polymers was suggested, based on the disproportionation of mono n-diisopropylbenzene radicals and preliminary breakdown of poly-n-xylylene oligomers. Orig. art. has: 4 figures.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organic Compounds, AN SSSR)

SUBMITTED: 01Apr64 ENCL: 00 SUB CODE: OC

NO REF SOV: 005 OTHER: 012

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 35486-65 EWT(m)/EPF(c)/EWP(j)/EWA(c) Pc-4/Pr-4 RPL JW/RM

ACCESSION NR: AP5005595 S/0190/65/007/002/0280/0284

AUTHORS: Frunze, T. M.; Korshak, V. V.; Izyneyev, A. A.

TITLE: Polybenzimidazoles from 3,3',4,4'-tetraminodiphenylmethane

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 2, 1965, 280-284

TOPIC TAGS: benzimidazole, methane

ABSTRACT: Polybenzimidazoles were synthesized from 3,3',4,4'-tetraminodiphenylmethane and diphenyl esters of adipic, sebacic, isophthalic, and terephthalic acids. The method of synthesis was described by A. A. Izyneyev, V. V. Korshak, T. M. Frunze, and V. V. Kurashev (Izv. AN SSSR, Ser. khimich., 1963, 1828). These polybenzimidazoles dissolve on heating in tricresol and dimethyl-formamide, and are especially soluble in glacial acetic acid and benzyl alcohol. The introduction of the methylene group between the benzimidazole rings leads to an increase in solubility of the polybenzimidazoles. The thermal stability remains practically unchanged. These polybenzimidazoles, containing aliphatic links, have greater solubility than polybenzimidazoles containing aromatic acid groups. Orig. art. has: 1 figure and 3 tables.

Card 1/2

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 35486-63

ACCESSION NR: AP5005595

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Hetero-Organic Compounds, AN SSSR)

SUBMITTED: 17Apr64 ENCL: 00 SUB CODE: OC

NO REF SOV: 003 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 35473-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T/EWA(c) Pc-4/Pr-4/Ps-4/Pt-10/ RPL
ACCESSION NR: AP5005596 WW/JW/RM S/0190/65/007/002/0285/0289

AUTHORS: Frunze, T. M.; Korshak, V. V.; Izyneyev, A. A.; Kurashev, V. V.

TITLE: Synthesis of some polybenzimidazoles containing phosphorus, boron, and oxygen in the chain

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 2, 1965, 285-289

TOPIC TAGS: benzimidazole, phosphorus, boron, oxygen, polymer property

ABSTRACT: The authors' purpose in making this synthesis was to obtain such polybenzimidazoles with heteroatoms in the principal chain in order to study the effect of these atoms on the properties of the polybenzimidazoles. They began with 3,3'-diaminobenzidine, 3,3'4,4'-tetraaminodiphenylmethane, 4,4'-dicarboxydiphenyloxide, diphenyl ester, and bis-(n-carboxyphenyl) methylphosphine oxide, in addition to 1,4-phenylenediboric acid tetrabutyl ester. The polymers were obtained by heating these initial reagents one-half hour at 220-260C, then for 5 hours with gradual increase in temperature from 260 to 320-350C and at a residual pressure of 10^{-3} mm. Studies were then made of the viscosity, x-ray powder photographs, softening temperature under a layer of paraffin, solubility in various

Card 1/2

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ACCESSION NR: AP5005596

15 2

solvents, and thermal stability. The data are tabulated in the paper. The authors show that all the synthesized polymers are highly stable thermally and are more soluble than similar polybenzimidazoles now containing such heteroatoms. Orig. art. has: 2 tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Hetero-Organic Compounds, AN SSSR)

SUBMITTED: 17Apr64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 006 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 35476-65 EWT(m)/EPF(c)/EWP(j)/EWA(c) Pc-4/Pr-4 RM

ACCESSION NR: AP5005602 S/0190/65/007/002/0322/0327

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Antonova-Antipova, I. P.

21
B

TITLE: Colored polyarylates from 3,3'-azobenzenedicarboxylic acid

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 2, 1965, 322-327

TOPIC TAGS: dicarboxylic acid, synthetic hydrocarbon, condensation reaction

ABSTRACT: The synthesis of 3,3'-azobenzenedicarboxylic acid polyarylates was accomplished by the equilibrium method and also by interphase polycondensation. Equilibrium condensation was effected in solvents having high boiling points (chlorinated biphenyl or ditolylmethane) from 3,3'-azobenzenedicarboxylic acid chloride, terephthalic and isophthalic acids, phenolphthalein dian, diallyldian, hydroquinone, and resorcinol. The 3,3'-azobenzenedicarboxylic acid was obtained with a yield of 80-90% by diazotization of m-aminobenzoic acid with subsequent decomposition of the diazo compounds. The 3,3'-azobenzenedicarboxylic acid chloride was synthesized by interaction (4-5 hours) between thionyl chloride and 3,3'-azobenzenedicarboxylic acid in the presence of 1-2% pyridine as catalyst. The yield of 3,3'-azobenzenedicarboxylic acid chloride was 80-90% of theoretical

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L 35476-65
ACCESSION NR: AP5005602

(melting point = 83.5-84.5C). This product, colored yellow, was used as initial material for producing synthetic polyarylates. Both homogeneous and mixed polyarylates were formed. With phenolphthalein, both were found to be readily soluble in organic solvents and to have high softening temperatures. They easily form strong, transparent, yellow films from their solution. Infrared absorption spectra of the synthesized polyarylates indicate a bathochrome mixture in the transition from 3,3'-azobenzenedicarboxylic acid polyarylates to 4,4'-azobenzenedicarboxylic acid polyarylates. Orig. art. has: 3 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: OC

NO REF SOV: 001 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 37718-65 EPF(c)/EPR/EPA(s)-2/EWP(j)/EWT(m)/EWP(b)/T/EWP(t) Pc-4/Pr-4/Ps-4/
Pt-10 IJP(c) RM/WW/JD

ACCESSION NR: AP5008368 S/0190/65/007/003/0427/0431

AUTHOR: Luneva, L. K.; Sladkov, A. M.; Korshak, V. V. 58 B

TITLE: Synthesis and properties of heteroorganic polymers containing silicon, germanium, and tin in the backbone

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 3, 1965, 427-431

TOPIC TAGS: organic semiconductor, semiconducting polymer, conjugated polymer, heteroorganic polymer

ABSTRACT: Organo-silicon, -germanium, and -tin- conjugated polymers have been prepared which contain double bonds alternating with hetero atoms in the backbone. The compounds listed in Table 1 of the Enclosure were polymerized in isopropyl alcohol or heptane solvent, in the presence of chloroplatinic acid or benzoyl peroxide catalyst, or without catalyst. Some of the properties of the polymers are shown in Tables 1 and 2 of the Enclosure. The thermal stability of the polymers decreased in the order Si>Ge>Sn from 500—520 to

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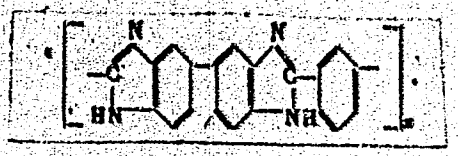
L 62618-65

ACCESSION NR: AP5018425



(II)

The polymers were prepared by heating the reactants for 3—5 hr to 380C at 4×10^{-2} mm Hg with subsequent heat treatment of the products at 450—800C. It was found that the polymers had high thermal stability, with decomposition setting in only at above 550C. Polymer I was more thermally stable than polymer II. Both polymers were high-ohmic semiconductors. For example, polymers I and II, nonheat-treated or heat-treated at up to 600C, had resistivities of the order of 10^{13}—10^{8} ohm·cm and activation energies for conduction from 1.2 to 0.56 ev. Unlike polymer II, polymer I showed a significant change in structure and electrical properties only at temperatures above 500C. Orig. art. has: 4 figures, 2 tables, and 2 formulas. [SM]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

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APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 62618-65

ACCESSION NR: AP5018425

SUBMITTED: 14Jul64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 003 OTHER: 005 ATD PRESS: 4058

Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

KLIMENTOVA, N.V.; KORCHAK, V.V.; SUPRUN, A.P.

Polymerization and copolymerization of 3,3-dichloro-1-propene. Izv. AN SSSR. Ser. khim. no.7:1264-1266 '65. (MIRA 18:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 62543-65 EPF(c)/EWP(j)/EWT(m) Pc-4/Pr-4 RPL RM/JAJ

ACCESSION NR: AP5019778 UR/0062/65/000/007/1267/1268
546.287

AUTHOR: Polyakova, A. M.; Suchkova, M. D.; Korshak, V. V.; Vdovin, V. M.

TITLE: New five-membered cyclic organosiloxanes

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1267-1268

TOPIC TAGS: organosilicon compound, organosilicon polymer, cyclic compound

ABSTRACT: By directly reacting substituted acetylenes $XC \equiv CX'$ (where X = H or Ph, and X' = Ph) with dihydride disiloxanes of the general formula HR'RSi-O-SiRR'H (where R = CH_3 and R' = CH_3 or C_2H_5), the authors prepared for the first time new five-membered organocyclosiloxanes with various substituents at the carbon,

where (1) X = X' = Ph; (2) X = H; X' = Ph; (3) R = R' = CH_3; (4) R = CH_3; R' = C_2H_5. The reaction takes place in a solvent (toluene) at atmospheric pressure at 110-120° in the presence of $H_2PtCl_6 \cdot 6H_2O$ (0.1 M solution in the isopropyl alcohol) or Pt/C as

Card 1/2

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 62543-65

ACCESSION NR: AP5019778

the catalyst according to the equation

In addition to the cyclic compounds, addition products of linear structure are formed. The yield of the cyclic fraction is affected by the nature of the substituents in acetylene and of the radicals at the silicon in the dihydride disiloxanes. The structure of the cyclic compounds was identified by means of infrared absorption spectra, nuclear magnetic resonance spectra, ultimate analysis, and molecular weight determination. The new five-membered cyclic compounds synthesized are capable of polymerizing under the influence of acidic or basic catalysts to form linear polymers. Orig. art. has: 1 formula.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elementoorganic Compounds, Academy of Sciences SSSR)

SUBMITTED: 21Oct64 ENCL: 00 SUB CODE: OC

NO REF SOV: 000 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 01046-66 EWG(j)/EWT(m)/EPF(c)/EWP(j)/T/EWA(h)/EWA(1) WW/RM

ACCESSION NR: AP5019781

UR/0062/65/000/007/1286/1288
541.6+539.238

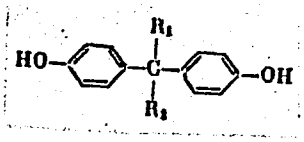
AUTHOR: Pankratov, V. A.; Korshak, V. V.; Vinogradova, S. V.

TITLE: Synthesis of polyaryl esters of 2',7'-dihydroxyspiro[fluorene-9,9'-xanthene]

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1286-1288

TOPIC TAGS: polyaryl ester, heat resistant polymer, solubility

ABSTRACT: Homo- and co-polymeric polyaryl esters based on 2',7'-dihydroxyspiro[fluorene-9,9'-xanthene] have been prepared in an attempt to produce polyaryl esters having both heat resistance and good solubility in common organic solvents, and hence, better processability. The other reactants were terephthalic and/or isophthalic chloride and various bisphenols of the type



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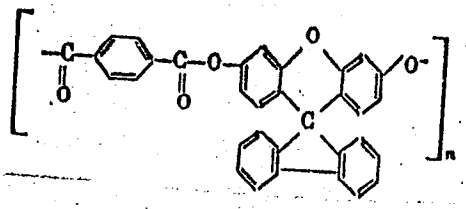
L 01046-66

ACCESSION NR: AP5019781

(where R_1 and R_2 are aliphatic, perfluorinated, and aromatic substituents) as well as hydroquinone and resorcinol. The polymers and copolymers had high softening points (320—370C) and good solubility in tricresol, tetrahydrofuran, and chlorinated hydrocarbons. The presence in the polymer repeat unit



of stable aromatic systems increases their thermal stability and suggests that they will also exhibit high radiation resistance. Orig. art. has: 1 table and 3 formulas. [SM]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences, SSSR)

SUBMITTED: 30Oct64 ENCL: 00 SUB CODE: OC,GC

NO REF SOV: 005 OTHER: 002 ATD PRESS: 4068

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

TIMOFEYEVA, G.I.; PAVLOVA, S.A.; KORSHAK, V.V.; Prinimala uchastiye: BRAGINA, T.P., laborant

Effect of the method of synthesis on the structure of polyarylate molecules based on 2,2-bis-(4-hydroxyphenyl)propane and isophthalic acid. Vysokom.soed. 7 no.7:1208-1213 Jl '65. (MIRA 18:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 63508-65 EPF(c)/EWP(j)/EWT(m)/T RPL IJP/WW

ACCESSION NR: AP5020970

UR/0190/65/007/008/1406/1409
678.01:54+678.674/675

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Teplyakov, M. M.

TITLE: The exchange between polyarylates (polyesters) and polyamides in a high-boiling solvent

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 8, 1965, 1406-1409

TOPIC TAGS: polymer, polyarylate, polymer exchange, polyamide, copolymer, block copolymer

ABSTRACT: The purpose of this work was the investigation of a potential preparation method for polyamidoesters (polyamidoarylates). The exchange was studied in equimolar mixtures of polyhexamethylenesebacamide and of polyarylates obtained by polycondensation of isophthalylchloride and diphenols such as 2,2-di(4-hydroxy-3-methylphenyl)-propane or 2,2-di(4-hydroxyphenyl)-propane. Chlorinated biphenyl was used as the solvent. It was found that either block-copolymers or conventional copolymers are formed, depending on the duration of the heat treatment. The rate of exchange depends on the structure of the starting polyarylates. The melting temperature of the polyamidoarylates varies widely and depends on the ratio of starting materials;

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L 63508-65

ACCESSION NR: A 020970

by selection of propriate amounts of components polymers melting between 140C and 280C can be prep ed. The obtained polyamidoarylates could be fabricated into films with strengths o 600 kg/cm². Orig. art. has: 4 figures. [VS]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Heteroorganic Compounds, AN SSSR); Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Institute of Chemical Technology)

SUBMITTED: 17Oct64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 002 OTHER: 001 ATD PRESS: 4073

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

TIMOFEYEVA, G.I.; PAVLOVA, S.A.; KORSHAK, V.V.

Effect of the method of preparation and the size of the side chain radical on the molecular weight distribution of polyarylates. Vysokom. soed. 7 no.8:1436-1441 Ag '65. (MIRA 18:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 1968-66 EWT(m)/EPF(c)/T/EWP(j) WW/RM

ACCESSION NR: AP5022599

UR/0190/65/007/009/1543/1548
678.674

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Antonova-Antipova, I. P.

TITLE: Colored polyaryl esters based on certain dihydroxyanthraquinones

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1543-1548

TOPIC TAGS: polyaryl ester, polymerization color, heat resistant polymer

ABSTRACT: To eliminate the dyeing step and to improve colorfastness, intrinsically colored polyaryl esters have been synthesized from dihydroxyanthraquinones, viz., alizarin, quinizarin, and quinizarin blue. Such starting materials were also of interest from the standpoint of the effect of repeat-unit structure on polymer properties, and because such polymers could be modified by treatment with metal salts. Homo- and co-polymeric polyaryl esters were prepared from the dihydroxyanthraquinones and terephthalic and isophthalic acids, and phenolphthalein by polycondensation in high boiling solvents. It was found that homo- and co-polymeric polyaryl esters from quinizarin and terephthalic or isophthalic acids, and from alizarin blue and terephthalic acid have high softening points, e.g., 475—500C for the polymer from quinizarin and terephthalic acid. Copolymeric

Card 1/2

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L 1968-66

ACCESSION NR: AP5022599

polyaryl esters from the dihydroxyanthraquinones and phenolphthalein had good solubility in organic solvents and could be readily cast from solution to form films. Such films were colored, strong (800—1200 kg/cm^2) and elastic (10—15%). Film color could be modified by adding the appropriate metal salt to the polymer solution. Orig. art. has: 3 formulas, 3 figures, and 2 tables. [SM]

ASSOCIATION: Institut elementoorganicheskikh soyedinenii AN SSSR (Institute of Heteroorganic Compounds, AN SSSR)

SUBMITTED: 13Oct64 ENCL: 00 SUB CODE: MT, GC

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Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 2925-66 EWT(m)/EPF(c)/EWP(j)/T/ETC(m) WW/RM

ACCESSION NR: AP5022610

UR/0190/65/007/009/1614/1618
678.01:54+678.674

AUTHORS: Rode, V. V.; Zhuravleva, I. V.; Rafikov, S. R.; Korshak, V. V.; Vinogradova, S. V.; Pankratov, V. A.

TITLE: The high temperature degradation of polydihydroxydiphenylfluorentere-phthalate. 24th communication in the series "Chemical Transformation of Polymers"

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1614-1618

TOPIC TAGS: thermal degradation, thermal oxidation, organic compound, polymer/D 9 polyarylate

ABSTRACT: The thermal degradation and thermooxidation of polyarylate D-9 was investigated. This investigation is an extension of the previously published work of I. V. Zhuravleva, V. V. Rode, and S. R. Rafikov (Izv. AN SSSR, ser. khim., 1965, 269). The thermal degradation and thermooxidation were carried out over the temperature region from 325 to 500C by 25C intervals. Graphs for the kinetics of gas evolution during degradation and thermooxidation are presented. The composition of the thermooxidation-degradation products are tabulated. The

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ACCESSION NR: AP5022610

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experimental results obtained for the thermooxidation in air are shown graphically in Fig. 1 on the Enclosure. It is concluded that the thermooxidation degradation of polyarylate D-9 proceeds via a homolytic chain rupture accompanied by the evolution of CO_2, CO, and H_2 gases. No induction period for the thermooxidation was observed. Orig. art. has: 2 tables and 6 graphs.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute for Heteroorganic Compounds, AN SSSR)

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SUBMITTED: 23Oct64 ENCL: 01 SUB CODE: OC

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Card 2/3

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ACCESSION NR: AP5022610

ENCLOSURE: 01

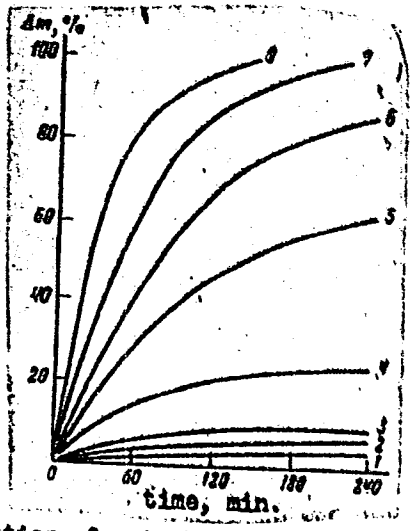

Fig. 1. Kinetics of weight loss of polyarylate D-9 during thermooxidation in air.
1- 325C; 2- 350C; 3- 375C; 4- 400C; 5- 425C; 6- 450C; 7- 475C; 8- 500C

Card 3/3

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 65215-65 EWT(m)/EPF(c)/EWP(j) RM

ACCESSION NR: AP5022613

UR/0190/65/007/009/1633/1636
541.64+678.674

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Baskakov, A. N.; Valetskiy, P. M.

TITLE: Synthesis of polyaryl esters based on 2,2-bis(4-hydroxy-3-methylphenyl)propane

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1633-1636

TOPIC TAGS: polyaryl ester, polymerization, plasticizer, heat resistant polymer

ABSTRACT: A study has been made of the synthesis and properties of polyaryl esters based on 2,2-bis(4-hydroxy-3-methylphenyl)propane (I). It is noted that the synthesis of polyaryl esters from dihydric phenols with alkyl substituents in the ring is of interest because their mechanical properties might be improved by the internal plasticization effect of the substituents. Synthesis was carried out by interfacial and low- and high-temperature solution polycondensation. Isophthaloyl and terephthaloyl chlorides and hydroquinone, resorcinol, and phenolphthalein were used with I to prepare homo- and co-polymeric polyaryl esters. It was found that in comparison with similar polyaryl esters from bisphenol A, those based on I had greater impact strength (30—55 kg cm/cm^2) and greater solubility in organic solvents. Polyaryl-

Card 1/2

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L 65215-65

ACCESSION NR: AP5022613

esters based on I were readily molded to transparent, light-brown, solid products with good mechanical strength (impact strength, 20—55 kg cm/cm^2). Casting from solution produced transparent, elastic films with a tensile strength at 20C of about 600 kg/cm^2 and elongation of about 50%. Orig. art. has: 2 tables. [SM]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Heteroorganic Compounds, AN SSSR)

SUBMITTED: 28Oct64 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 005 OTHER: 002 ATD PRESS: 4089

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

KORSHAK, V.V.; PAVLOVA, S.A.; TIMOFEYEVA, G.I.; VINOGRADOVA, S.V.; PANKRATOV, V.A.

Effect of the method of preparation and of the size of the side chain radical on the viscosometric properties of polyarylates. Vysokom.soed. 7 no.10:1679-1683 O '65. (MIRA 18:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 3938-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5025956

UR/0190/65/007/010/1689/1692
541.64+678.674

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Pankratov, V. A.

TITLE: Synthesis and investigation of polyarylates from 4,4'-biphenyldicarboxylic acid and diphenols with various substituents at the central carbon atom

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 10, 1965, 1689-1692

TOPIC TAGS: polyester, plastic, polyarylate

ABSTRACT: In the course of continuing investigations of polyesters, a series of polyarylates were prepared from bis-(4-hydroxyphenyl)methane, 2,2-bis-(4-hydroxyphenyl)propane, 2,2-bis-(4-hydroxyphenyl)hexafluoropropane, bis-(4-hydroxyphenyl)-phenylmethane, bis-(4-hydroxyphenyl)methylphenylmethane, bis-(4-hydroxyphenyl)trifluoromethylphenylmethane, bis-(4-hydroxyphenyl)diphenylmethane, 9,9-bis-(4-hydroxyphenyl)fluorene, and 4,4'-biphenyldicarboxylic acid. It was found that the physical properties of the polyarylates obtained depend to a large extent on the nature of the substituent at the central carbon atom. The physical constants and the mechanical characteristics of the polyarylates are given in tabular form. Orig. art. has: 2 tables. [VS]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Heteroorganic Compounds, AN SSSR)

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 3938-66

ACCESSION NR: AP5025956

SUBMITTED: 02Nov64 ENCL: 00 SUB CODE: MT,OC,GC

NO REF SOV: 009 OTHER: 001 ATD PRESS: 4118

Card 2/2 DP

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 3936-66 EWT(m)/EPF(c)/EWP(j)/T/ETC(m) RPL WW/RM

ACCESSION NR: AP5025968 UR/0190/65/007/010/1813/1817
678.01:54+678.67

44,55 44,55 44,55 44,55

AUTHOR: Korshak, V. V.; Manucharova, I. F.; Vinogradova, S. V.; Pankratov, V. A.

15,44,55

TITLE: Investigation of the thermal stability of a series of polyarylates by differential thermal analysis

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 10, 1965, 1813-1817

TOPIC TAGS: polyarylate, plastic, polymer, thermal stability

ABSTRACT: Polyarylates were prepared from diphenols and terephthalic acid and subjected to differential thermal analysis utilizing thermogravimetric methods. It was found that the nature of the substituent at the central carbon of the diphenol (of the di-p-hydroxyphenylmethane type) exerts an appreciable influence on the thermal stability of the polyarylate. Thus, e.g., replacement of methyl groups at the central carbon atom by trifluoromethyl groups improves the stability of the polyarylate. The temperatures of incipient decomposition of the polyarylates investigated ranged from 375 to 465C. The most thermally stable polyarylate was obtained from 9,9-bis-(4-hydroxyphenyl)fluorene and terephthalic acid. Orig. art. has: 2 tables and 5 figures. [VS]

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APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 3936-66

ACCESSION NR: AP5025968

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Heteroorganic Compounds, AN SSSR); Institut obshchey i neorganicheskoy khimii AN SSSR (Institute of General and Inorganic Chemistry, AN SSSR)

SUBMITTED: 26Nov64 ENCL: 00 SUB CODE: MT, OC, GC, TD

NO REF SOV: 011 OTHER: 000 ATD PRESS: 4118

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 27335-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6008965 (A) SOURCE CODE: UR/0190/65/007/011/1884/1888

AUTHORS: Vinogradova, S. V.; Korshak, V. V.; Korchevey, M. G.

ORG: Institute of Elementoorganic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

34
33
B

TITLE: Copolymerization of allyl-substituted unsaturated polyarylates with styrene (76th report in the series "Heterochain polyesters")

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 11, 1965, 1884-1888

TOPIC TAGS: copolymerization, graft copolymer, polyaryl plastic

ABSTRACT: Copolymerization of allyl-substituted unsaturated polyarylates (I) with styrene (II) has been investigated in an effort to prepare a three-dimensional polymer analogous to those derived from polyfumarates described by A. V. Tokarev (Dissertatsiya, 1959). A mixed polymer, represented by the scheme

Card 1/2

UDC: 66.095.26+678.674+678.746

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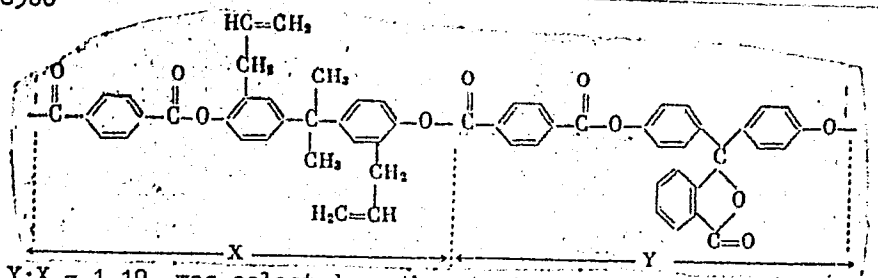
"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 27335-66

ACC NR: AP6008966



in which ratio Y:X = 1.19, was selected as the starting I. The copolymerization was performed at 80C, in sealed ampules, and in an argon atmosphere, with benzoyl peroxide used as an initiator. It was observed that a gel effect, which increases with increased ratio of I to II, affects the reaction rate. The products of the reaction are mainly branched graft copolymers, with only an insignificant amount of three-dimensional copolymers formed when the ratio of I to II is large. Orig. art. has: 2 tables, 2 figures, and 1 formula.

SUB CODE:07, 11/SUBM DATE: 07Dec64/ ORIG REF: 010/ OTH REF: 004

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 27332-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6008967 SOURCE CODE: UR/0190/65/007/011/1889/1893

AUTHORS: Vinogradova, S. V.; Korshak, V. V.; Korchevey, M. G.

ORG: Institute of Elementary Organic Compounds AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

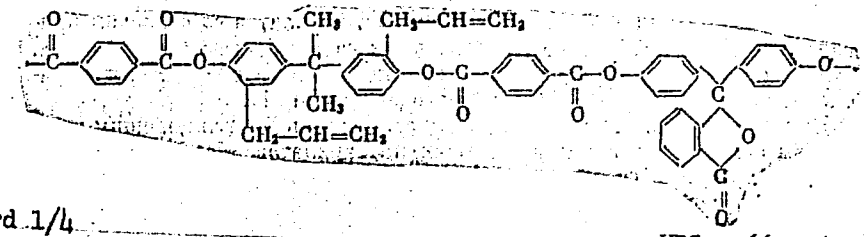
36
B

TITLE: Copolymerization of allyl substituted unsaturated polyarylates with polyarylates with methyl methacrylate (77th report in the series "Heterochain Polyesters")

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 11, 1965, 1889-1893

TOPIC TAGS: copolymerization, polymerization kinetics, polyaryl plastic

ABSTRACT: Kinetics of copolymerization of allyl-substituted polyarylates (I) represented by the formula



Card 1/4

UDC: 66.095.26+678.674+678.744

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 27332-66

ACC NR: AP6008967

with methyl methacrylate (II) has been studied as a continuation of the search for a suitable cross-linking agent for I, previously discussed by the authors (S. V. Vinogradova, V. V. Korshak, and M. G. Korchevey, Vysokomolek. soyed., 7, 1884, 1965). Figure 1 summarizes the information obtained. Methyl methacrylate was found to be a satisfactory cross-linking agent for I. The copolymerization was accompanied by a gel-effect which determined the reaction kinetics above 60% of conversion. The cross-links between the molecules of I consisted of comparatively long chains of polymethylmethacrylate.

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L 27332-66

ACC NR: AP6008967

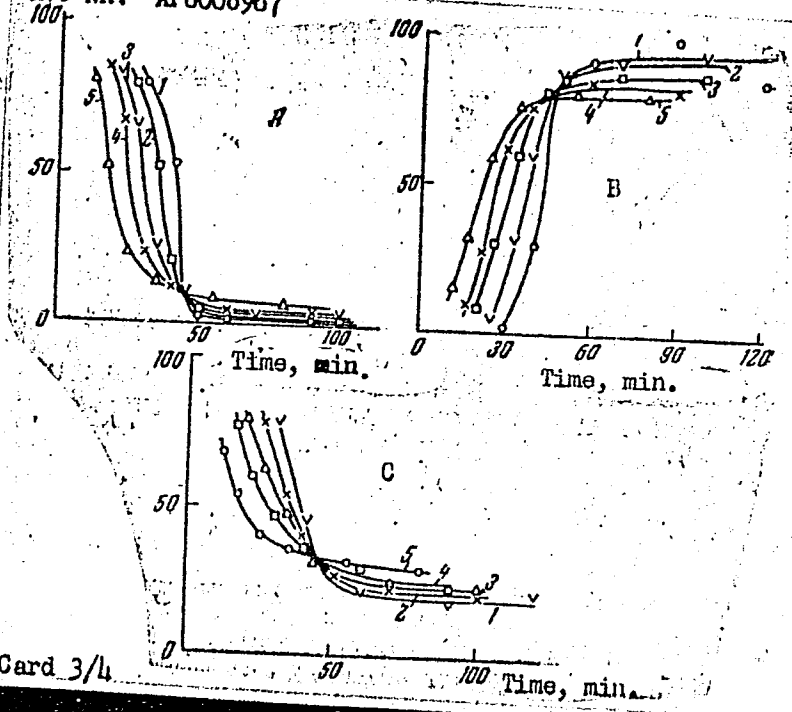

Fig. 1. Copolymerization of I with II at 70C in the presence of 0.5% of benzoyl peroxide. A - change of II concentration in the reaction mixture (ordinate: % unreacted monomer); B - change of the yield of insoluble (cross-linked) copolymer (ordinate); C - change of concentration of residual double bonds in copolymer (ordinate). Polyarylate: monomer weight ratio: 1 - 1:2; 2 - 1:1.8; 3 - 1:1.65; 4 - 1:1.5; 5 - 1:1.

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 27332-66

ACC NR: AP6008967

Orig. art. has: 1 table, 1 figure, and 1 formula.

SUB CODE: 07,11/SUBM DATE: 07Dec64/ ORIG REF: 004/ OTH REF: 001

Card 4/4

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 27314-66 EWT(m)/EWP(j)/T/ETC(m)-6 IJP(c) DS/WW/RM

ACC NR: AP6008971 SOURCE CODE: UR/0190/65/007/011/1908/1912

AUTHORS: Korshak, V. V.; Rafikov, S. R.; Vinogradova, S. V.; Fomina, Z. Ya.

ORG: Institute for Heteroorganic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Photochemical degradation of polyarylates in solution [78th communication in the series: Heterocyclic polyesters]

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 11, 1965, 1908-1912

TOPIC TAGS: polyarylate plastic, uv absorption, uv irradiation, polyester

ABSTRACT: This investigation was conducted to extend earlier published work by V. V. Rode, A. S. Yarov, and S. R. Rafikov (Vysokomolek. soyed., 6, 2061, 1964) and to study the nature of the molecular changes in polyarylates which result from uv irradiation of their chloroform and cyclohexanone solutions. The polyarylates investigated were derived from phenolphthalein and chloranhydrides of terphthalic and isophthalic acids following the procedure of V. V. Korshak, S. V. Vinogradova, and S. N. Salazkin (Vysokomolek. soyed., 4, 339, 1962). The experimental results are presented in graphs and tables (see Fig. 1). It was found that in dilute solutions the principal degradation reaction consists of rupture of the main chain of the polymer, leading to a decrease in the average molecular weight and viscosity of the polymer. At higher concentration, structuration processes predominate. The photodegradation of the

Card 1/2

UDC: 678.01:54+678.674

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L 27314-66

ACC NR: AP6008971

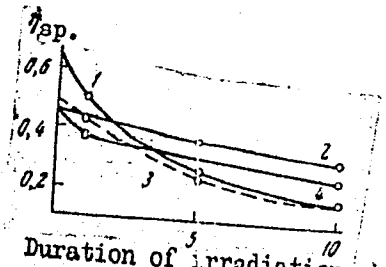

Fig. 1. Change in the specific viscosity during irradiation of 1% solutions of polyarylates in chloroform at 20 ± 2C. 1 - F-2c; 2 - F-2D; 3 - F-2c'; 4 - F2'D. F-2c - polyarylate derived from terephthalic acid; F-2c' - low molecular weight polyarylate; F-2'D - F-2 plus 1.5% chlorinated diphenyl; F-2D - polyarylate derived from isophthalic acid.

polymer is more rapid in cyclohexanone solution than in chloroform solution, and it is sensitized by chlorinated diphenyl. Orig. art. has: 1 table and 5 graphs.

SUB CODE: 11/ SUBM DATE: 09Dec64/ ORIG REF: 003/ OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

(A) L 13518-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6001859

SOURCE CODE: UR/0190/65/007/012/2048/2051

AUTHORS: Vinogradova, S. V.; Korshak, V. V.; Korzeneva, Yu. I.

ORG: Institute of Elemento-organic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy, AN SSSR)

26
B

TITLE: Kinetics of polycondensation of 4,4'-(β,β'-dihydroxyethoxyphenyl)-2,2-propane [Abstracter's note: word "phenyl" is added to correct the error in the original title] and 4,4'-(β,β'-dihydroxypropoxyphenyl)-2,2-propane with fumaric acid. 79th report in the series On Heteropolyesters

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2048-2051

TOPIC TAGS: polycondensation, fumaric acid, polymerization kinetics, adhesive, polyester plastic

ABSTRACT: Kinetics of polycondensation of 4,4'-(β,β'-dihydroxyethoxyphenyl)-2,2-propane (I) and 4,4'-(β,β'-dihydroxypropoxyphenyl)-2,2-propane (II) with fumaric acid (III) at 190--220C was investigated. The reaction is of interest as it leads to formation of adhesives of high thermal resistivity and of high mechanical and insulatory properties which are required in the preparation of reinforced glass. This reaction was conducted with equimolar amounts of reagents in a molten state, in a stream of oxygen-free nitrogen. The progress was followed by determining oxygen number of the reaction mixture at various time intervals according to the method

Card 1/2

UDC: 541.64+678.674

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 13518-66

ACC NR: AP6001859

described by T. N. Kasterina and L. S. Kalinina (Khimicheskiye metody issledovaniya sinteticheskikh smol i plasticheskikh mass, Goskhimizdat, M., 1963, str. 178). The data obtained at various temperatures are summarized in Fig. 1, a and b. It was

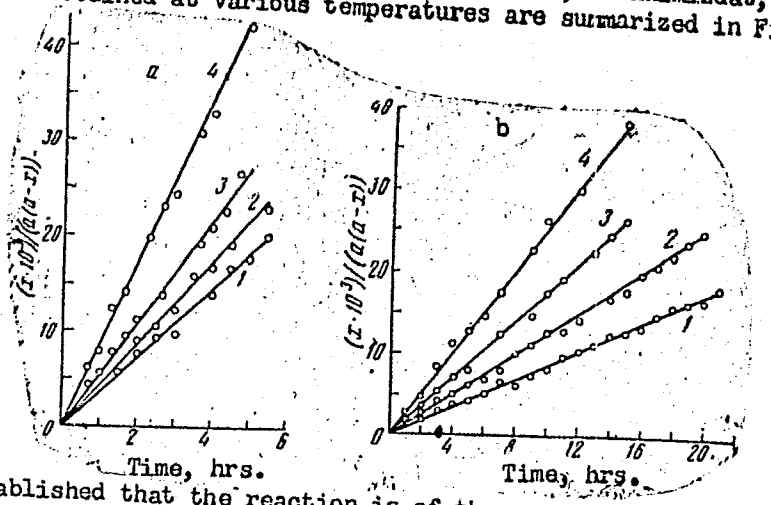

Fig. 1. Polycondensation of fumaric acid: a - with I; b - with II. 1 - 190C, 2 - 200C, 3 - 210C, 4 - 220C.

established that the reaction is of the second order. The rate constants for various temperatures between 190--220C were calculated and so were the activation energies, which were 13200 cal/mol for reaction of I with III and 16500 cal/mol for reaction of II with III. Orig. art. has: 3 tables and 3 figures.

SUB CODE: 07/ SUBM DATE: 07Dec64/ ORIG REF: 003

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

(A) L 13519-66 EWT(m)/EWP(j)/T/EWA(c)/ETC(m) WW/RM

ACC NR: AP6001860 SOURCE CODE: UR/0190/65/007/012/2052/2056

AUTHORS: Vinogradova, S. V.; Korshak, V. V.; Antonova-Antipova, I. P.

ORG: Institute of Elemento-organic Compounds AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

54
B

TITLE: Colored polyarylates of 4,4'-dihydroxyazobenzene. 80th report in the series On Heteropolyesters

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2052-2056

TOPIC TAGS: polymer, polyaryl plastic, polycondensation, thermomechanical property

ABSTRACT: Polyarylates of 4,4'-dihydroxyazobenzene (I) with phenolphthalein (II), dian (III), isophthalic (IV), and terephthalic (V) acids were synthesized and their physical properties were investigated. Study of the effects of the dibasic phenol upon the structure of the product and of the azo group upon its color was of particular interest. Experimental work was performed using methods described by the authors in earlier publications (Vysokomolek. soyed., 6, 2174, 1964; 7, 322, 1965; 7, 1543, 1965). It was found that polyarylates of I with IV and V do not melt but decompose above 400C. Thermomechanical curves (see Fig. 1) indicate that while polymers derived from I reacted with IV and V possess low deformation and high rigidity, but that introduction of II and III increases the former and lowers the latter property. The solubility of homopolyarylates of I in organic solvents may be

Card 1/3 UDC: 678.674

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 13519-66

ACC NR: AP6001860

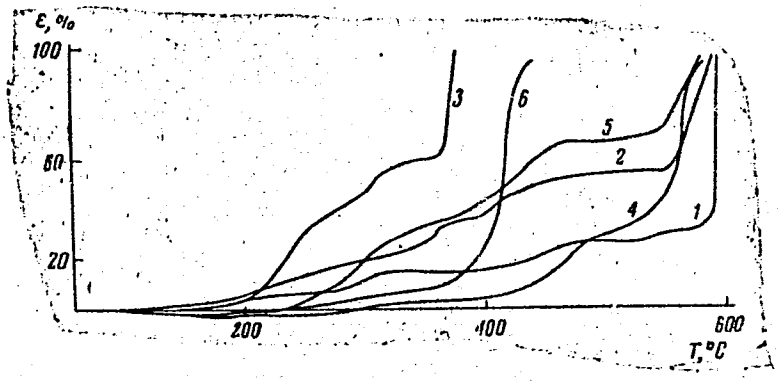

Fig. 1. Thermomechanical curves of polyarylates from I with dian (III), phenolphthalein (II), terephthalic (V), and isophthalic (IV) acids.
1 - I:V=1:1 (interphase polycondensation);
2 - I:III:V = 0.5:0.5:1 (interphase polycondensation);
3 - I:III:V = 0.2:0.8:1 (interphase polycondensation);
4 - I:V = 1:1 (equilibrium polycondensation);
5 - I:II:V = 0.5:0.5:1 (equilibrium polycondensation);
6 - I:IV = 1:1 (equilibrium polycondensation).

Card 2/3

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 13519-66

ACC NR: AP6001860

increased by substituting a portion of I by II or III. Such solutions can be used for preparing strong, transparent yellow films which, when heated for several hours at 250C, still maintain up to 50% of their original tensile strength. Spectra of the products in the visible and UV regions are reported. Orig. art. has: 3 figures, and 4 tables.

SUB CODE: 07/ SUBM DATE: 23Dec64/ ORIG REF: 003/ OTH REF: 003

Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

A L 11607-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6001863

SOURCE CODE: UR/0190/65/007/012/2067/2072

AUTHORS: Mukhamed Abdel'moneym El' Azmirli; Korshak, V. V.; Sergeyev, V. A. 47 B

ORG: Moscow Chemical-Technological Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut); Institute for Heteroorganic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: On the autocatalytic nature of the anionic polymerization process of ε-caprolactam with alkali salts

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2067-2072

TOPIC TAGS: polymer, polymerization, catalytic polymerization, polymerization catalyst, heat of polymerization, polymerization kinetics, amin, alkali

ABSTRACT: The catalytic anionic polymerization of ε-caprolactam (KL) in the presence of the sodium salt of KL or N,N'-isophthaloyl-bis-ε-caprolactam was studied to extend the currently available information on the properties of poly-ε-caprolactam. The change in temperature during polymerization, the yield of polymer, and the specific viscosity of the reaction mixture as a function of the initial temperature of reaction were determined. Experimental results are shown in tables and graphs (see Fig. 1), and a polymerization mechanism is proposed. It was found that the polymers obtained during the anionic polymerization of ε-caprolactam

Card 1/2

UDC: 66.095.26+678.675

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 11607-66

ACC NR: AP6001863

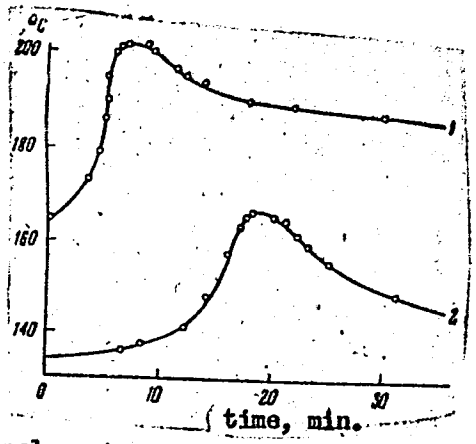

Fig. 1. Change in the temperature of the reaction mixture during polymerization. Initial temperatures: 1 - 164°C; 2 - 134°C.

catalyze the polymerization of ε-caprolactam, so that the polymerization is autocatalytic. Orig. art. has: 2 tables, 4 graphs, and 8 equations.

SUB CODE: 07,11/ SUBM DATE: 07Jan65/ ORIG REF: 008/ OTH REF: 006

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 01007-66 EWT(m)/EPF(c)/EWP(j)/T RM/WW

ACCESSION NR: AP5019564 UR/0191/65/000/008/0009/0011
678.632'32'21

AUTHOR: Doroshenko, Yu. Ye.; Korshak, V. V.; Sergeyev, V. A.

TITLE: Phenolformaldehyde polymers. The effect of the structure of bis-phenol on the properties of polymers

SOURCE: Plasticheskiye massy, no. 8, 1965, 9-11

TOPIC TAGS: polymer, polymerization, phenolformaldehyde, thermosetting material

ABSTRACT: The physical and mechanical properties of polymers were investigated as a function of the length of cross linkage. Polymers were synthesized from 1,6-bis-(*n*-hydroxyphenyl)-hexane, 1,8-bis-(*n*-hydroxyphenyl)-octane and 1,10-bis-(*n*-hydroxyphenyl)-decane by condensation with formaldehyde in *n*-propanol in the presence of ammonia. The distance between polymer chains can be changed by changing the length of R in the following structure

Card 1/2

Card 2/2

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 62954-65 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5019565 UR/0191/65/000/008/0011/0013
678.664.01:539—3

44,55 44,55 44,55 44,55

AUTHOR: Renard, T. L.; Tseytlin, G. M.; Kamenskiy, I. V.; Korshak, V. V.; Zapadinskiy, B. I.

44,55

TITLE: Synthesis and properties of polyester urethane foams based on polyesters modified by polyhydric alcohols

15 15

SOURCE: Plasticheskiy massy, no. 8, 1965, 11-13

44,55

TOPIC TAGS: polyurethane, foam plastic, polymerization

ABSTRACT: The article presents the results of production and testing thermally and mechanically stable polyester urethane foams based on polyesters synthesized using such compounds as 2,2,5,5-tetrahydroxymethylcyclopentanone and 2,2,6,6-tetrahydroxymethyl-1-hydroxycyclohexane. Such polyols are characterized by the presence of four and five hydroxyl groups and contain 5- and 6-membered saturated rings which results in polymers with high thermal stability. Syntheses were conducted at 200 ± 10°C in nitrogen atmosphere, purified from oxygen. Polyesters were foamed in closed form. It was found that the most thermally stable and strongest foams are obtained

Card 1/2

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L 62954-65

ACCESSION NR: AP5019565

with dimethylbenzylamine. At the same time the duration of heat treatment effects significantly the properties of polyester urethane foams. The maximum thermal stability was displayed by specimens held at 100°C for 25-30 hrs. "Some physico-chemical and dielectric properties were determined by A. A. Moiseyev and G. V. Troyan, for which the authors are deeply grateful." Orig. art. has: 1 figure and 4 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, OC

NO REF SOV: 002 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 1127-66 EWT(m)/EPF(c)/EWP(j)/T/EWA(c)/ETC(m) RPL WW/JW/RM

ACCESSION NR: AP5022934 UR/0062/65/000/008/1462/1464
547.244 + 542.91

AUTHOR: Korshak, V. V.; Bekasova, N. I.; Komarova, L. G.

TITLE: Interaction of B-methyl-N-triphenylborazole with diisocyanates and diamines

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1965, 1462-1464

TOPIC TAGS: diamine, copolymer, polycondensate

ABSTRACT: Several linear copolymers and polycondensates of B-methyl-N-triphenylborazole with diisocyanates and diamines were prepared and characterized. The object of this work was to synthesize thermally stable (above 400°C) polymeric materials. Copolymers with hexamethylenediisocyanate, p-toluilenediisocyanate and 4,4'-diphenylenediisocyanate were synthesized according to the following scheme

Card 1/3

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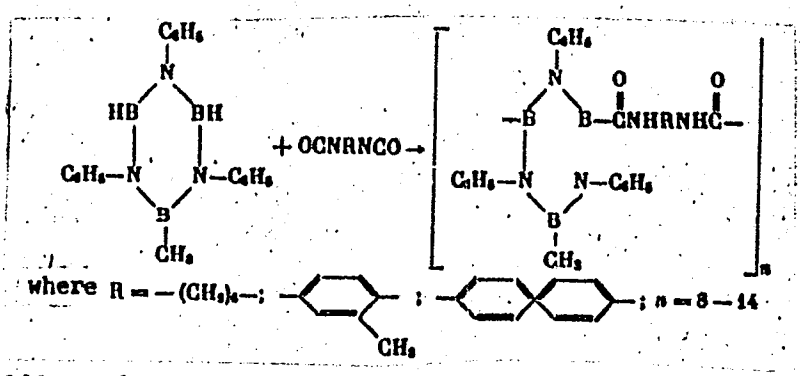
L 1127-66

ACCESSION NR: AP5022934



These are solids having 4,000-6,000 molecular weight. Their softening temperature is within the 100-110°C range and they begin to decompose above 100°C. Polycondensates of B-methyl-N-triphenylborazole with hexamethylenediamine, p-phenylenediamine, and N,N'-diisopropylhexamethylenediamine were synthesized according to the following scheme

Card 2/3

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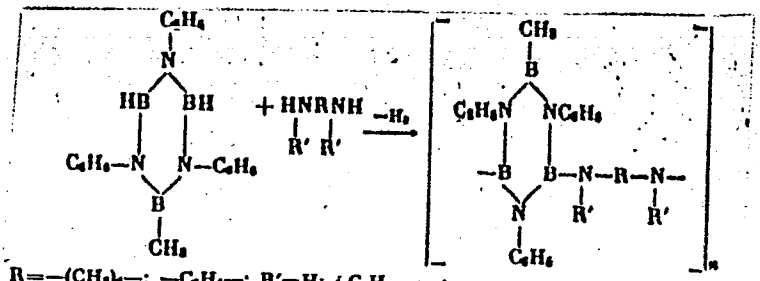
"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 1127-66

ACCESSION NR: AP5022934



where $R = -(CH_2)_6-$; $-C_6H_4-$; $R' = H$; $i\text{-}C_3H_7$

Polycondensate with hexamethylenediamine was a brittle transparent solid with a softening temperature of about 70°C. It was stable up to 260°C and its reduced viscosity in cresole was 0.19. Polycondensate with p-phenylenediamine was a brittle transparent solid with softening temperature at 120°C and reduced viscosity in cresole 0.11. It was stable up to 300°C. An attempt to prepare a polycondensate with N,N'-diisopropylhexamethylenediamine was unsuccessful. Orig. art. has: 1 figure.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds, Academy of Sciences, SSSR)

SUBMITTED: 03Nov64 ENCL: 00 SUB CODE: GC, OC

NO REF SOV: 002 OTHER: 001

Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 2324-66 EWT(m)/EPF(c)/EWP(j)/T/ETC(m) WW/RM

ACCESSION NR: AP5022222 UR/0191/65/000/009/0016/0019
678.673.01:536.495:537.311

AUTHOR: Vinogradova, S. V.; Korshak, V. V.; Fridman, Ye. I.; Andreyeva, M. A.; Baraboshkina, L. N.

TITLE: Heat-resistant electroinsulating polyarylate plastic material

SOURCE: Plasticheskiye massy, no. 9, 1965, 16-19

TOPIC TAGS: plasticizer, heat resistant plastic, heat resistant material, polyaryl plastic, terephthalic acid, electric insulator, plastic , heat resistance, polyarylate, phenolphthalein, bisphenol A, isophthalic acid, softening point

ABSTRACT: The possibility of preparing heat-resistant plastics suitable for electric insulators and capable of being compression molded was studied by preparing neat and mixed compositions from phenolphthalein isophthalate or terephthalate based polyarylates (i.e., aromatic polyesters). It was also attempted to prepare polymers which had to be kept at their melting temperature during compression molding for a minimum time. Thus, powdered poly(phenolphthalein isophthalate) could be compression molded at 270—300C into semitransparent light-brown samples of plastic designated as F-1, while the poly(phenolphthalein terephthalate), designated as plastic F-2, cracked

Card 1/2

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L 2324-66
ACCESSION NR: AP5022222

and disintegrated after being taken out of the molds. The addition of plasticizers, "Sovol" [biphenol dichloride], a polysiloxane and some other polyarylates based on either bisphenol A or phenolphthalein sebacate, made it possible to prepare compression molded samples from F-2 with softening points from 255 to 340C. The addition of Sovol in varying amounts or the same polysiloxane to F-1 produced plastics with softening points between 250 and 285C. Even the sample with 10% Sovol still had a softening point of 230C, which was considered to be sufficiently high, combined with good workability of the material. The introduction of fillers (up to 40% by weight of the composition) was also studied for the purpose of reducing cracking of the plastic and to save polymer materials. Good results were obtained with quartz flour or talcum, while aluminum oxide or silica gel were ineffective. The filled F-2 polyarylate samples were resistant to thermal shock; they withstood repeated sharp temperature change from -60 to 250C. The polyarylate compositions obtained had high dielectric properties in a rather wide range of temperatures. Orig. art. has: 4 figures and 4 tables. [BN]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, OC

NO REF SOV: 004 OTHER: 000 ATD PRESS: 4107

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 52138-65 EPF(c)/EWP(j)/EWT(m)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5015289 UR/0286/65/000/009/0067/0067

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Salazkin, S. N.; Vygodskiy, Ya. S.

TITLE: A method for obtaining polyarylates. Class 39, No. 170661 25 B

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 67

TOPIC TAGS: polyarylate, diphenyl chloride, dicarboxylic acid, phenol, polymer

ABSTRACT: This Author Certificate presents a method for obtaining polyarylates by the condensation of chloranhydrides of dicarboxylic acids with two-atom phenols in solutions of a high boiling point solvent. To increase the molecular weight of the obtained polymer, to lower the amount of solvent used, and to simplify the technique of separating the polymer, diphenyl chloride is used as the high boiling point solvent.

ASSOCIATION: none

SUBMITTED: 13Aug62 ENCL: 00 SUB CODE: OC

NO REF SOV: 000 OTHER: 000

Card 1/1 MB

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 53740-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/EWA(c) Pc-4/Pr-4/Ps-4 RPL
WW/JW/RM

ACCESSION NR: AP5015287 UR/0286/65/000/009/0066/0067
678.634/.639.002.2

34
B

AUTHOR: Korshak, V. V.; Tseytlin, G. M.; Pavlov, A. I.; Izyneyev, A. A.

15

TITLE: Preparative method for heat-resistant polymers. Class 39, No. 170659

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 66-67

TOPIC TAGS: polybenzoxazole, heat resistant polymer, preparation

ABSTRACT: An Author Certificate has been issued for a preparative method for heat-resistant polymers (polybenzoxazoles) involving the polycondensation of aromatic dicarboxylic acids (or esters thereof) with aromatic amines. To produce heat-resistant and soluble polybenzoxazoles, the aromatic amine to be used is bis(3-amino-4-hydroxyphenyl)propane or bis(3-amino-4-hydroxy-5-methylphenyl)propane. [SM]

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. Mendeleyeva (Moscow Chemical Engineering Institute)

SUBMITTED: 27Apr64 ENCL: 00 SUB CODE: GC, GC
NO REF SOV: 000 OTHER: 000 ATD PRESS: 4019

10

Card 1/1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 52139-65 EPF(c)/EPR/EWP(j)/EWA(c)/EWT(m)/T Pc-4/Pr-4/Ps-4 RPL WW/RM

ACCESSION NR: AP5015290 UR/0286/65/000/009/0067/0067

AUTHORS: Korshak, V. V.; Knunyants, I. L.; Vinogradova, S. V.; Gambaryan, N. P.; Pankratov, V. A.; Livshits, B. R.

TITLE: A method for obtaining polyarylates. Class 39, No. 170662 15 34 B

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 67

TOPIC TAGS: polyarylate, carboxylic acid, phenol, hexafluoropropane

ABSTRACT: This Author Certificate presents a method for obtaining polyarylates based on the anhydrides of dicarboxylic acids and bisphenols. To increase the thermal stability, elasticity, and solubility, and also to broaden the assortment of self-stopping polyarylates, 2,2-bis(4-carboxyphenyl)-hexafluoropropane is used as the anhydride of [illegible]oxylic acid.

ASSOCIATION: none

SUBMITTED: 05Jun64 ENCL: 00 SUB CODE: OC

NO REF SOV: 000 OTHER: 000

Card 1/1 MB

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 52133-65 EWG(j)/EWP(j)/EWA(h)/EWT(m)/EWA(1) Pc-4/Pr-4/Peb RM

ACCESSION NR: AP5015295 UR/0286/65/000/009/0068/0068

AUTHORS: Korshak, V. V.; Rafikov, S. R.; Vinogradova, S. V.; Fomina, Z. Ya. 28 B

TITLE: A method for obtaining uniform and mixed polyarylates. Class 39, No. 170667 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 68

TOPIC TAGS: polyarylate, chloranhydride, phenol, dicarboxylic acid, ultraviolet light, diphenol, sulfophthalein

ABSTRACT: This Author Certificate presents a method for obtaining uniform and mixed polyarylates based on chloranhydrides of dicarboxylic acids and 2-atom phenols. To obtain polyarylates stable under the action of ultraviolet rays, 15 diphenols containing sulfo-groups, such as sulfophthalein, are used as 2-atom phenols.

ASSOCIATION: none

SUBMITTED: 08Jun64 ENCL: 00 SUB CODE: OC

NO REF SOV: 000 OTHER: 000

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APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 52134-65 EPF(c)/EPR/EWP(j)/EWT(m)/T Pc-4/Pr-4/Pe-4 RM/WW

ACCESSION NR: AP5015296 UR/0286/65/000/009/0068/0068

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Salazkin, S. N.; Genkina, G. K. 29 13

TITLE: A method for obtaining uniform and mixed thermoplastic and thermoreactive polyarylates. Class 39, No. 170668 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 68

TOPIC TAGS: polyarylate, thermoplastics, chloranhydride, dicarboxylic acid, phenol, phenoltetrachlorophthalein

ABSTRACT: This Author Certificate presents a method for obtaining uniform and mixed thermoplastic and thermoreactive polyarylates based on chloranhydrides of dicarboxylic acids and 2-atom phenols. To obtain nonflammable and self-stopping polyarylates, phenoltetrachlorophthalein is used as the 2-atom phenol.

ASSOCIATION: none

SUBMITTED: 20Apr64 ENCL: 00 SUB CODE: OC

NO REF SOV: 000 OTHER: 000

Card 1/1 mb

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 51525-65 EWT(m)/EWP(j)/T Pc-4 PM

ACCESSION NR: AP5015300 UR/0286/65/000/009/0069/0069

678.71/74

21

B

AUTHOR: Korshak, V. V.; Mozgova, K. K.; Zasechkina, A. P.; Khanitonova, V. M.; Got'ye, T. N.; Karpova, G. D.; Morgun, L. A.

TITLE: A method for producing polyamide fiber. Class 39, No. 170672

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 69

TOPIC TAGS: polyamide resin, thermal stability, methacrylate, acrilic acid

ABSTRACT: This Author's Certificate introduces: 1. A method for producing polyamide fiber by polymerization of ε-caprolactam. A copper salt of the copolymer of methylacrylate and acrylic acid is added to the monomeric ε-caprolactam to improve the resistance of the fiber to heat and light. 2. A modification of this method in which the amount of copper salt added is 0.01%.

ASSOCIATION: none

SUBMITTED: 02Mar62 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 000

Card 1/1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 3785-66 EWT(m)/EPF(c)/EWP(j)/T/EWA(c) RPL WW/RM

ACCESSION NR: AP5025510 UR/0062/65/000/009/1649/1654
541.6+661.723-16

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Pankratov, V. A.

TITLE: Heterochain polyesters. 56. Fluorinated polyarylates

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 9, 1965, 1649-1654

TOPIC TAGS: polymer, fluorinated polymer, polyester, polyarylate

ABSTRACT: The purpose of this work was to prepare homo- and heteropolyarylates from 2,2-bis-(4-hydroxyphenyl)-1,1,1,3,3,3-hexafluoropropane, 2,2-bis-(4-hydroxyphenyl)-1,1,1-trifluoro-2-phenylethane with terephthalic, isophthalic, perfluoroadipic, and perfluorosebacic acids, and to investigate the properties of the polymers obtained. It was found that replacement of the methyl group at the central carbon atom of the diphenols by a trifluoromethyl group lowers the softening temperature of the homo- and heteropolyarylates obtained from them. Condensation of ω,ω,ω-trifluoroacetophenone with phenol yielded 2,2-bis-(4-hydroxyphenyl)-1,1,1-trifluoro-

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L 3785-66

ACCESSION NR: AP5025510

2-phenylethane. The characteristics of the polyarylates obtained are given in tabular form. Orig. art. has: 2 tables. [VS]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Heteroorganic Compounds, Academy of Sciences, SSSR); Khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Chemical Technology Institute)

SUBMITTED: 02Jul63 ENCL: 00 SUB CODE: MT, OC, GC

NO REF SOV: 010 OTHER: 009 ATD PRESS: 4118

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 1868-66 EPA(s)-2/EWT(m)/EPF(c)/EWP(j)/T/ETC(m) WW/RM

ACCESSION NR: AP5024495 UR/0191/65/000/010/0001/0003

678.673.4:678.029.44

AUTHOR: Vinogradova, S. V.; Andreyeva, M. A.; Davydova, V. F.; Korshak, V. V.

TITLE: Study of the feasibility of curing and converting thermosetting polyaryl esters into end products

SOURCE: Plasticheskiye massy, no. 10, 1965, 1-3

TOPIC TAGS: polyaryl ester, heat resistant plastic, polyaryl plastic

ABSTRACT: A study has shown that unfilled or quartz-filled cross-linked D-5 polyaryl ester can be processed into end products by molding. D-5, prepared from terephthaloyl chloride, bisphenol A, and 1,1,1-trimethylolpropane (1/0.5/0.5 molar ratio), is partly cross-linked (38% insoluble in chloroform) at the outset. Study of further cross-linking by various curing agents revealed that maleic and endic (cis-3,6-endomethylene-1,2,3,6-tetrahydrophthalic) anhydrides or tetrabutoxytitanium give the best results. Cross-linking occurs as follows:

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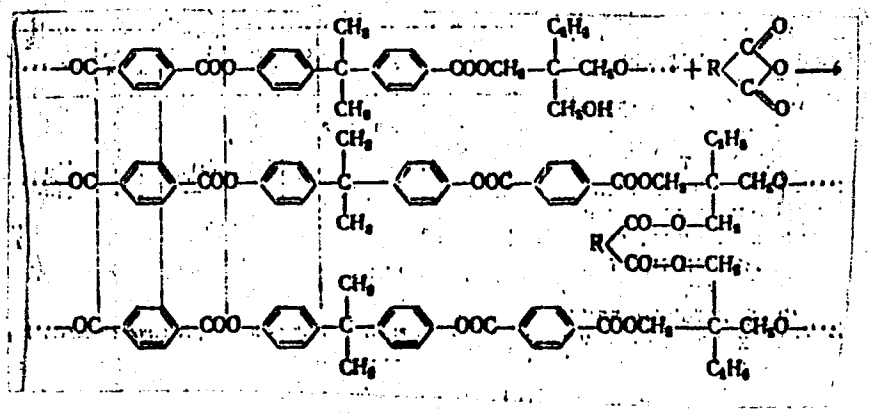
"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 1868-66

ACCESSION NR: AP5024495



Study of D-5 molding showed the expediency of using a cross-linked polymer softening at 200—210C and 60—70% insoluble. Such a polymer is rapidly molded (at 110—160C) into solid products. Fig. 1 of the Enclosure shows the thermomechanical properties of D-5 and, for comparison, of D-2 polyaryl ester (from terephthalic acid and bisphenol A). As Fig. 1 indicates, cross-linking considerably improves heat resistance.

Card 2/4

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L 1868-66

ACCESSION NR: AP5024495

Cross-linked D-5 withstands temperature cycling from -60 to 250C and exhibits good dielectric properties. Orig. art. has: 1 table and 4 figures. [SM]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 01 SUB CODE: MT

NO REF SOV: 002 OTHER: 000 ATD PRESS: 4112

Card 3/4

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 1868-66

ACCESSION NR: AP5024495

ENCLOSURE: 01

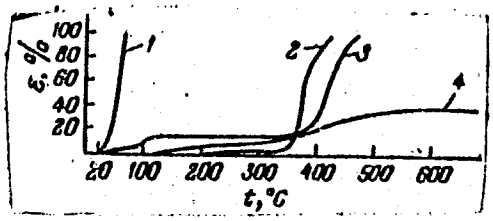


Fig. 1. Thermomechanical curves

1 - Initial D-5 polyaryl ester; 2 - D-2 polyaryl ester; 3 - D-5 cross-linked with 15% maleic anhydride; 4 - D-5 cross-linked with 15% tetrabutoxytitanium.

Card 4/4

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 4989-66 EWT(m)/EPF(c)/EWP(j)/T/EWA(c)/ETC(m) WW/RM

ACC NR: AP5027695 SOURCE CODE: UR/0062/65/000/010/1912/1913

AUTHOR: Korshak, V. V.; Tseytlin, G. M.; Pavlov, A. I.

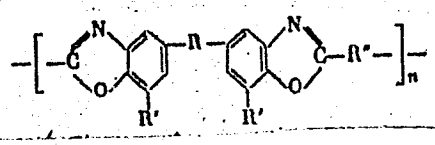
ORG: Moscow Institute of Chemical Technology im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut); Institute of Heteroorganic Compounds, Academy of Sciences, SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Synthesis of new polybenzoxazoles

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1965, 1912-1913

TOPIC TAGS: benzoxazole, polybenzoxazole, heat resistant polymer, polymer solubility

ABSTRACT: In addition to the known polybenzoxazoles based on 3,3'-dihydroxybenzidine or 3,3'-diamino-4,4'-dihydroxybiphenyl, new polybenzoxazoles with various substituents between the benzoxazole rings and in the benzene ring of the benzoxazole group have been obtained with the following general structure:



Card 1/2 UDC: 542.91

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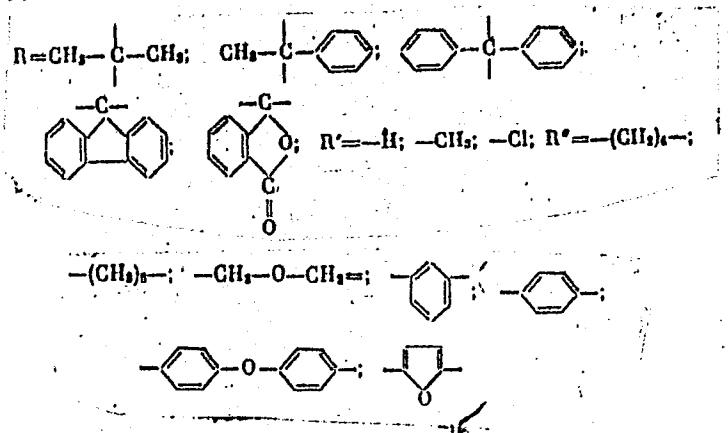
"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 4989-66

ACC NR: AP5027695

where



The polymers obtained are highly heat resistant: their weight loss starts at 300 to 400C for aliphatic, and at 400—500C for aromatic substituents R" (see above). They are soluble in a wide variety of organic solvents, such as chloroform, tetrachloroethane, tricresol, benzyl alcohol, pyridine, dimethylformamide, etc., except for polymers with a halogen in the side chain and those with the phthaloyl radical at the central carbon atom. The above-mentioned benzidine-based polyoxazoles are noted for their limited solubility, mainly in sulfuric or formic acids. Polybenzoxazoles with aromatic R" become insoluble after heating to 450C. Orig. art. has: 1 formula. [BN]

SUB CODE: OC, GC/ SUBM DATE: 08Jul65/ ORIG REF: 002/ OTH REF: 003/ ATD PRESS: 4131

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

AKIMOV, B.A.; BEKASOVA, N.I.; ZHIGACH, A.F.; ZAMYATINA, V.A.; KORSHAK, V.V.; SARISHVILI, I.G.; SOBOLEVSKIY, M.V.

Synthesis of heat-resistant polymers on a borazole and carborane compound base. Plast. massy no.11:16-18 '65. (MIRA 18:12)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 56676-65 ENT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM
ACCESSION NR: AP5017834 UR/0286/65/000/011/0076/0076
678.675.4.002.2

25
B

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Teplyakov, M. M.; Chernomordik, Yu. A.

TITLE: A method for producing polyamide esters. Class 39, No. 171553 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 11, 1965, 76

TOPIC TAGS: polyamide resin, polyester plastic 15

ABSTRACT: This Author's Certificate introduces: 1. A method for producing polyamide esters. The process is simplified by heating polyesters with polyamides in a stream of nitrogen at 250-300°C. 2. A modification of this method in which the process is accelerated by using catalysts, e.g. oxides, hydroxides and acetates of metals in groups I, II, III, IV, and VIII of the periodic table.

ASSOCIATION: none

SUBMITTED: 13Sep62 ENCL: 00 SUB CODE: MT

NO REF SOV: 000 OTHER: 000

Card 1/1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 19386-66 EWT(m)/EWP(j)/T WW/RM

ACCESSION NR: AP5017849

UR/0286/65/000/011/0080/0080
678.674

AUTHOR: Komlev, V. K.; Kamenskiy, I. V.; Korshak, V. V.

TITLE: A method for producing a binder for plastic. Class 39, No. 171579

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 11, 1965, 80

TOPIC TAGS: plastic, bakelite, phenol-formaldehyde resin

ABSTRACT: This Author's Certificate introduces a method for producing a binder for plastics based on bakelite. The strength and heat resistance are improved by adding incomplete esters of diethylene glycol and furfuroacrylic acid or a product based on them.

ASSOCIATION: none

SUBMITTED: 19May62 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 000 OTHER: 000

LJC

Card 1/1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 16507-66 EWT(m)/EWP(j)/T WW/RM

ACC NR: AP6001490 (A) SOURCE CODE: UR/0191/65/000/012/0003/0006

AUTHORS: Korshak, V. V.; Frunze, T. M.; Kurashov, V. V.; Baranov, Ye. L.

ORG: none

31
30
B

TITLE: Synthesis of graft copolymers of styrene with ε-caprolactam in bulk by two-stage polymerization

SOURCE: Plasticheskiye massy, no. 12, 1965, 3-6

TOPIC TAGS: graft copolymer, copolymerization, catalytic polymerization

ABSTRACT: A method for synthesizing of graft polymers of styrene with ε-caprolactam is described. The method consists of consecutively treating the reaction mixture with polymerization catalysts of anionic and radical character. In the first stage of the process styrene is copolymerized with N-methacryloylcaprolactam (catalytic amounts) in ε-caprolactam solution, using a radical type initiator (e.g., benzoyl peroxide). The second stage is initiated by addition of sodium. The graft copolymer has the structure:

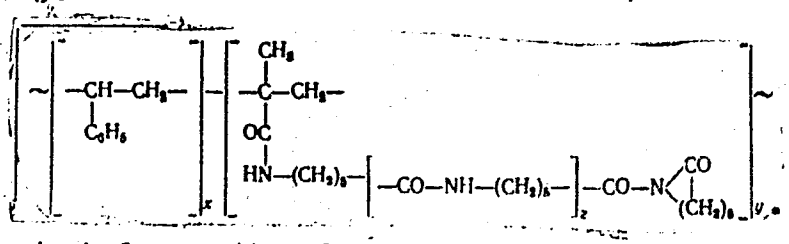
Card 1/2 UDC: 678.675'126-134.622

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 16507-66

ACC NR: AP6001490



Physical and mechanical properties of the copolymers obtained by varying the ratio of starting materials and the concentration of the catalytic system (sodium caprolactam and N-methacryloylcaprolactam) have been investigated. The authors express their gratitude to co-workers from VNIITUglemash for physical and mechanical testing of the copolymer samples. Orig. art. has: 3 tables, 2 figures, and 3 structures.

SUB CODE: 07/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 006

Card 2/2 SM

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930008-7

L 61496-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/JAJ/RM
ACCESSION NR: AP5019046 UR/0286/65/000/012/0075/0075
678.673

33
B

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Fomina, Z. Ya.

TITLE: Preparative method for flame-resistant phosphorus-containing polyaryl esters. Class 39, No. 172038

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 75

TOPIC TAGS: polyaryl ester, flame resistant plastic, heat resistant plastic

ABSTRACT: An Author Certificate has been issued for a preparative method for flame-resistant, phosphorus-containing polyaryl esters, involving polycondensation of bisphenols with aromatic dicarbonyl chlorides and phosphorus acids. To improve the solubility and to increase the heat resistance of the polyaryl esters, the bisphenol used is phenolphthalein. [SM]

ASSOCIATION: none

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678.744.45.002.2
547.566.1
547.391.1

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Korchevey, M. G.

TITLE: Preparative method for polymers and copolymers of an acrylic compound. Class 12, No. 172312

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 17

TOPIC TAGS: polymer, polymerization, allylphenol methacrylate, heat resistant polymer

ABSTRACT: An Author Certificate has been issued for a preparative method for acrylic polymers and copolymers of increased heat resistance. The method involves bulk polymerization of 2-allylphenol methacrylate at elevated temperature in the presence of free radical initiators [unspecified]. [SM]

ASSOCIATION: none

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