

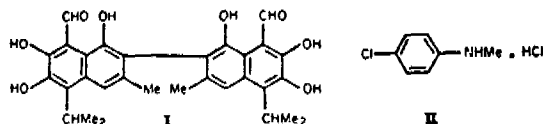
other fractions. Unlike CCl_4 intoxication, P intoxication increased the activity of glucose-6-phosphatase. All of these results may help to explain the differences and similarities between CCl_4 and white P poisoning. DZJN

123241q Histochemical study of the "adrenocortical lipid hyperplasia" induced in rats by aniline. Horvath, Eva; Kovacs, Kalman; Yeghiayan, E. (Inst. Med. Exp. Surg., Univ. Montreal, Montreal, Que.) *Acta Histochem.* 1971, 39(1), 154-61 (Eng). S.c. administration of 30 mg aniline (I) to rats for 7



or 14 days caused adrenal enlargement, increased the amts. of sudanophilic lipids and cholesterol, but decreased the activities of succinic dehydrogenase, lactic acid dehydrogenase, and steroid- β -ol dehydrogenase. I probably interferes with corticosteroidogenesis at the adrenal level. FGJN

123242r Gossypol: subcellular localization and stimulation of rat liver microsomal oxidases. Abou-Donia, Mohamed B.; Dieckert, Julius W. (Dep. Biochem. Biophys., Texas A and M Univ., College Station, Tex.) *Toxicol. Appl. Pharmacol.* 1971, 18(3), 507-16 (Eng). In rats, although the level of gossypol (I)



after oral administration was not exclusively segregated in any 1 liver cell fraction, most of it was found in the microsomal fraction. I was distributed according to its lipid-sol. property rather than by virtue of its reaction with protein. In rats fed I, the liver microsomal enzyme which catalyzed the oxidative demethylation of p-chloro-N-methylaniline-HCl (II) increased in activity. A no effect dosage for the stimulation of demethylation of II by dietary gossypol was 50 mg/kg. The I stimulation of rat liver microsomal oxidases seems to be due to an increase in enzyme synthesis since it did not alter the K_m ($6.7 \times 10^{-3} M$) but increased the max. velocity of I demethylation (33%). The ability of rat liver microsomal enzymes to dealkylate some carbamate pesticides was increased by the oral administration of I. DCJN

123243s Exploratory study of automobile driving performance under the influence of low levels of carboxyhemoglobin. Ray, A. M.; Rockwell, T. H. (Dep. Ind. Eng., Ohio State Univ., Columbus, Ohio). *Ann. N.Y. Acad. Sci.* 1970, 174(Art. 1), 396-408 (Eng). Estd. automobile concns. of CO result in 8% of the nonsmokers having blood carboxyhemoglobin concn. levels greater than 7% and 4% having greater than 14% carboxyhemoglobin, assuming that they were exposed for two hr or more. Smokers would have carboxyhemoglobin levels up to 15% higher than these depending on their smoking habits. Several of the effects of carboxyhemoglobin were definitely detrimental to driving performance. Harry W. Gordon

123244t Effect of carbon monoxide on human performance. Mikulka, Peter; O'Donnell, Robert; Heinig, Patrick; Theodore, James (Old Dominion Univ., Norfolk, Va.). *Ann. N.Y. Acad. Sci.* 1970, 174(Art. 1), 409-20 (Eng). A study was undertaken to det. the effects of CO on relatively simple applied performance tasks. Carboxyhemoglobin (COHb) levels reflected a direct relation with the ambient CO exposure levels. The individual performance curves revealed no consistent differences as a function of low levels of CO exposure. Harry W. Gordon

123245u Human performance of a psychomotor test as a function of exposure to carbon monoxide. Hanks, Thrift G. (Syst. Corp., Newport Beach, Calif.). *Ann. N.Y. Acad. Sci.* 1970, 174(Art. 1), 421-4 (Eng). No effect on performance of the crit. tracking task of Jex (1966) attributable to CO exposure was found. An empirical relation was obsd. between pulmonary CO and blood carboxyhemoglobin values. Harry W. Gordon

123246v Chemical poisoning. Hoogendoorn, D. (Sticht. Med. Reg., Utrecht, Neth.). *Ned. Tijdschr. Geneesk.* 1970, 114(39), 1644-5 (Neth). Statistics were gathered in the Netherlands on poisoning by chem. compds. other than compds. for medical use. Poisoning by CO was the most frequent type during the period 1967-68. The largest no. of poisonings were encountered in the 1-4 age group. They were principally due to petroleum products and industrial solvents. A. G. Derouane

123247w Disintegration products and smoke generation from fire action on plastics. I. Rumberg, Eckhard (Staatl. Materialpruefungsamt, Nordheim-Westfalen, Dortmund-Aplerbeck, Ger.) *VDI (Ver. Deut. Ing.) Z.* 1971, 113(1), 20-4 (Ger). The toxicity and irritating effects of smoke and products of the thermal degradation of plastics on rats were studied. The possible detn. of relative toxicity of these combustion gases is also discussed. The toxic effects of gaseous pyrolysis products

lonitrile, polymethacrylates, and other synthetic polymers were studied on animals and humans. At 2-300°, these polymers gave off gases which were less toxic to rats than those of wood or rubber. PVC combustion gases were the most toxic of the synthetic plastic decompn. products tested. BFJG

123248x Toxicity of bilirubin. Beck, Kurt (Gastroenterol. Abt., Med. Universitaetsklin., Freiburg/Br., Ger.). *Dtsch. Z. Verdau. Stoffwechselk.* 1970, 30(1-2), 47-51 (Ger). The i.v. LD₅₀ of bilirubin (I) in rats is ~150 mg/kg. The animals become atactic and die in tonic convulsions. Increased serum transaminase values, necrosis of liver and myocardium, severe renal tubular damage, and marked hemolysis with hemoglobinemia and hemoglobinuria were obsd. By inhibiting respiration and decoupling of oxidative phosphorylation, I blocks its own detoxication, which depends on normal oxidn. and intact oxidative phosphorylation. The toxicity of I is higher in adrenalectomized animals, which is partly due to glycogen depletion in the liver. This increase of toxicity is partly prevented by pretreatment with synthetic glucocorticoids. Kurt H. Zingraf

123249y Lead poisoning in cattle: brain lesions and hematologic changes. Christian, R. G.; Tryphonas, L. (West. Coll. Vet. Med., Univ. Saskatchewan, Saskatoon, Sask.). *Amer. J. Vet. Res.* 1971, 32(2), 203-16 (Eng). In cattle with Pb poisoning, diagnosed initially by clin. and toxicol. observations, gross brain lesions consisting of cerebrocortical softening, yellowish discoloration, and cavitation, were obsd. only in those with prolonged clin. illness (>9 days), being most severe in the occipital lobes, but the tips of most cerebral gyri were affected. In acute Pb poisoning, microscopic lesions varied from diffuse capillary activation to scattered focal areas of status spongiosis and necrosis of the cerebral cortex. In subacute and chronic poisoning, the microscopic lesions were located at the gyral tips and ranged from different degrees of status spongiosis, astrocytic swelling, and nerve cell degeneration to severe cavitation and vascular proliferation. Exptl. induced Pb poisoning in 3 2-year old cattle produced acute, subacute, and chronic syndromes with clin. and pathol. features similar to those obsd. in naturally occurring Pb poisoning. David B. Sabine

123250s Intraerythrocytic 2,3-diphosphoglycerate and carbon monoxide exposure. Astrup, Poul (Dep. Clin. Chem., Rigshosp., Copenhagen, Den.). *Ann. N.Y. Acad. Sci.* 1970, 174(Art. 1), 252-4 (Eng). 2,3-Diphosphoglycerate concns. were measured in the blood after 24 hr exposure of normal individuals to CO, leading to approx. 20% carboxyhemoglobin. The results indicated an 8% fall in 2,3-diphosphoglycerate, resulting in a higher affinity of Hb for O and a displacement of the oxyhemoglobin dissociation curve to the left. The same thing occurred when the percentage of reduced Hb was diminished by exposing patients to O inhalations or high atm. pressure (2 atm). Harry W. Gordon

123251t Effects of elevated carboxyhemoglobin on gas exchange in the lung. Brody, Jerome S.; Coburn, Ronald F. (Sch. Med., Univ. Pennsylvania, Philadelphia, Pa.). *Ann. N.Y. Acad. Sci.* 1970, 174(Art. 1), 255-60 (Eng). Small amts. of CO directly interfere with alveolar gas exchange. The tissue hypoxia produced by CO inhalation may be accentuated by rather marked degrees of arterial hypoxemia in patients with heart or lung disease. The arterial hypoxemia in these instances results from the CO-induced changes in the shape of the oxyhemoglobin dissociation curve. Harry W. Gordon

123252u State of the biliary tract of pilots and technicians working with chemical poisons. Kaskевич, L. M. (Klin. Otd., Vses. Nauchno-Issled. Inst. Gig. Toksikol. Pestits., Polym. Plast. Mass, Kiev, USSR). *Vrach. Delo* 1971, (1), 133-6 (Russ). A group of 102 pilots and 30 air technicians working with chem. poisons of the chlor- and phosphoorg. group was compared with a group of 104 pilots and 11 air technicians not exposed to the poisons with respect to their biliary functions. A higher frequency of biliary tract diseases was found in the exposed group and often chronic cholecystoangiocholitis had a latent course. Duodenal probing is recommended to ensure early diagnosis, and prophylactic hygiene is suggested. M. Hava

123253v Cannabis: study of the fractional extracts of the cannabis plant, smoke of cannabis cigarettes, and residues in the urine of cannabis cigarette smokers. Repetto, M. J.; Mendendez, M. (Inst. Natl. Toxicol., Seville, Spain). *J. Eur. Toxicol.* 1970, 3(6), 392-6 (Fr). Thin-layer chromatog., uv spectro-photometry, and gas chromatog. of cannabis (cannabis) plant ext., cannabis smoke and pipe residues, and urine of cannabis smokers was carried out. The detection of cannabis components was possible in all of these sources. Detection in urine was carried out by gas chromatog. using an SE-30 column on Chromosorb after extrn. with hexane and washing the ext. with NaCl soln. Kurt H. Zingraf

123254w Effects of essential phospholipids (EPL) on the lipid contents of the serum and liver in white rats after a single dose of ethyl alcohol. Sanochowicz, Leomidas; Wojcicki, Jerzy (Dep. Pharmacol., Pomeranian Med. Acad., Szczecin, Pol.).

corresponding to the α transition shifts with increasing polymer diln. toward lower temps. The role of the low-temp. secondary dispersions may be of primary importance in influencing the changes in storage and loss compliance, but the influences may be difficult to sep. when several secondary mechanisms may occur to influence the viscoelastic data.

CQJN

64774r Creep characteristics of thermoplastic materials in surface active media with special reference to pseudo-stress cracking. Menges, Georg; Schmidt, Heinz; Berg, H. (Inst. Kunststoffverarb., Rheinische-Westfael. Tech. Hochsch., Aachen, Ger.). *Kunststoffe* 1970, 60(11), 868-72 (Ger). The effect of surface active substances on the mech. properties of thermoplastics was studied in connection with pseudo-stress cracking under sustained loads. Pseudo-stress cracks appeared in air and in corrosive agents whenever certain deformation limits were exceeded. Corrosive attack started only after the formation of pseudo-stress cracks and reduced the break resistance. Substances with greater affinity to plastics were also absorbed in the subcritical loading range. The basic mech. properties of the material changed through swelling and soln. along with the mechanism of pseudo-stress cracking.

FPJG

64775s Spreading of the neck in [the course of drawing] polymers due to self-induced vibrations. Barenblatt, G. I. (USSR). *Izv. Akad. Nauk SSSR, Mekh. Tverd. Tela* 1970, (5), 121-31 (Russ). On the basis of self-excited vibrations reported by V. A. Kargin, et al. (1968) during elongation of poly(ethylene terephthalate) films, detailed anal. of mech. and thermal effects is presented. Conditions for the initiation of a self-excited vibrations mechanism are presented in a math. model, which also accounts for neck failure. The self-excited vibration regime of the neck propagation depends on a sufficiently high compliance of the sample. For samples of low compliance the neck formation vibrations are similar to relaxation vibrations. In studies of elongation of polymer samples and particularly of neck formation the base prerequisites are the simultaneous measurements of stress, elongation rate for the neck, and temp. of the orientation transition region. A set of data on crit. stress and the thermal flux accompanying the orientation phenomenon in a wide range of rates and temps. may be calcd. from a single expt. by this method.

A. Plochocki

64776t Increase in the reliability of the ultrasonic welding of plastics. Orlov, Yu. N.; Volkov, S. S. (MVТУ im. Baumana, Moscow, USSR). *Svar. Proizvod* 1970, (11), 39-41 (Russ). App. for contactless switching on of the ultrasonic generator and the control of welding quality according to the change of the energy of ultrasonic oscillation substantially increased the technol. reliability of the title process.

BCJR

64777u Electrical conductivity of isoporous ion exchangers. Grebenyuk, V. D. (Inst. Kolloid. Khim. Khim. Vody, Kiev, USSR). *Zh. Fiz. Khim.* 1970, 44(12), 3149-52 (Russ). The mechanism of ion retention (poisoning) by the isoporous ion exchangers is the same as that of the macroporous or heteroporous exchangers. In all cases, the retention of large ions, which remain after the exchanger regeneration, is due to the existence of crosslinks between the exchanger macromols. which hinder the movement of such ions. The elec. cond. and the ion desorption characteristics of isoporous ion exchangers (Zerolit FF-Ip, Deacid, or AV-17) are intermediate between those of the macroporous and heteroporous ion exchangers.

CPJR

64778v Hydrolytic stability of electrical potting compounds. House, Philip A. (Air Force Mater. Lab., Wright-Patterson Air Force Base, Ohio). *Aerosp. Adhes. Elastomers, Nat. SAMPE (Soc. Aerosp. Mater. Process Eng.) Tech. Conf. Proc., 2nd* 1970, 609-42 (Eng). SAMPE Nat. Bus. Off.: Azusa, Calif. The hydrolytic stability of elec. potting compds. used by the United States Air Force was investigated using hardness, compression load, and isolation resistance tests. Polyurethanes, polyester polyurethanes, epoxy resins, silicones, and polysulfides were tested.

BFJN

64779w Changes in some electrophysical properties of plastics based on a poly(methylsiloxane) resin during aging. Morozova, T. V.; Genkin, S. M.; Polinskii, G. I. (USSR). *Plast. Massy* 1971, (1), 20-1 (Russ). The sp. vol. resistance of PK-9 or KPZh-9 plastics [poly(methylsiloxanes) filled with glass fibers or asbestos, resp.] decreased only slightly after storage in water for 360 days. The plastics aged in water, humid air, or in sunlight for ≤ 2 years had only moderately decreased resistance to high voltage and arcing. These plastics are recommended for high voltage insulation.

CPJR

64780q How additives affect the flow and surface roughness of PVC. Shah, Pravin L. (Raychems Mkt. Co., Gloucester, Va.). *SPE (Soc. Plast. Eng.) J.* 1971, 17(1), 49-52 (Eng). An increased content of dioctyl adipate (I) in poly(vinyl chloride) resin 450 (II) led to an increased free vol. and mol. overlap of II chains, thereby causing the fusion rate to increase and the flow resistance to decrease. Careful examn. of II-extrudate samples suggested that surface roughness and flow discontinuity may be due to insufficient swelling of the mols. Addn. of 0.5% stearic acid (III) depressed the melt viscosity of each sample and prevented the occurrence of melt fracture. Two stearic acid effectiveness fac-

tors were derived, i.e. E_a (in high-stress regions) and E_i (in low-stress regions). High values of E_a at low I wt. % values resulted from applied stress, which increased the lubricant-diluent interaction and the value of E_a . An increase in wt. % I caused a decrease in viscosity, which was a favorable factor for interaction between the lubricant and the diluent. For 30% I, E_a became ineffective due to a very high mol. overlap and E_i became ineffective due to swelling of the mols.

CKJR

64781r Thermal expansion of graphite-epoxy composites. Fahmy, A. A.; Ragai, A. N. (Dep. Mater. Eng., North Carolina State Univ., Raleigh, N.C.). *J. Appl. Phys.* 1970, 41(13), 5112-15 (Eng). The thermal expansion is studied of unidirectional, balanced angle-ply, and complex laminated graphite-epoxy composites. The expansion coeff. of the unidirectional composites is detd. as a function of fiber orientation and follows the equation $\alpha_\theta = \alpha_L \cos^2 \theta + \alpha_T \sin^2 \theta$, where θ is the angle with the fiber direction and α_L and α_T are expansion coeffs. at 0° and 90°, resp. Results obtained on angle-ply composites agree with predictions based on an anal. reported by J. C. Halpin and N. J. Pagano (1969). The applicability of the same approach to a panel of more complex construction is discussed. Hysteresis effects, obsd. in this panel, may be caused by interlayer stress relaxation.

RCJL

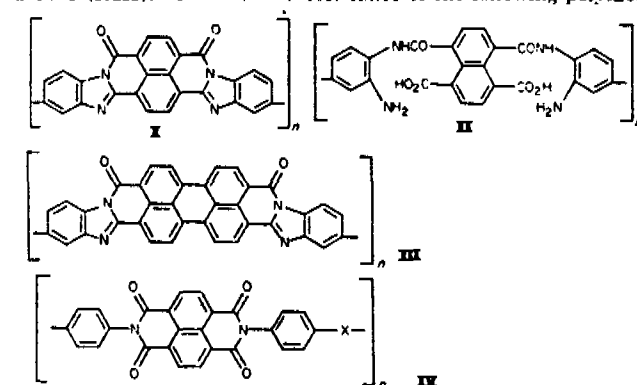
64782s Initial heating of moving polymer films with air. Ushakov, V. G.; Baranenko, A. P.; Fandeev, E. I.; Volovik, V. P.; Bryzgalov, L. N. (USSR). *Plast. Massy* 1971, (1), 67-8 (Russ). A graph is shown which can be used to det. the optimum temp. of the hot air stream required for adequate annealing of 50-500 μ thick poly(ethylene terephthalate) film moving at 20-40 m/min. The graph applies only when the heat transfer between the air and the film is 48-54 W/m². The heat transfer depends on the equipment configuration and must be detd. exptl. A microcalorimeter and a method used in the heat transfer detns. are described.

CPJR

64783t Thermal stability of poly(vinyl chloride). Malyasova, L. A.; Voskresenskii, V. A. (USSR). *Plast. Massy* 1971, (1), 37-9 (Russ). Gas chromatog. showed that the volatiles formed in the thermal decompn. of poly(vinyl chloride) (I) at temps. $\leq 280^\circ$ consisted solely of HCl and H₂. DTA endothermic min., obsd. at 250° for the unstabilized I, was assoc. with the max. HCl evolution rate. The addn. of 1% Zn stearate or 10% Ca stearate shifted the DTA min. to 270° or 264°, resp., showing that Zn stearate was a more effective stabilizer for I.

CPJR

64784u Ablation resistance of some thermostable polymers. Misevicius, P.; Maciulis, A.; Liogonkii, B. I.; Shamraev, G. M.; Berlin, A. A.; Grigorovskaya, V. M. (Inst. Fiz.-Tekh. Probl. Energi., Vilnius, USSR). *Vysokomol. Soedin., Ser. A* 1970, 12(9), 2091-8 (Russ). The ablation resistance of the following polymers



towards a stream of hot air was studied: I, II, III, IV (X = single bond), IV (X = O), poly-1,4-phenylene, poly-1,4-naphthylene, and poly(1,4-naphthylene-1,4-phenylene). I was the most resistant to ablation. Branching, and noncyclic segments decreased the ablation resistance.

CPJR

64785v Evolution of the thermal conductivity of cellular plastic materials. Gieryga, J. M.; Job, Claude; Landler, Yvan (Cent. Rech., Soc. Kleber-Colombes, Paris, Fr.). *Progr. Refrig. Sci. Technol., Proc. Int. Congr. Refrig., 12th* 1967 (Pub. 1969), 2, 195-207 (Fr). Inst. Int. Froid: Paris, Fr. The calen. of the thermal cond. of a cellular plastic from knowledge of its solid and gaseous proportions and the compn. and thermal cond. of these constituents is described. A grafted, crosslinked cellular poly(vinyl chloride) insulant is examd. in detail.

CNJF

64786w Multistep separation of phenols from sedimentation-resin oils at the Ashinsk Wood Chemical Combine. Pilyalkin, V. N.; Efimov, L. M.; Slayanskii, A. K. (USSR). *Nauch. Tr., Leningrad. Lesotekh. Akad.* 1969, No. 182, 62-9 (Russ). The multistep sepn. of total phenols from sedimentation-resin oils was examd. In alk. treatment, most of the phenols were sepd. in the 2-4th steps, all 7 fractions being differentiated easily. The 1st 3 fractions contained guaiacol, PhO₂, o-cresol, and m- and p-cresols. The following fractions were characterized by an increased content of xylenols and guaiacol homologs. Car-

Tomohiko Asahara

13814f Heat- and light-stabilized polyamides. Siclari, Francesco; Silverstroni, Piergiorgio; Perazzoni, Pierluigi (SNIA VISCOSA Società Nazionale Industria Applicazioni Viscose) Ger. Offen. 2,010,753 (Cl. C 08g), 01 Oct 1970, Ital. Appl. 06 Mar 1969; 21 pp. Polyamides are prepd. for industrial use with improved heat- and light-stability and a high degree of whiteness by adding a Cu compd. and an allyl halide. Thus, various types of nylon were prepd. in a conventional manner with the addn. of allyl chloride and Cu(OAc), to the monomer charge. Similarly used were CuCl₂, cupric stearate, and several allyl halides. Ethylene chlorohydrin could also be added. **FPPG**

13845g Drying poly(ethylene terephthalate) molding materials. Tahara, Shogo; Tamura, Tsutomu (Teijin Ltd.) Japan. 70 19,789 (Cl. 25 H 611), 06 Jul 1970, Appl. 22 Sep 1966; 3 pp. Poly(ethylene terephthalate) pellets contg. 0.2-0.3% H₂O were mixed with 0.5% talc powder and dried continuously with hot air at 160°. When pellets without the talc were similarly dried, the pellets stuck together and continuous transportation of pellets was difficult. **CBPY**

13846h Crosslinking of nitrated polymers with acyl halides. Magay, Daniel (Raychem Corp.) Ger. Offen. 1,914,231 (Cl. C 08f), 22 Oct 1970, US Appl. 30 Aug 1968; 19 pp. Polymers, e.g. polyethylene or ethylene-vinyl acetate copolymers, were nitrated with NO₂ and the nitro polymers crosslinked with ClCO- (CH₂)_nCOCl (n = 0, 2, 4, or 8). Thus, powd. polyethylene (melt index 1, d. 0.916) was nitrated by passing over NO₂ at 60-80° for 21 min to give nitropolyethylene contg. 0.447 millimole NO₂ groups/g polymer. Films of 0.63 mm thickness from the above nitropolyethylene were heated 60 sec with ClCOCOCl at 64° and heated 19 hr at 100° to give films of 3.1 kg/cm² Young's modulus and 7.73 kg/cm² tensile strength at 150°. **KTPG**

13847j Grafted polymers from modified epoxide derivatives of polyphenols and olefinic monomers. Farbenfabriken Bayer A.-G. Fr. Demande 2,014,164 (Cl. C 08g), 17 Apr 1970, Ger. Appl. 12 Jun 1968; 23 pp. Bisphenol A diglycidyl ether (I) resins (II) (or mixts. of I with o- and p-tert-BuC₆H₄OH), 5% of whose OH groups had been esterified with light-resistant monoisocyanates were grafted with vinyl monomers in the presence of free radical initiators to give graft copolymers with a higher content of epoxy groups and less homopolymer or copolymer from the grafted monomer(s) than when unmodified II were used. E.g., 400 parts II of epoxy equiv. 475 having terminal epoxy groups was treated for 1 hr at 100° in the presence of Sn 2-ethylcaproate and Me₂NCH₂Ph with 112 parts MeOCH₂NCO to urethane 5.4% of the OH groups. A soln. of 3.3 parts azobisisobutyronitrile in 300 parts vinyl acetate (III) was added during 4.5 hr to the epoxy

resin and the reaction was stopped after an addnl. hr to give III conversion 89%, epoxy equiv. of the 66% soln. 1320, and poly(vinyl acetate) (IV) 10%. An unmodified II-III graft copolymer prepd. under similar conditions gave III conversion 87%, epoxy equiv. of a 60% soln. 1200, and IV 35%. Other isocyanates used were MeNCO, cyclohexyl isocyanate, and stearyl isocyanate. **HCPF**

13818k Alkali metal alkyl phosphates as antistatic agents in plastics surfaces. Leaute, Jean; Guestaux, Claude; Virey, Claude; Vial, Jacques (Eastman Kodak Co.) Ger. Offen. 2,016,593 (Cl. C 08j, D 21h, G 03c), 15 Oct 1970, Fr. Appl. 08 Apr 1969-23 Dec 1969; 42 pp. Plastics, e.g. cellulose triacetate or poly(ethylene terephthalate), useful as photog. or magnetic recording materials, become antistatic when coated with alkali metal alkyl phosphates, e.g. K, Rb, or Cs octadecyl phosphate, K, Rb or Cs cetyl phosphate, K tetradecyl phosphate, K dodecyl phosphate, K octylphenyl phosphate, or Na monoocetyl phosphate, with or without a wax or polymeric binder, e.g. cellulose triacetate, cellulose ether phthalate, or poly(vinyl butyral). Thus, cellulose triacetate was coated with a soln. of 80 ml MeOH and 20 ml MeOCH₂CH₂OH contg. 0.4 g Rb cetyl phosphate to give a film of 0.80 and 10¹⁰ ohms sq. surface resistivity at 50 and 30% relative humidity, resp., without electrostatic field. **KTPG**

13849m Antistatic thermoplastic mixtures. Suehiro, Michiaki; Hirata, Akio (Asahi Dow Ltd.) Japan. 70 18,213 (Cl. 25 H 32), 23 Jun 1970, Appl. 28 Aug 1965; 6 pp. An antistatic acrylonitrile-butadiene-styrene copolymer (ABS) resin was prepd. by mixing with an acrylonitrile-butadiene rubber (NBR) and an antistatic agent. Thus, 100 parts (based on the solid portion) ABS latex was mixed with 25 parts NBR latex and 2 parts of a com. antistatic agent, dried at 80°, and molded into pellets. The friction-charged voltage of the pellet was 10, whereas that of a pellet prepd. from an ABS resin was >300. **CBPY**

See also: Synthetic High Polymers, Section 35. Plastics Fabrication and Uses, Section 37. Elastomers, Including Natural Rubber, Section 38. Textiles, Section 39. Coatings, Inks, and Related Products, Section 42. Foam-forming properties of hydraulic fluids (Sect. 46) 14413b. Shape of cetomacrogol micelles in aq. soln. (Sect. 46) 14412a. Industrial hygiene during production of epoxy resin foam PE-5 (Sect. 39) 15557p.

Patents: α-Amino-N-(aminoalkyl)alkanamides (Sect. 23) 12636c. 3,3-Dimethyl-1,2,4-butanetriol (Sect. 23) 12640z. F-contg. alcs. having unsatd. four-membered ring (Sect. 24) 12698z. Org. isocyanates by reaction of org. nitro compd. with CO in presence of noble metal catalyst (Sect. 25) 12812g. Dihydrophosphatriazine P-sulfides (Sect. 29) 13268w. Regenerated leather (Sect. 41) 14217r.

37—PLASTICS FABRICATION AND USES

OLI 7353

CHESTER K. ROSENBAUM

13850e Ductile forming methods for polyolefins. Latham, D. H. (Shell Res. Ltd., Urmston/Manchester, Engl.) *Plast. Polym.* 1970, 38(137), 346-50 (Engl.). The ductile metal working techniques used for polyolefins, i.e., cold rolling, press forging, rubber-pad stamping, diaphragm or hydrostatic forming, impact extrusion, forward extrusion, and sheet stamping were discussed with 10 refs. **CFJN**

13851f Polymer properties relevant in melt processing. Cogswell, F. N.; Lamb, P. (Plast. Div., Imp. Chem. Ind. Ltd., Weywyn Garden City/Herts., Engl.) *Plast. Polym.* 1970, 38(137), 331-42 (Engl.). The rheol., thermodynamics, chem. and other polymer properties were reviewed with no refs. Three production-grade materials, a low-d. polyethylene, polypropylene, and an acrylic polymer, were used as examples. **CFJN**

13852g Improvement of rock mass strength by chemical injections. Barthel, H. (Peute-Chemie G.m.b.H. und Co., Hamburg, Ger.) *Bergbauwissenschaften* 1970, 17(8), 281-5 (Ger.). The types of plastic used to improve rock mass strength, and the chemistry and physics involved are discussed with no refs., and suggestions for the most effective application of plastic injection are given. **BFJG**

13853h Blow molding polypropylene. Cavalier, R. J.; Wid-sing, W. M. (Plast. Resins Tech. Cent., Shell Chem. Co., N.J.) *Brit. Plast.* 1970, 43(11), 106-9 (Engl.). A review with no refs. on blow molding, continuous and intermittent parison extrusion, die and mandrel design, molds, auxiliary equipment, finishing, decorating, and applications. **DKJN**

13851j Is thermal decomposition of poly(vinyl chloride) a danger in reinforced concrete? Wulkan, E. K. H. (Hoofd Sect. Bouwmaterialen, Stichting Ratiobouw, Neth.) *Plastica* 1970, 23(10), 486-91 (Neth.). A review with 2 refs. Studies of the corrosion of steel reinforcements in concrete caused by the thermal decompn. products of poly(vinyl chloride) were discussed. **CCJZ**

13855k Synthetic polymers in medicine. Atlas, Sheldon M.

(Italy). *Nuova Chim.* 1970, 46(7), 32-40; (8), 29-36 (Ital.) A review of poly(vinyl mercaptan), poly(p-mercaptopstyrene), poly(mercaptopalkylene dicarbamates), 4-vinylimidazole copolymers, grafted enzymes, vinyl polymers, polyolefins, and acrylic polymers and their uses in medicine. **BDJL**

13856m Selectivity of ion-exchange membrane electrodes. Novikov, P. D. (USSR). *Izobmen Membrany Elektrodlize* 1970, 108-20 (Russ.). Edited by Saldadze, K. M. Izdatel'stvo "Khimiya", Leningradskoe Otdelenie: Leningrad, U.S.S.R. A review with 34 refs. A list is given of ion-exchange membranes suitable as "electrodes" in the potentiometric detn. of anions and cations (Materova, E. A., et al., 1961). **CPJR**

13857n Design of gears with plastic cog wheels. Gafitanu, M. D. (Rom.). *Mater. Plast. (Bucharest)* 1970, 7(6), 276-87 (Rom.). A review with 16 refs. of the design of plastic cog-wheel gears from polyamide, polyformaldehyde, polycarbonates, etc. **BTJQ**

13858p Ion exchangers with adsorbing properties (scavenger ion exchangers). Petranu, L.; Carpo, Adrian; Poinescu, Ignat (Rom.). *Mater. Plast. (Bucharest)* 1970, 7(7), 328-34 (Rom.). A review with 11 refs. on the manuf., properties and utilization of scavenger ion exchangers. **BTJQ**

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