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PVC
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1981

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TIMOTHY J CAWLEY, UNION CARBIDE CORP.
39 OLD RIDGEBURY RD. P2-585
DANBURY, CT 06817-0001

RNW 1692

undergoing hemodialysis and exposed to I, presumably obtained from PVC tubing. The rate of leaching of a new plasticizer, Hatcol 200 (a 1,3-dihydro-1,3-dioxo-5-isobenzofuran carboxylic acid branched oxo alc. ester) [75882-00-7] from PVC by serum was 1% that of I. Normal serum incubated for 3 wk with PVC strips plasticized with I produced significant growth inhibition of human diploid fibroblasts whereas Hatcol 200 stored for 4 wk showed no effect. Thus, Hatcol 200 is an ideal replacement for I, based on PVC tensile properties and in vitro data.

RN - 117-81-7; 9002-86-2; 75882-00-7
EM - 8206

- 3 SI - CA/096/156879M
CC - CA/104003
AU - Stranska E ; Mandys W ; Waitzova D
AD - State Inst. Control Drugs, Prague
TI - Toxicity of synthetic polymers and their extracts tested in vitro and in vivo
SO - Polim. Med.; VOL 11, ISS 1, 1981,27-37
PT - JOURNAL ARTICLE
CY - Czech.
LA - ENG
CD - PMYMA
IS - 0370-0747
AB - CBAC COPYRIGHT: CHEM ABS The toxicity of poly(vinyl chloride) (PVC) [9002-86-2], polyamide, rubber, and polyethylene [9002-88-4] was studied in vitro and in vivo with the use of solid samples and aq. exts. at different temps. and times of application. No toxic effect of any samples was obsd. for polyethylene (Granoten), whereas all samples of routinely sterilized rubbers had an immediate toxic effect on stabilized lines of cells and caused contact tissue necrosis in the subcutis of the exptl. animals. Routinely sterilized polyamide and PVC did not cause direct-contact changes in the stabilized lines of cells or any contact necrosis in the s.c. tissue, but their exts. had toxic effects on HeLa cells and on rat spermatozoa.
DN - 9002-86-2; 9002-88-4

- 6 SI - CA/096/148725T
CC - CA/161002
AU - Boettner EA ; Ball GL ; Hollingsworth Z ; Aquino R
AD - Dep. Environ. Ind. Health, Univ. Michigan, Ann Arbor
TI - Organic and organotin compounds leached from PVC and CPVC pipe
SO - Report; ISS EPA-600/1-81-062; Order No. PB82-108333,, 1981,116 pp.
PT - TECHNICAL REPORT
CY - USA
LA - ENG
CD - D8REP
AB - CBAC COPYRIGHT: CHEM ABS Potable water pollution PVC pipe;Organic compounds Water pollution by, by leaching of org. and organotin compds. from PVC pipe into potable supplies;Pipes and Tubes Pollution of potable water supplies by org. and organotin compds. leached from;Water pollution By org. and organotin compd. leached from PVC and chlorinated PVC pipes
RN - 78-93-3; 108-94-1; 109-99-9; 2406-65-7; 9002-86-2; 23120-99-2

RNW 1694.1

00010025

PAGE 3

PVC

EM - 8205

- 7 SI - CA/096/148255Q
CC - CA/159005
AU - Wallace DN
AD - Public Interest Sci. Consult. Serv., New York
TI - Dangers of poly(vinyl chloride) wire insulation decomposition.
I. Long-term health impairments: studies of firefighters of the
1975 New York telephone fire and of survivors of the 1977 Beverly
Hills Supper Club fire
SO - J. Combust. Toxicol.; VOL 8, ISS Nov., 1981,205-32
PT - JOURNAL ARTICLE
CY - USA
ZP - 10027
LA - ENG
CD - JCTOD
IS - 0362-1669
AB - CBAC COPYRIGHT: CHEM ABS Polyvinyl chloride fire respiratory
hazard Vinyl chloride polymer fire hazard;Electric insulators
and Dielectrics PVC, respiratory hazard of smoke from, in
fires;Health hazard From poly(vinyl chloride) insulation
combustion products, from burning wire insulation
Respiratory;Respiratory tract From poly(vinyl chloride)
insulation combustion products, from burning wire insulation
Disease;Smoke From combustion of poly(vinyl chloride) insulation,
health hazard of
RN - 9002-86-2
EM - 8205
- 8 SI - CA/096/148231D
CC - CA/159005
AU - Maltoni C ; Lodi P
AD - Inst. Oncol., Bologna
TI - Results of sputum cytology among workers exposed to vinyl
chloride monomer and to poly(vinyl chloride)
SO - EHP, Environ. Health Perspect.; VOL 41,, 1981,85-8
PT - JOURNAL ARTICLE
CY - Italy
LA - ENG
CD - EVHPA
IS - 0091-6765
AB - CBAC COPYRIGHT: CHEM ABS Health hazard VC occupational exposure
PVC occupational exposure health hazard Respiratory disease PVC
occupational exposure;Air pollution By polyvinyl chloride and
vinyl chloride, occupational exposure to, respiratory disease in
relation to, in factory workers, of Italy;Metallurgy Occupational
health hazard in, respiratory tract disease in relation to;Mines
and Mining Occupational health hazard in, respiratory tract
disease in relation to;Neoplasm In respiratory tract, from
occupational exposure to polyvinyl chloride and vinyl chloride,
in factory workers, of Italy;Respiratory tract Occupational, from
exposure to polyvinyl chloride and vinyl chloride, in factory
workers, of Italy Disease

PVC

- RN - 7440-47-3; 9002-86-2; 77108-45-3
EM - 8205
- 9 SI - CA/096/131866S
CC - CA/171011
AU - Damerau G ; Kemmler G ; Muhr G ; Wieczorek H
AD - Inst. Nukl. Entsorgungstech., Kernforschungszent. Karlsruhe
G.m.b.H., Karlsruhe
TI - Wet combustion of plutonium-containing wastes. Part II.
Inactive equipment for demonstrating the ILONA process.
Construction and operational results
SO - Comm. Eur. Communities, [Rep.] EUR; ISS EUR 7441,, 1981,23-58
PT - TECHNICAL REPORT
CY - Fed. Rep. Ger.
LA - GER
CD - CECED
AB - CBAC COPYRIGHT: CHEM ABS Wet combustion plutonium waste
Radioactive waste plutonium wet combustion;Radioactive wastes Wet
combustion of plutonium-contg., inactive equipment for
demonstration of ILONA process in Liq.
RN - 7440-07-5; 9002-86-2
EM - 8205
- 10 SI - CA/096/131865R
CC - CA/171011
AU - Stojanik B ; Wieczorek H
AD - Inst. Nukl. Entsorgungstech., Kernforschungszent. Karlsruhe
G.m.b.H., Karlsruhe
TI - Wet combustion of plutonium-containing wastes. Part I.
Dissolution of plutonium oxide during wet combustion of
plutonium-contaminated combustible wastes
SO - Comm. Eur. Communities, [Rep.] EUR; ISS EUR 7441,, 1981,1-22
PT - TECHNICAL REPORT
CY - Fed. Rep. Ger.
LA - GER
CD - CECED
AB - CBAC COPYRIGHT: CHEM ABS Wet combustion plutonium waste
Reactor fuel reprocessing plutonium recovery Radioactive waste
dissoln plutonia Sulfuric acid waste plutonium sepn;Nuclear
reactor fuel reprocessing Plutonium recovery and recycle
in;Radioactive wastes Wet combustion of plutonium-contg.,
plutonium oxide dissoln. in relation to Liq.;Rubber Radioactive
wastes contg., plutonium dissoln. and recovery from Neoprene
RN - 7440-07-5; 7664-93-9; 9002-86-2; 9002-88-4
EM - 8205

- 11 SI - CA/096/129459T
CC - CA/161004
AU - Rakhmanin YA ; Selivanov SB ; Ershova KP
AD - Inst. Obshch. Kommunal'n. Gig. im. Sysina, Moscow
TI - Hygienic basis of using polymer materials in reverse osmotic desalination of water in "filter-press"-type units
SO - Gig. Sanit.; ISS 11, 1981,8-11
PT - JOURNAL ARTICLE
CY - USSR
LA - RUS
CD - GISAA
IS - 0016-9900
AB - CBAC COPYRIGHT: CHEM ABS Polymer hygiene water desalination Reverse osmosis app drinking water Cellulose acetate hygiene filter press Mioplast hygiene filter press desalination Paronite hygiene filter press desalination;Polymers In reverse osmosis filter-press desalination of drinking water, hygienic assessment of;Water purification In reverse osmosis filter-press, for drinking water, polymer use in, hygienic assessment of Desalination
RN - 9002-86-2; 9004-35-7; 80966-48-9
EM - 8205
- 12 SI - CA/096/128853E
CC - CA/159005
AU - Natov M ; Vasileva S ; Shopova T
AD - Vissh Khim.-Tekhnol. Inst., Sofia
TI - Study of the dust content of a working environment in processing a poly(vinyl chloride) composition
SO - Khim. Ind. (Sofia); ISS 6, 1981,274-6
PT - JOURNAL ARTICLE
CY - Bulg.
LA - BUL
CD - KINSA
IS - 0368-5764
AB - CBAC COPYRIGHT: CHEM ABS Polyvinyl chloride dust workplace air Plastic processing dust air pollution;Air pollution By dust, of workplace air in hard poly(vinyl chloride) product manuf. plant, control of;Dust Control of, in workplace air of poly(vinyl chloride) product manuf. from;Plastics Poly(vinyl chloride), processing of, air pollution by dust in, control of
RN - 9002-86-2
EM - 8205
- 13 SI - CA/096/128642K
CC - CA/159000
AU - Dimmick WF
AD - Emiss. Stand. Eng. Div., EPA, Research Triangle Park
TI - EPA programs of vinyl chloride monitoring in ambient air
SO - EHP, Environ. Health Perspect.; VOL 41,, 1981,203-6
PT - JOURNAL ARTICLE
CY - USA

ZP - 27711
LA - ENG
CD - EVHPA
IS - 0091-6765
AB - CBAC COPYRIGHT: CHEM ABS Review vinyl chloride ambient air; Air
pollution By vinyl chloride, in ambient air, monitoring of,
Environmental Protection Agency Programs of
RN - 75-01-4; 9002-86-2
EM - 8205

15 SI - CA/096/128640H
CC - CA/159000
AU - Jones JH
AD - Div. Surveill., Hazard Eval. Field Stud., Natl. Inst. Occup. Saf.
Health, Cincinnati
TI - Worker exposure to vinyl chloride and poly(vinyl chloride)
SO - EHP, Environ. Health Perspect.; VOL 41,, 1981,129-36
PT - JOURNAL ARTICLE
CY - USA
ZP - 45226
LA - ENG
CD - EVHPA
IS - 0091-6765
AB - CBAC COPYRIGHT: CHEM ABS Review health hazard vinyl chloride
PVC exposure health hazard review; Health hazard From poly(vinyl
chloride) and vinyl chloride Occupational
RN - 75-01-4; 9002-86-2
EM - 8205

- 16 SI - CA/096/112126J
CC - CA/171010
AU - Wardley RB
TI - X-ray screening materials
SO - Brit. PATENT NO. 1603654 11/25/81 (Wardroy Products (Clerkenwell) Ltd.)
PT - PATENT
CY - UK
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS X ray screening material garment Protective garment x ray screening Health physics x ray screening Lead PVC screening x ray; Health physics Of protective garments from x-ray screening materials; Wearing apparel X-ray Protective; X-ray Shielding against, materials for
RN - 7439-92-1; 9002-86-2
EM - 8205
- 17 SI - CA/096/109922K
CC - CA/161004
AU - Cole M
TI - Desalination with improved chlor-alkali production by electrolytic dialysis
SO - U.S. PATENT NO. 4295950 10/20/81
PT - PATENT
CY - USA
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS Electrodialyzer desalination chloralkali process Seawater desalination chloralkali process electrodialyzer Brine desalination chloralkali process electrodialyzer; Cathodes Microporous resins as substrates for, in electrodialyzer for combined water desalination and chlor-alkali process; Dialyzers For combined water desalination and chlor-alkali process Electro-; Rubber Microporous, as substrate for cathode in electrodialyzer for combined water desalination and chlor-alkali process Synthetic; Rubber Microporous, as substrate for cathode in electrodialyzer for combined water desalination and chlor-alkali process Natural; Water purification Electrodialyzer for, in combination with chlor-alkali process Desalination; Water purification Desalination by, in combination with chlor-alkali process, app. for Electrodialysis
RN - 1310-73-2; 1333-74-0; 9002-84-0; 9002-86-2; 9002-88-4; 9003-07-0; 9003-27-4
EM - 8205
- 18 SI - CA/096/109339A
CC - CA/159002
AU - Kannan S ; Shah JA ; Srinivasan D
AD - Dep. Chem. Eng., A. C. Coll. Technol., Madras
TI - An environmental assessment of the manufacturing processes of poly(vinyl chloride)
SO - Indian Chem. Manuf.; VOL 19, ISS 9, 1981, 4-8, 2 plates
PT - JOURNAL ARTICLE

- CY - India
ZP - 600 025
LA - ENG
CD - ICMFA
IS - 0367-7257
AB - CBAC COPYRIGHT: CHEM ABS PVC manufg air pollution control; Air pollution Control of, PVC manufg. processes in relation to; Environment Of PVC manufg. processes, assessment of
RN - 75-01-4; 9002-86-2
EM - 8205
- 19 SI - CA/096/102627J
CC - CA/117005
AU - Tatsuno T ; Inoue T ; Tanimura A
AD - Natl. Inst. Hvg. Sci., Tokyo
TI - Hygienic chemical studies on poly(vinyl chloride). V. Migration of plasticizer from soft poly(vinyl chloride) used for food packaging
SO - Eisei Shikensho Hokoku; ISS 99, 1981,138-40
PT - JOURNAL ARTICLE
CY - Japan
ZP - 158
LA - JPN
CD - ESKHA
IS - 0077-4715
AB - CBAC COPYRIGHT: CHEM ABS Plasticizer migration vinyl chloride Packaging food hexyl adipate migration; Food Packaging materials for, poly(vinyl chloride) film, di-Et hexyl adipate migration from; Packaging materials For food, poly(vinyl chloride) film, di-Et hexyl adipate migration from
RN - 103-23-1; 9002-86-2
EM - 8205
- 20 SI - CA/096/091655P
CC - CA/163006
AU - Theeuwes F
TI - Agent dispenser with microporous releasing diffusor
SO - Eur. Pat. Appl. PATENT NO. 40457 11/25/81 (Alza Corp.)
PT - PATENT
CY - USA
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS A dispenser for controlled deliver of a drug into a fluid environment comprises an exterior wall surrounding and forming an internal compartment, a flexible partition in the compartment sepg. the compartment into a 1st and 2nd space, a drug in the 1st space and a swellable lightly crosslinked polymer or osmotically effective solute in the 2nd compartment. The exterior wall is formed from a microporous polymer when the 2nd space contains a swellable crosslinked polymer, or the exterior wall is formed from a microporous and semipermeable polymer with the semipermeable polymer surrounding a part of the 2nd space contg. a swellable crosslinked polymer or osmotic solute. Osmotic solute NaCl was compressed to shape and

coated on 1 surface with a partition forming compn. comprising 70% cellulose acetate [9004-35-7] mixed with 30% polyethylene glycol 400 dissolved in 80:20 CH₂Cl₂-MeOH to form an expandable partition on the solute. Then antiarrhythmic-antifibrillatory p-amino-N-(2-diethylaminoethyl)benzamide-HCl was compressed into a shape corresponding to the shape of the solute and placed onto the available surface of the partition. Next an intermediate dispenser comprising solute partition and drug was surrounded with a cellulose acetate microporous wall to give an oral dispenser.

RN - 79-41-4; 9002-86-2; 9002-89-5; 9003-07-0; 9004-35-7; 24936-45-6
EM - 8204

- 21 SI - CA/096/093793F
CC - CA/171010
AU - Maurin AJ Em
TI - Tiles for shielding against atomic radiations
SO - Fr. Demande PATENT NO. 2482761 11/20/81
PT - PATENT
CY - Fr.
LA - FRE
AB - CBAC COPYRIGHT: CHEM ABS Shielding tile nuclear radiation Lead oxide resin pseudovitrification; Epoxy resins In shielding tiles for nuclear radiation; Glass fibers Fireproof, in shielding tiles for nuclear radiation; Radiation Shielding against, tiles for; Rubber Fireproof, in shielding tiles for nuclear radiation Synthetic
RN - 1314-41-6; 1317-36-8; 1335-25-7; 7439-92-1; 9002-86-2
EM - 8204

- 22 SI - CA/096/093771X
CC - CA/171004
TI - Radiation shield composition
SO - Jpn. Tokkyo Koho PATENT NO. 81 49320 11/20/81 (Kyowa Gas Chemical Industry Co., Ltd.)
PT - PATENT
CY - Japan
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Radiation shield polymer lead compd; Health physics Polymer-lead compd. shielding compn. for; Radiation Shielding against, polymer-lead compd. compn. for
RN - 7428-48-0; 9002-86-2; 12684-23-0
EM - 8204

- 23 SI - CA/096/091223W
CC - CA/161001
AU - Missimer TM ; Holland LK ; Horvath LE ; O'Donnell TH
AU - Holzinger RL
AD - Missimer and Assoc. Inc., Cape Coral
TI - Evaluation of groundwater quality changes in supplies to reverse osmosis systems
SO - Tech. Proc. - Annu. Conf. Int. Trade Fair Natl. Water Supply Improv. Assoc.; VOL 9th, ISS Vol. 2, 1981, Paper 2, 32 pp.

- PT - JOURNAL ARTICLE
CY - USA
ZP - 33904
LA - ENG
CD - TPASD
AB - CBAC COPYRIGHT: CHEM ABS Groundwater supply quality reverse osmosis;Plastics Well casings from, quality of groundwater supply to reverse-osmosis systems in relation to Reinforced, glass fiber-;Water purification Of groundwater, evaluation of supply for Reverse osmosis;Waters Evaluation of supply of, to reverse-osmosis systems Natural, ground
RN - 9002-86-2; 9003-56-9; 12597-68-1
EM - 8204
- 24 SI - CA/096/074090H
CC - CA/160002
AU - Yamamoto M ; Yamaguchi T
AD - Tokyo Metrop. Ind. Tech. Inst., Tokyo
TI - Studies of treatment and effective use of plastic wastes. 3. Dimethylamination of poly(vinyl chloride) by N,N-dimethylformamide and ammonia
SO - Nippon Kagaku Kaishi; ISS 12, 1981,1957-62
PT - JOURNAL ARTICLE
CY - Japan
ZP - 115
LA - JPN
CD - NKAKB
IS - 0369-4577
AB - CBAC COPYRIGHT: CHEM ABS Plastic waste treatment utilization PVC waste methylamination DMF ammonia;Waste solids PVC, dimethylamination in treatment and utilization of, DMF and ammonia in;Water purification Copper and nickel removal by, waste PVC dimethylamination product as adsorbent in Adsorption
RN - 68-12-2; 7440-02-0; 7440-50-8; 7664-41-7; 9002-86-2
EM - 8204
- 25 SI - CA/096/073768Y
CC - CA/159000
AU - Tsendrovskaya VA
TI - Migration of harmful substances from poly(vinyl chloride)-based building materials
SO - Plast. Massy; ISS 11, 1981,46-7
PT - JOURNAL ARTICLE
CY - USSR
LA - RUS
CD - PLMSA
IS - 0554-2901
AB - CBAC COPYRIGHT: CHEM ABS Review migration toxin polymer material Vinyl chloride polymer material safety Construction material vinyl chloride migration;Air pollution By vinyl chloride migration from polyvinyl chloride-based building materials;Building materials Polyvinyl chloride-based, vinyl chloride migration from

- RN - 75-01-4; 9002-86-2
EM - 8204
- 26 SI - CA/096/057201C
CC - CA/160002
AU - Danilov IN ; Ishmaeva AM
TI - Chemical stability of materials in ozone-containing media
SO - Khim. Neft. Mashinostr.; ISS 8, 1981,30-1
PT - JOURNAL ARTICLE
CY - USSR
LA - RUS
CD - KHNMA
IS - 0023-1126
AB - CBAC COPYRIGHT: CHEM ABS Ozonization coking condensate corrosion material Steel corrosion ozonization coking condensate Plastic stability ozonization coking condensate;Carbonization and Coking Condensate from, ozonization of, chem. stability of equipment materials in;Enamels Chem. resistance of equipment from, in ozonization of coking condensate;Epoxy resins Chem. resistance of equipment from, in ozonization of coking condensate;Plastics Chem. resistance of equipment from, in ozonization of coking condensate Reinforced, glass fiber-;Vinyl compounds Chem. resistance of equipment from, in ozonization of coking condensate;Wastewater treatment Of coking condensate, chem. stability of equipment materials in Ozonization
- RN - 9002-86-2; 9002-88-4; 9039-02-5; 12611-78-8; 12718-48-8; 26917-50-0; 37245-26-4; 37245-27-5; 39296-41-8
EM - 8204
- 27 SI - CA/096/042868B
CC - CA/171010
AU - Severa J ; Knajfl J ; Bar J
AD - Doskolovaci Ustav, Jana Ev. Purkyne Univ., Hradec Kralove
TI - Model wet decontamination of PVC floor coverings
SO - Jad. Energ.; VOL 17, ISS 8-9, 1981,308-10
PT - JOURNAL ARTICLE
CY - Czech.
LA - CZE
CD - JADEA
IS - 0448-116X
AB - CBAC COPYRIGHT: CHEM ABS Radioactive decontamination soln vinyl floor;Chelating agents Radioactive decontamination solns. contg., for vinyl floor coverings;Linoleum PVC, decontamination of radioactive;Radioactive substances Removal of, from vinyl floor coverings using aq. soln. contg. chelating agent and surface-active agent;Surfactants Radioactive decontamination soln. contg., for vinyl floor coverings
- RN - 64-02-8; 67-43-6; 77-92-9; 9002-86-2; 10124-56-8; 80456-06-0; 80456-29-7; 80497-31-0
EM - 8204

- 28 SI - CA/096/040335B
CC - CA/160002
AU - Ivanova GV ; Voitova NV ; Kuritsyna VV ; Isaenkova AV ; Emets LV
AU - Vol'f LA
AD - Leningr. Inst. Tekst. Legk. Prom., Leningrad
TI - Removal of phenol from wastewater using fibrous sorbents
SO - Kozh.-Obuvn. Prom-st.; VOL 23, ISS 9, 1981,28-30
PT - JOURNAL ARTICLE
CY - USSR
LA - RUS
CD - KOOPA
IS - 0023-4354
AB - CBAC COPYRIGHT: CHEM ABS Phenol adsorption fiber tanning wastewater Anion exchange fiber phenol adsorption;Rayon Phenol removal from tanning wastewater by polyethylenepolyamine-treated mixt. of polyvinylchloride and wool and;Tanning Wastewater from, phenol removal from, anion-exchange fibers for;Wastewater treatment Phenol removal by, from tanning effluents, polymer fibers in Anion exchange;Wool Phenol removal from tanning wastewater by polyethylenepolyamine-treated mixt. of polyvinylchloride and viscous fiber and
RN - 108-95-2; 9002-86-2; 25014-41-9
EM - 8204
- 29 SI - CA/096/040154S
CC - CA/159005
AU - Bartknecht W
AD - Zentraler Sicherheitsdienst, Ciba-Geigy A.-G., Basel
TI - Recent research results in explosion protection in handling of flammable dusts
SO - Swiss Chem; VOL 3, ISS 3A, 1981,51, 53-4, 56-7, 59-60, 63-5, 67-8
PT - JOURNAL ARTICLE
CY - Switz.
ZP - 4002
LA - GER
CD - SCHED
AB - CBAC COPYRIGHT: CHEM ABS Dust gas ignition explosion safety;Dust Ignition and explosion of, control of, gaseous fuel ignition and explosion in relation to;Explosion Of dust, control of, explosion of gaseous fuel in relation to;Flours and Meals Ignition and explosion of, control of Dust;Fuel gases Ignition and explosion of, ignition and explosion of dust in relation to;Ignition Of dust, control of, ignition of gaseous fuel in relation to
RN - 2082-79-3; 6386-38-5; 9002-86-2; 9002-88-4; 9004-34-6; 9004-67-5; 50936-05-5; 80455-88-5; 80455-94-3
EM - 8204

- 30 SI - CA/096/024603G
CC - CA/161005
AU - Kreft P ; Trussell A ; Lang J ; Kavanaugh M ; Trussell R
TI - Notes and comments: leaching of organics from a
PVC-polyethylene-plexiglass pilot plant
SO - J. - Am. Water Works Assoc.; VOL 73, ISS 10, 1981,558-60
PT - JOURNAL ARTICLE
CY - USA
LA - ENG
CD - JAWWA
IS - 0003-150X
AB - CBAC COPYRIGHT: CHEM ABS Drinking water org plastic piping
Plastic material drinking water org PVC piping drinking water
org Polyethylene material drinking water org;Plastics Water
treatment and transport app. of, effect on org. removal in water
filtration and flocculation and sedimentation processes;Water
purification Orgs. removal by, plastic equipment interference in,
in filtration and flocculation and sedimentation processes
RN - 56-23-5; 67-66-3; 71-43-2; 71-55-6; 75-09-2; 75-25-2; 75-27-4;
75-69-4; 78-84-2; 79-01-6; 95-47-6; 96-17-3; 100-41-4; 100-42-5;
104-76-7; 106-42-3; 107-06-2; 108-38-3; 108-88-3; 110-62-3;
112-31-2; 124-19-6; 124-48-1; 127-18-4; 9002-86-2; 26523-64-8
EM - 8204
- 31 SI - CA/096/024361B
CC - CA/160006
AU - Fong MA ; Haxo HE Jr
AD - Matrecon, Inc., Oakland
TI - Assessment of liner materials for municipal solid waste landfills
SO - U. S. Environ. Prot. Agency, Off. Res. Dev., [Rep.] EPA; ISS
EPA-600/9-81-002a, Land Disposal : Munic. Solid Waste, Proc.
Annu. Res. Symp., 7th, PB81-173874,, 1981,138-62
PT - TECHNICAL REPORT
CY - USA
ZP - 94623
LA - ENG
CD - XPARD
IS - 0092-8054
AB - CBAC COPYRIGHT: CHEM ABS Municipal refuse leachate landfill
liner Liner material landfill municipal refuse;Asphalt Landfill
lining with, municipal refuse leachate effect on;Rubber Landfill
lining with, municipal refuse leachate effect on Butyl;Rubber
Landfill lining with, municipal refuse leachate effect on
Ethylene-propene;Waste solids Landfilling of, liner materials
for, testing of Municipal refuse;Waste solids Liner materials
for, testing of Landfill;Wastewater From municipal refuse,
landfill liner resistance to Leachate
RN - 9002-86-2; 9002-88-4
EM - 8204

- 32 SI - CA/096/018868F
CC - CA/117004
AU - Illouze C
TI - Packing for preservation of perishable commodities as exemplified by fresh fruits and vegetables, mushrooms, fresh meat, poultry, fresh fish and shellfish
SO - Fr. Demande PATENT NO. 2467795 04/30/81
PT - PATENT
CY - Fr.
LA - FRE
AB - CBAC COPYRIGHT: CHEM ABS Packaging material food preservation Sulfur dioxide atm food preservation Raisin preservation atm;Atmosphere Sulfur dioxide-high, for food preservation Environmental;Carboxylic acids Preservative compn. contg., for food, packaging material-enclosed;Fish Preservative gas-generating compn. for, packaging material-enclosed;Food Preservative gas-generating compn. for, packaging material-enclosed;Fruit Preservative gas-generating compn. for, packaging material-enclosed;Meat Preservative gas-generating compn. for, packaging material-enclosed Poultry;Meat Preservative gas-generating compn. for, packaging material-enclosed;Mushroom Preservative gas-generating compn. for, packaging material-enclosed;Packaging materials For food, for preservation;Raisin Preservative gas-generating compn. for, packaging material-enclosed;Shellfish Preservative gas-generating compn. for, packaging material-enclosed;Urethane polymers Packaging material, for food, with preservative compn.;Vegetable Preservative gas-generating compn. for, packaging material-enclosed
RN - 50-81-7; 65-85-0; 77-92-9; 87-69-4; 110-15-6; 110-44-1; 150-13-0; 554-13-2; 866-84-2; 1637-73-6; 6915-15-7; 7446-09-5; 7681-57-4; 7757-81-5; 9002-86-2; 9002-88-4; 10043-67-1; 10103-46-5; 10377-52-3; 16731-55-8
EM - 8204
- 33 SI - CA/096/057846S
CC - CA/164003
AU - Tsuge M ; Senba T
AD - Cent. Res. Lab., Sumitomo Bakelite Co., Ltd., Kanagawa
TI - Gas chromatographic determination of ethylene oxide in materials for medical devices
SO - Bunseki Kagaku; VOL 30, ISS 12, 1981,814-16
PT - JOURNAL ARTICLE
CY - Japan
ZP - 495
LA - JPN
CD - BNSKA
IS - 0525-1931
AB - CBAC COPYRIGHT: CHEM ABS About 2 g sample of poly(vinyl chloride) [9002-86-2] plasticized with bis(2-ethylhexyl) phthalate, and treated with ethylene oxide [75-21-8] was extd. with 10 mL EtOH at 20.degree. for 24 h and the ext. was analyzed

PVC

by gas chromatog. using a stainless steel column packed with 15% poly(propylene glycol succinate)/Chromosorb W-AW. Hexane was used as the internal std. This method was comparable to the direct injection method. However, the direct method can not be applied to insol. samples such as silicone, polyethylene, and fluorocarbon resins. The coeff. of variation of this method was .apprx.3.5% and the detection limit was .apprx.1 ppm.

RN - 75-21-8; 9002-86-2
EM - 8202

- 34 SI - CA/096/040725D
CC - CA/162006
AU - Figge K ; Freytag W ; Klahn J ; Gmelka D
AD - Unilever Forschungsges. m.b.H., Hamburg
TI - Absorption through cosmetics and food of diffusible packaging constituents by man. A comparative study
SO - Parfuem. Kosmet.; VOL 62, ISS 10, 1981,311-16
PT - JOURNAL ARTICLE
CY - Fed. Rep. Ger.
ZP - D-2000
LA - GER
CD - PAKOA
IS - 0031-1952
AB - CBAC COPYRIGHT: CHEM ABS Compilation of data obtained from storage of bath preps., toothpaste, skin creams, hand creams, lotions, aerosol deodorant, shampoo, and hair spray in polypropylene [9003-07-0], low-d. polyethylene [9002-88-4] or PVC [9002-86-2], containers contg. 0.1% Irganox 1076 [2082-79-3] and 0.2% BHT [128-37-0] (polyolefins) or 1% Irgastab 17 MOK [15571-58-1] and 0.6% stearly alc. [112-92-5] (PVC) showed that consumers would be exposed to 0.1-15 mug/day of the additives with normal use of the cosmetics. Migration of the additives into food simulants stored in the same containers would contribute .apprx.2 mg/day to the human diet. The amt. of additives adsorbed by humans from cosmetic packaging is insignificant compared to that from food.
- RN - 112-92-5; 128-37-0; 2082-79-3; 9002-86-2; 9002-88-4; 9003-07-0; 15571-58-1
EM - 8202

- 35 SI - CA/096/029523R
CC - CA/104003
AU - Rumyantsev GI ; Bol'shakov AM ; Prokhorov NI ; Tambovtseva AM
AD - I Mosk. Inst., Moscow
TI - Labor hygiene and toxicology during implementation of new chemical additives in synthetic leather production
SO - Gig. Sanit.; ISS 9, 1981,13-16
PT - JOURNAL ARTICLE
CY - USSR
LA - RUS
CD - GISAA
IS - 0016-9900
AB - CBAC COPYRIGHT: CHEM ABS Exposure of rats to Belophor OM

(3-phenyl-5,6-benzocoumarin) [62886-86-6], used for making PVC [9002-86-2]-based materials, affected the blood, nervous system, immunol. response, energy metab. and some enzymes. Oxidn.-redn. process affecting enzymes showed quite stable changes. Fibrogenic action of the dust was obsd. in the lungs and the liver and a slight toxic effect on the brain and myocardium. Belophor OM showed no pronounced irritating, resorptive or sensitization effect when applied on the skin. The recommended safe level of Belophor OM in the working zone is 6 mg/m³.

RN - 9002-86-2; 62886-86-6
EM - 8202

- 36 SI - CA/096/011725Y
CC - CA/163008
TI - Poly(vinyl chloride) containers for hyperalimentation solutions
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 81116467 09/12/81 (Sumitomo Bakelite Co., Ltd.)
PT - PATENT
CY - Japan
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Hyperalimentation soln. container materials are prepd. by combining vinyl chloride resin 100, polyurethane resin 5-75, polyester plasticizers 5-75, and epoxy plasticizers 5-30 parts by wt. These materials do not release toxic substances into the hyperalimentation solns. unlike com. materials contg. phthalates as plasticizers. Thus, a typical compn. consists of poly(vinyl chloride) [9002-86-2] 100, polyurethane 20, polyester 40, and epoxidized soybean oil 10 parts. The containers made from this compn. did not release the plasticizer into hyperalimentation soln.

RN - 9002-86-2
EM - 8202

- 37 SI - CA/096/011718Y
CC - CA/163007
TI - Blood-compatible vinyl chloride plastic materials
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 81116466 09/12/81 (Toray Industries, Inc.)
PT - PATENT
CY - Japan
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Vinyl chloride resins were surface-treated with plasma at low temp. and coated with silicone resins to prevent the release of plasticizers. The products are blood compatible and may be used in the prepn. of blood storage bags. Thus, a poly(vinyl chloride) [9002-86-2] sheet (400 mu thick, 35 wt.% 2-diethylhexyl phthalate plasticizer) was treated with plasma at low temp. using CO gas with primary elec. potential of 4 kV. The surface of this sheet was then treated with a silicone soln. and dried to obtain a material that was used for the prodn. of blood storage bags.

RN - 9002-86-2
EM - 8202

- 38 SI - CA/096/011716W
CC - CA/163007
TI - Perforated contact lens
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 81111625 09/03/81 (Tokyo Contact Lens Research Institute)
PT - PATENT
CY - Japan
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Perforated plastic small disks are prepd. for the manuf. of contact lenses. For example, a mixt. of Me methacrylate, a polymn. catalyst, etc., was poured into a plastic cylindrical container contg. a no. of PVC [9002-86-2] fibers stretched from end to end. The cylinder was then heated in a water bath at 40-70.degree. for polymn. The polymd. product was removed from the cylinder and sliced to obtain disks contg. pieces of the PVC fibers. The disks were treated with a solvent that dissolved only the PVC fibers to obtain a perforated disk.
RN - 9002-86-2; 9011-14-7
EM - 8202
- 39 SI - CA/096/011635U
CC - CA/163007
AU - Ishikawa Y ; Honda K ; Sasakawa S ; Hatada K ; Kobayashi H
AU - Soeda F ; Yoshimura K ; Igaki H
AD - Cent. Blood Cent., Japanese Red Cross Soc., Tokyo
TI - Surface structure of glow discharge-treated poly(vinyl chloride) and the interaction with platelets
SO - Kobunshi Ronbunshu; VOL 38, ISS 10, 1981,709-15
PT - JOURNAL ARTICLE
CY - Japan
ZP - 150
LA - JPN
CD - KBRBA
AB - CBAC COPYRIGHT: CHEM ABS The surface properties of glow discharge-treated plasticized poly(vinyl chloride) (I) [9002-86-2] were examd. A mixt. of CO and Ar, N2, H2O, NH3, CF4 was used for glow discharge. The resulting I had a double-layered surface composed of densely crosslinked outer layer and slightly crosslinked inner layer. The total thickness of the crosslinked layers was 2000.apprx.3000 .ANG.. The crosslinking took place by the recombination of radicals formed by the cleavage of C-Cl bond and/or by binding of the radicals and plasma-dissocd. species. The wettability of the surfaces which were exposed to the plasma of various gases, except for CF4 or fluorohexyl acrylate, was increased. In addn., the adhesiveness to silicone was increased. The platelets strongly adhered to the discharge-treated surfaces. However, the glow discharge treatment inhibited the leakage of di-(2-ethylhexyl) phthalate [117-81-7] from I so that the aggregability of platelets stored in the bags made of the glow discharge-treated I film decreased with time to a lesser extent compared with the untreated material.

PVC

- RN - 75-73-0; 117-81-7; 124-38-9; 630-08-0; 7440-37-1; 7446-09-5;
7664-41-7; 7727-37-9; 7732-18-5; 9002-86-2
EM - 8202
- 40 SI - CA/096/001588S
CC - CA/104003
AU - Hilado CJ ; Huttlinger PA
AD - Prod. Saf. Corp., Sunnyvale
TI - Polymer structure and relative toxicity of off-gases
SO - J. Elastomers Plast.; VOL 13, ISS 3, 1981,177-82
PT - JOURNAL ARTICLE
CY - USA
ZP - 94087
LA - ENG
CD - JEPLA
IS - 0095-2443
AB - CBAC COPYRIGHT: CHEM ABS The toxicity of the off-gases of a wide variety of materials to mice, as manifested by staggering, convulsion, collapse, and death, was studied. Of 27 plastic samples polyether sulfone was most toxic and chlorinated polyethylene the least toxic. Of several fibers and fabrics examd., wool and silk were most toxic. Also among various cushioning materials feather, hair, and wool (all proteinaceous materials) had similar high toxicity. The toxicity of off-gases of starch-contg. food (flour, spaghetti, and rice) was very similar. Cotton fabric, wood, and cane sugar gave similar off-gas toxicity results; these materials are all carbohydrates. Apparently, there is a relation between chem. structure and relative off-gas toxicity.
- RN - 57-50-1; 9002-86-2; 9002-88-4; 9003-53-6; 9003-56-9; 9010-98-4;
9011-14-7; 9016-75-5; 9041-80-9; 24936-68-3; 24937-79-9;
24981-14-4; 27026-93-3
EM - 8202
- 41 SI - CA/095/225161Q
TI - Stabilization of acid digestion of radioactive organic wastes
SO - Belg. PATENT NO. 888830 08/28/81 (Power Reactor and Nuclear Fuel Development Corp.)
LA - FRE
AB - CBAC COPYRIGHT: CHEM ABS A procedure is discussed for using a boiler or an acid digestion vessel of Ta or a Ta base alloy for digesting radioactive org. waste materials. The procedure allows continuous operation and is carried out in such a way as to prevent embrittlement of the boiler or digestion vessel by absorption of H. The org. materials consist of polymn. or copolymn. products of monomers contg. Cl, such as vinyl chloride, vinylidene chloride and chloroprene used for shielding against radiation. Tests were made of corrosion rates of and H absorption by Ta or Ta alloy vessels in H2SO4 media contg. HNO3, HNO2, nitrate or nitrite salts (LiNO3, NH4NO3, Fe(NO3)2, Cu(NO3)2, Ba(NO3)2, Ni(NO3)2, KNO2, NaNO2) in total quantities of .gtoreq.10 ppm. The course of the acid digestion is monitored by measuring the potential of the Ta or Ta alloy. Oxides of N (NO,

- NO2 or their mixt.) may also be present.
- RN - 1333-74-0; 3251-29-4; 6484-52-2; 7440-25-7; 7632-00-0; 7664-93-9;
7697-37-2; 7782-77-6; 7790-69-4; 9002-85-1; 9002-86-2;
10022-31-8; 10102-43-9; 10102-44-0; 14013-86-6
- EM - 8201
- 42 SI - CA/095/225159V
TI - Treatment of radioactive organic wastes
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 81117199 09/14/81 (Toyo Engineering Co., Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS In reducing the vol. of radioactive org. waste (e.g. poly(vinyl chloride), neoprene, ion exchange resin, etc. from a nuclear power plant) during waste treatment by oxidatively decomp. with H2SO4 and HNO3, small amts. of concd. HNO3 is continuously added to the waste in a glass-lined steel vessel at 190-230.degree. while contacting the waste with concd. H2SO4 contg. 0.2-0.5% Se. The addn. of Se (e.g. as SeO2) speeds up the oxidative decompn.
- RN - 7446-08-4; 7664-93-9; 7697-37-2; 7782-49-2; 9002-86-2
- EM - 8201
- 43 SI - CA/095/225043C
AU - Harrison DW ; Reynolds LF
AD - ICI Brixham Lab., Brixham/Devonshire
TI - Liquid effluent treatment and disposal at ICI Wilhelmshaven site
SO - Inst. Chem. Eng. Symp. Ser.; VOL 67, ISS Ind. Water Econ., 1981,133-43
LA - ENG
CD - ICESD
AB - CBAC COPYRIGHT: CHEM ABS The treatments for the effluents from PVC and vinyl chloride monomer manufg. include pH adjustment, ethylene dichloride stripping, metal hydroxide removal, and bio-treatment.
- RN - 75-01-4; 107-06-2; 9002-86-2
- EM - 8201
- 44 SI - CA/095/174940H
AU - Goberman MS ; Shenker MA ; Korol'kov NM ; Khlusova VI
AD - Vses. Nauchno-Issled. Inst. Iodobrom.
TI - Effect of pipe wall material on calcium carbonate deposits
SO - Neftepromysl. Delo; ISS 7, 1981,32-3
LA - RUS
CD - NDTSA
AB - CBAC COPYRIGHT: CHEM ABS The scaling of pipe walls with CaCO3 deposited from wastewaters in a petroleum refinery could be reduced by .1toeq.24% by substituting glass, polyethylene, Ftoroplast, or Viniplast for steel tubes. (9002-88-4 Polyethylene)(9039-02-5 Ftoroplast)(9002-86-2 Viniplast)
- RN - 9002-88-4; 9039-02-5; 9002-86-2; 471-34-1
- EM - 8201

- 45 SI - CA/095/174557P
AU - Gaspar G ; Bekes A
AD - A SZOT Munkavedelmi Tudományos Kutató Int. Közleménye
TI - Examination of air pollution due to the processing of PVC cables
SO - Munkavedelem; VOL 27, ISS 4-6, 1981,1-6
LA - HUN
CD - MUNKA
AB - CBAC COPYRIGHT: CHEM ABS Pilot plant studies were conducted to det. the air pollutants formed by high-temp. processing of poly(vinyl chloride) PVC cables. (9002-86-2 PVC) Three domestic PVC granulate samples were examd. for characteristic emission components at 180-230.degree.. At <200.degree., the only air pollutant was the plasticizer bis(2-ethylhexyl) phthalate (I); however at >200.degree., besides a large increase of I, significant increases of HCl, acrolein, C6H6, and 2-ethylhexanol (I degradn. product) were obsd. (117-81-7 Bis(2-ethylhexyl) phthalate)(107-02-8 Acrolein)(71-43-2 Benzene)(104-76-7 2-Ethylhexanol)
RN - 9002-86-2; 117-81-7; 107-02-8; 71-43-2; 104-76-7; 7647-01-0
EM - 8201
- 46 SI - CA/095/225531K
AU - Valeri CR ; Valeri DA ; Gray A ; Malaragno AJ ; Vecchione JJ
AU - Dennis RC ; Emerson CP
AD - Nav. Blood Res. Lab., Boston
TI - Cryopreserved red blood cells for pediatric transfusion. Frozen storage of small aliquots in poly(vinyl chloride) (PVC) plastic bags
SO - Transfusion (Philadelphia); VOL 21, ISS 5, 1981,527-36
LA - ENG
CD - TRANA
AB - CBAC COPYRIGHT: CHEM ABS Human nonrejuvenated and rejuvenated red blood cells were prepd. for cryopreservation and subsequent pediatric transfusion. Glycerol was added to the red blood cells in the primary poly(vinyl chloride) plastic collection bag to achieve a concn. of 40% wt./vol. (56-81-5 Glycerol)(9002-86-2 Poly(vinyl chloride)) The red blood cells were concd. by centrifugation, and the supernatant glycerol was discarded. Each glycerolized unit was divided into 4 equal aliquots in the individual 600-mL bags of a dry quadruple poly(vinyl chloride) plastic system, and each aliquot was frozen and stored at -80 .degree.. After thawing, NaCl solns. were used to wash the aliquots in the Blood Processor and the washed aliquots were stored in a NaCl-glucose-phosphate soln. at 4.degree. for 24 h. Freeze-thaw recovery of the red blood cells was about 97% and freeze-thaw-wash recovery was about 84%. Twenty-four-hour posttransfusion survival values were about 92% for both nonrejuvenated and indated-rejuvenated red blood cells. Nonrejuvenated red blood cells, those frozen within 3 to 5 days of collection without biochem. modification, had normal O transport function at the time of transfusion; rejuvenated red blood cells, those biochem. treated with PIGPA Soln. A after 3 to

5 days of storage at 4.degree., had improved O transport function at the time of transfusion.

RN - 56-81-5; 9002-86-2

EM - 8201

47 SI - CA/095/215920X

AU - Nagues C ; Fouet C ; Picart P ; Jouany JM

AD - Lab. Cent. Biol. Aerospatiale, Cent. Etudes Rech. Med. Aerospatiale, Paris

TI - Experimental intoxications by PVC thermal degradation products: study of the respiratory tract lesions

SO - J. Combust. Toxicol.; VOL 8, ISS MAY, 1981,108-20

LA - ENG

CD - JCTOD

AB - CBAC COPYRIGHT: CHEM ABS Rabbits and rats inhaling PVC pyrolysis products showed respiratory lesions affecting 1st the nasal cavities and trachea, 2nd the bronchi and bronchioli, and finally the alveoli. The damage tended to be more local in the rat. The necrotic lesions involved pulmonary edema which was accompanied by capillary protein leakage. HCl was the main toxic component in the pyrolysis product.

RN - 7647-01-0; 9002-86-2

EM - 8201

48 SI - CA/095/209613H

AU - Hamon M

AD - Pharm. Cent., Hop. Assist. Publique, Paris

TI - Plastic materials in pharmaceutical packaging. I. Behavior in relation to various parameters

SO - Sci. Tech. Pharm.; VOL 10, ISS 6, 1981,277-81

LA - FRE

CD - STQPA

AB - CBAC COPYRIGHT: CHEM ABS The interactions of plastic containers and packaging materials with pharmaceuticals depended on the pharmaceutical, the type of plastic, the plastic molding temp., and the additives in the plastic. Polyethylene, polypropylene, polystyrene, and PVC, were stored in contact with different stimulants, e.g. EtOH, epoxidized soybean oil, and HOAc, and changes were studied by UV spectrometry. (9002-88-4 Polyethylene)(9003-07-0 Polypropylene)(9003-53-6 Polystyrene)(9002-86-2 PVC) Free styrene was found in the simulants, esp. when the polystyrene had been molded at 350 or 300.degree. rather than at 250.degree.. (100-42-5 styrene) Zn stearate was leached from polypropylene by HOAc, but not by H2O or alc. (557-05-1 Zn stearate) Epoxidized (.gtoreq.4%) soybean oil favored the migration of dioctyltin isooctylmercaptoacetate stabilizer from PVC. (26401-97-8 dioctyltin isooctylmercaptoacetate)

RN - 9002-88-4; 9003-07-0; 9003-53-6; 9002-86-2; 100-42-5; 557-05-1; 26401-97-8

EM - 8201

PVC

- 49 SI - CA/095/209531E
AU - Fessi H ; Marty JP ; Carstensen JT ; Puisieux F
AD - Fac. Pharm., Univ. Paris XI, Chatenay-Malabry
TI - Biopharmaceutical study of tablets of plastic matrix type: effect of the solubility of active principle and the nature of polymer on the dissolution rate
SO - C.-R. - Congr. Eur. Biopharm. Pharmacocinet., 1st; VOL 1,, 1981,475-80
LA - FRE
CD - 46QKA
AB - CBAC COPYRIGHT: CHEM ABS The soln. rate of diphenhydramine-HCl (I) tablets depended on the polymeric matrix and followed the order with the following matrixes: PVC > vinyl acetate-vinyl chloride copolymer (15:85) > poly(vinyl acetate). (147-24-0 Diphenylhydramine hydrochloride)(9002-86-2 PVC)(9003-22-9 Vinyl acetate-vinyl chloride copolymer)(9003-20-7 Poly(vinyl acetate)) The release of active ingredient, e.g. theophylline, diprophyllyne and paracetamol, from the tablet depended on the soly. of this ingredient and followed Higuchi's law (1961). (58-55-9 Theophylline)(479-18-5 diprophyllyne)(103-90-2 paracetamol) I release did not follow Higuchis law.
RN - 147-24-0; 9002-86-2; 9003-22-9; 9003-20-7; 58-55-9; 479-18-5; 103-90-2
EM - 8201
- 50 SI - CA/095/198433W
AU - Herpol C ; Vandeveld P
AD - State Univ. Gent, Ghent
TI - Note on the nonexistence of correlation between toxicity and other reaction to fire characteristics of materials
SO - J. Combust. Toxicol.; VOL 8, ISS MAY, 1981,135-42
LA - ENG
CD - JCTOD
AB - CBAC COPYRIGHT: CHEM ABS Twenty-six building materials involved in toxicol. studies were tested for fire reaction characteristics such as ignitability, flame propagation, rate of heat release, smoke opacity, and smoke corrosivity. No correlation between those characteristics and toxicity of the materials was found.
RN - 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6
EM - 8201
- 51 SI - CA/095/209109Y
TI - An apparatus for pyrolysis of waste polyvinyl chloride
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 81109282 08/29/81 (Chugai Ro Kogyo Kaisha, Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Poly(vinyl chloride) wastes are pyrolyzed in an app. designed to use the pyrolysis gas formed as an auxiliary fuel in the pyrolysis operation. (9002-86-2 Poly(vinyl chloride)) The app. comprises a reactor (internally partitioned into a combustion chamber and a pyrolysis chamber) and a pyrolysis gas storage tank. This tank is equipped with a

device for sensing the amt. of the pyrolysis gas present and sending signals to the valve controlling the flow of the auxiliary fuel to the combustion chamber.

RN - 9002-86-2
EM - 8112

52 SI - CA/095/209082J

AU - Lopushanskaya AI ; Rudi VP ; Ornynyak MV ; Khaber NV

AU - Vatamanyuk VI ; Sidenko ZS

TI - Removal of poly(vinyl chloride) from wastewaters

SO - U.S.S.R. PATENT NO. 833567 05/30/81 ("Khlorvinil" Kaluga Industrial Enterprises)

LA - RUS

AB - CBAC COPYRIGHT: CHEM ABS The process consisted of the addn. of a coagulant in an acid medium with subsequent filtration. Alk. wastewater was coagulated by derivs. of $RN+Me_2(CH_2)_nN+RMe_2$ $2Br^-$ ($n=2-6$, 10 and $R=Cl_2H_{25}$ or $n=6$ and $R=C_7H_{15}-Cl_2H_{25}$).

RN - 9002-86-2
EM - 8112

53 SI - CA/095/208846Z

AU - Longstaff B ; Cains PW ; Elliot MN ; Taylor RF

AD - UKAEA, Harwell

TI - Investigation of a process for the pyrolysis of plutonium contaminated combustible solid waste

SO - Comm. Eur. Communities, [Rep.] EUR; ISS EUR 7339,, 1981,207 pp.

LA - ENG

CD - CECED

AB - CBAC COPYRIGHT: CHEM ABS Pyrolysis offers an attractive 1st-stage alternative to incineration as a means of wt. and vol. redn. of solid combustible waste (Pu contaminated materials), if it is required to recover Pu from the final product. The avoidance of turbulent conditions assocd. with incineration should lead to less carry-over of particulates, and the lower operating temps. (.apprx.700.degree.) should be most advantageous to the choice of construction materials and to plant life. The char product from pyrolysis may be oxidized to a final ash at similarly acceptable low temps. by passing air over a stirred bed of material. The recently received draft designs for a cyclo after-burner (plus assocd. scrubbers and filters, etc.) offer an attractive method for dispensing of the volatile products of pyrolysis. The off-gases arising from the pyrolysis of empty polypropylene pots and of a pot of waste simulant were analyzed by gas chromatog. Quant. compn. data were obtained to account for .apprx.70% of the gas vol., and hypotheses as to the nature of the remainder were formulated. In the run with simulated waste, the NaOH scrubber provided effective removal of acid gases. A cyclonic afterburner design was proposed to handle off-gases from a 20 kg/h pyrolyzer which would be used to dispose of shredded/packaged Pu-contaminated materials. A hazard assessment was undertaken.

RN - 7440-07-5; 9002-84-0; 9002-86-2; 9002-88-4; 9003-53-6; 9011-14-7
EM - 8112

PVC

- 54 SI - CA/095/208844X
AU - Alexander BM ; Grimm RS ; Doty JW Jr
AD - Mound Facil., Monsanto Res. Corp., Miamisburg
TI - Incineration of LWR-type waste at Mound Facility
SO - Proc. DOE Nucl. Air Clean. Conf.; VOL 16, ISS 2, 1981,929-49
LA - ENG
CD - PDNCD
AB - CBAC COPYRIGHT: CHEM ABS The Mound Cyclone Incinerator, demonstrated over several years for the combustion of radioactive waste contg. Pu, is now being developed for vol. redn. of radioactive waste contg. mixed beta- and gamma-emitters, from LWR facilities. To this end, a lab.-scale feasibility study was developed and executed. Development of the feasibility study was based on known characteristics of LWR waste and on operating data compiled for the Mound Cyclone Incinerator since 1975. Feed spiked with several isotopes found in LWR waste was burned in the lab.-scale cyclone incinerator, and samples were collected and analyzed. From these data, the applicability of cyclone incineration was demonstrated, and an efficient scrub liquor compn. was chosen for the offgas treatment system. A health physics survey of the incinerator system after incineration of 220 mCi of beta/gamma activity showed no exposure readings above background level.
- RN - 9002-86-2; 9002-88-4; 9003-07-0; 10043-66-0; 10045-97-3;
10198-40-0; 12587-47-2; 13966-31-9; 13967-70-9; 13967-71-0;
13967-76-5; 13981-38-9; 13981-50-5; 13982-39-3; 14234-35-6;
14392-02-0; 14596-12-4; 18496-04-3
- EM - 8112
- 55 SI - CA/095/208805K
AU - Georgieva V ; Tsoneva M
AD - Med. Acad., Sofia
TI - Sister chromatid exchanges in persons occupationally exposed to vinyl chloride and poly(vinyl chloride)
SO - Genet. Sel.; VOL 14, ISS 2, 1981,132-9
LA - BUL
CD - GESKA
AB - CBAC COPYRIGHT: CHEM ABS Sister chromatid exchange (SCE) frequency in 25 workers exposed to vinyl chloride and PVC increased to 7.315 $\pm$ 0.620 exchanges/cell, compared to 6.03 $\pm$ 0.280 exchanges/cell in controls. (75-01-4 Vinyl chloride)(9002-86-2 PVC) The SCE level in lymphocyte cultures of long-term workers was increased. The SCE distribution in the control group followed the normal Gaussian distribution, that of exposed workers, a Charliet distribution.
- RN - 75-01-4; 9002-86-2
EM - 8112

- 56 SI - CA/095/208801F
AU - Turbin EV ; Aldyreva MV ; Matyukhin VV
AD - Inst. Gig. Tr. Profzabol., Moscow
TI - Physiological and hygienic evaluation of the working conditions in the manufacture of leather substitutes
SO - Gig. Tr. Prof. Zabol.; ISS 8, 1981,30-5
LA - RUS
CD - GTPZA
AB - CBAC COPYRIGHT: CHEM ABS Approx. the same shifts in body function occur in male and female primers due to chem. exposure. Fatigue occurred by the end of the working day or after 3 h of work in mill and calender operators, checkers, and female primers. Stress was obsd. earlier in workers exposed to combined effects of phosphate and phthalate plasticizers than in workers exposed to phthalate alone.
RN - 88-99-3; 9002-86-2
EM - 8112
- 57 SI - CA/095/191824R
AU - Tengerdy RP ; Johnson JE ; Hollo J ; Toth J
AD - Dep. Microbiol., Colorado State Univ., Fort Collins
TI - Denitrification and removal of heavy metals from waste water by immobilized microorganisms
SO - Appl. Biochem. Biotechnol.; VOL 6, ISS 1, 1981,3-13
LA - ENG
CD - ABIBD
AB - CBAC COPYRIGHT: CHEM ABS *Pseudomonas fluorescens*, Immobilized on soft poly(vinyl chloride) granules contg. .1toreq.35% softeners as C source, was used for the simultaneous removal of NO3- and heavy metals. In typical continuous column operation, a 100 mg/L NO3- input soln. was reduced to a 20 mg/L output at a feeding rate of 1500 mL/h, with a capacity of 14 kg/day/m³, and with an efficiency of 79%. In the same column, Pb(NO3)2 concn. was reduced from 1.0 to 0.05-0.1 mg/L and ZnSO4 concn. from 10 to 5 mg/L. *Pseudomonas aeruginosa* Immobilized on an O plasma-treated melt-blown polypropylene web was used for removing 95% of a 1.7 nCiPuCl4 activity from a nuclear plant wastewater in a batch operation.
RN - 7440-07-5; 9002-86-2; 9003-07-0; 13536-92-0
EM - 8112
- 58 SI - CA/095/191810H
AU - Haxo HE Jr
AD - Matrecon, Inc., Oakland
TI - Durability of liner materials for hazardous waste disposal facilities
SO - U. S. Environ. Prot. Agency, Off. Res. Dev., [Rep.] EPA; ISS EPA-600/9-81-0026, Land Disposal: Hazardous Waste, Proc. Annu. Res., 7th, PB81-173882,, 1981,140-56
LA - ENG
CD - XPARD
AB - CBAC COPYRIGHT: CHEM ABS The results of exposures of lining

materials (soil, mixts., sprayed-on and polymeric membranes) to a selected group of hazardous wastes and 3 test fluids, i.e. distd. water, 5% aq. soln. of NaCl, and a satd. soln. of Bu3PO4 are discussed. The exposures included the primary testing of 12 liners in contact with 6 wastes for 3 yr, immersion tests of 12 polymeric membranes in 9 wastes for .1 to eq. 2.25 yr, and roof exposure of polymeric membranes and wastes. Most of these results have been reported at previous research symposia and in interim reports. The effect of minor amts. of org. constituents in a waste can have significant effects on liner materials on prolonged exposure. Swelling of a membrane results in the loss of phys. properties such as tensile strength, elongation at break, and tear strength. Major factors in the swelling of a membrane in a given waste are its soly. parameter with respect to that of the waste, its degree of crosslinking and crystallinity, and the presence of water sol. constituents in the membrane compd. No single liner material in the test program appears to satisfy all of the requirements for all wastes. The complexity of the various waste streams requires that compatibility tests must be run to demonstrate the durability of the lining material under consideration with the waste which is to be impounded. Liners based on polymers with crystallinity appear to be more resistant to water and chem. than the other polymeric materials.

RN - 9002-86-2; 9002-88-4
EM - 8112

- 59 SI - CA/095/191767Z
AU - Wheatley AD ; Williams IL
AD - Inst. Sci. Technol., Univ. Manchester, Manchester
TI - Some comparative studies on the wetting and stability of biological filter media
SO - Water Pollut. Control (Maidstone, Engl.); VOL 80, ISS 3, 1981, 433-46
LA - ENG
CD - WPOCA
AB - CBAC COPYRIGHT: CHEM ABS Electron micrographs of the media showed that the smooth surface of the plastic media did not inhibit bacterial adhesion. There was significant channelling within the plastic (Floccor R), slag, and gravel media with a progressive redn. in the original plan area wetted with increasing depth in the filter. (9002-86-2 Floccor R) Washing the plastic medium released an initial flush of heavy metals, but there was no increase in metals from the mineral media. The concn. of metals released was below that often encountered in domestic sewage. There was a small loss in mech. strength of the plastic medium due to aging; however, this is not significant under normal operating loads. The anticipated life of the media is 40-50 yr.
- RN - 9002-86-2; 7439-92-1; 7440-02-0; 7440-43-9; 7440-47-3; 7440-50-8; 7440-66-6
EM - 8112

- 60 SI - CA/095/191627D
AU - Prerovska I ; Pickova J ; Nepilova J
AD - Inst. Hyg. Epidemiol., Prague
TI - Literature reports on the damage caused by vinyl chloride and our findings in exposed persons
SO - Prac. Lek.; VOL 33, ISS 4, 1981,137-40
LA - CZE
CD - PRLFA
AB - CBAC COPYRIGHT: CHEM ABS A group of 22 workers employed in coating of cables by PVC was examd. (9002-86-2 PVC) The av. exposure to vinyl chloride was 9.5 yr. (75-01-4 Vinyl chloride) Light vasoneurotic manifestations were found in 15 persons. A liver malfunction was found in half of the workers. However, the development of a fibrotizing process of the liver was not directly related to vinyl chloride exposure.
RN - 9002-86-2; 75-01-4
EM - 8112
- 61 SI - CA/095/182071R
AU - Dessy E ; Faa G ; Calatri S ; Bucarelli A
AD - Univ. Cagliari, Cagliari
TI - Experimental lesions in rats due to polyvinyl chloride (PVC) combustion
SO - Boll. - Soc. Ital. Biol. Sper.; VOL 57, ISS 11, 1981,1278-81
LA - ITA
CD - BSIBA
AB - CBAC COPYRIGHT: CHEM ABS In 14 rats forced inhalation of smoke from the combustion of polyvinyl chloride for 1 h/day for 30-180 days caused irritability, aggressivity, wt. loss, and other signs of toxicity. Two of the exptl. rats showed mammary adenocarcinomas and metaplasia of the trachea-bronchial tract.
RN - 9002-86-2
EM - 8112
- 62 SI - CA/095/181927N
AU - Hilado CJ ; Huttlinger PA
AD - Prod. Saf. Corp., Natl. Fire Prot. Assoc., Quincy
TI - Toxic hazards from common materials
SO - Fire Technol.; VOL 17, ISS 3, 1981,177-82
LA - ENG
CD - FITCA
AB - CBAC COPYRIGHT: CHEM ABS From the off-gas toxicity of common foods and other household materials, the majority of the synthetic plastics and foams which may be present throughout a residence appear to present no greater toxic hazard potential than many food materials, and less toxic hazard potential than wood.
RN - 57-50-1; 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6; 9003-56-9
EM - 8112

PVC

- 63 SI - CA/095/181922G
AU - Dessy E ; Faa G ; Frau G ; Zucca G
AD - Istol. Patol., Univ. Cagliari, Cagliari
TI - Experimental study on PVC effects in rats treated intravenously
SO - Boll. - Soc. Ital. Biol. Sper.; VOL 57, ISS 12, 1981,1377-81
LA - ITA
CD - BSIBA
AB - CBAC COPYRIGHT: CHEM ABS Three of 16 rats, treated with PVC (50 mg/rat, i.v.) died of pulmonary embolism. (9002-86-2 PVC) The remaining rats survived for 9 mo and an autopsy showed hyperplasia of the lymphoreticular tissue particularly in the liver and spleen. Also, the lacrimal glands showed acinar aggregation.
RN - 9002-86-2
EM - 8112
- 64 SI - CA/095/181800R
AU - Hilado CJ ; Huttlinger PA
AD - Product Safety Corp., Sunnyvale
TI - Toxicity of off-gases from thermal insulation
SO - J. Therm. Insul.; VOL 4, ISS APRIL, 1981,276-87
LA - ENG
CD - JTIND
AB - CBAC COPYRIGHT: CHEM ABS Of 12 rigid cellular polymers examd., pyrolysis gases from polyimide-type and phenolic rigid foams exhibited the shortest times to death in mice using a rising temp. program without forced air flow whereas pyrolysis products from polyisocyanurate, poly(vinyl chloride), polyurethane, and polystyrene rigid foams exhibited the longest times to death. Cellulose boards based on bagasse, newsprint, and starch exhibited longer times to death than the cellulosic boards based on mixed hardwood fibers and phenol-formaldehyde or urea-formaldehyde binder. The introduction of air flow reduced time to death from polyisocyanurate and phenolic rigid foams. CO was apparently the principal toxicant in the pyrolysis gases.
RN - 630-08-0; 9002-86-2; 9003-35-4; 9003-53-6; 25585-20-0; 27026-93-3; 62238-79-3
EM - 8112
- 65 SI - CA/095/175827P
AU - Vincent AE Lo
TI - Antiparasitic medicine with a delayed effect
SO - Fr. Demande PATENT NO. 2461495 02/06/81
LA - FRE
AB - CBAC COPYRIGHT: CHEM ABS Slow-release large tablets for veterinary therapeutics are prepd. contg. an anthelmintic and an agent which produces a prolonged retard effect. The dimensions of the oblong tablets were: length 6-8 cm; width 1.5-3.0 cm; depth 1.5-3.0 cm; wt. 10-60. These tablets are introduced into the ruminant digestive system. Anthelmintic agents, e.g. fenbendazole and thiabendazole for the treatment of animal fascioliasis, respiratory and digestive strongylosis, and

- cestodiasis are given. (22662-39-1 Rafoxanide)(844-26-8 Bitin S)
- RN - 22662-39-1; 844-26-8; 50-65-7; 56-72-4; 70-30-4; 90-89-1;
92-84-2; 97-18-7; 97-24-5; 114-91-0; 142-71-2; 148-79-8;
321-55-1; 557-04-0; 2180-18-9; 2277-92-1; 3687-31-8; 3748-77-4;
5036-02-2; 7758-98-7; 9002-86-2; 9004-57-3; 10043-83-1;
10331-57-4; 10605-21-7; 11104-61-3; 13847-22-8; 14255-87-9;
14769-73-4; 15686-83-6; 20559-55-1; 20574-50-9; 23233-88-7;
23564-06-9; 31431-39-7; 36141-82-9; 43210-67-9; 53716-50-0;
54965-21-8; 58306-30-2; 58425-86-8; 60200-06-8
- EM - 8112
- 66 SI - CA/095/175772S
AU - Wankowicz Z ; Biernacki A ; Galecki Z
AD - Inst. Med. Wewn., Wojskowa Akad. Med., Warsaw
TI - Clinical applicability of poly(vinyl chloride) containers for
peritoneal dialysis fluids
SO - Probl. Tech. Med.; VOL 12, ISS 1, 1981,25-33
LA - POL
CD - PTMDB
AB - CBAC COPYRIGHT: CHEM ABS Poly(vinyl chloride) containers were
suitable for storage of peritoneal dialysis fluids. (9002-86-2
Poly(vinyl chloride)) Exts. of the containers were not toxic to
mice when administered i.v. or i.p. In clin. applications,
complications such as peritonitis were seldom obsd. (on the av.
once/33 wk/subject).
- RN - 9002-86-2
EM - 8112
- 67 SI - CA/095/163581R
AU - Frau G ; Zucca G ; Faa G ; Dessy E ; Frongia N
AD - Ist. Anat. Istol. Pathol., Univ. Studi Cagliari, Cagliari
TI - Experimental data on the carcinogenicity of poly(vinyl chloride)
SO - G. Ital. Med. Lav.; VOL 3, ISS 1, 1981,1-4
LA - ITA
CD - GIMLD
AB - CBAC COPYRIGHT: CHEM ABS In rats, administration of poly(vinyl
chloride) (500 mg, s.c., either 1, 2, or 3 times at 1 mo
intervals) resulted in formation of malignant neoplasms from
40-545 days after treatment in 32% of the treated animals.
(9002-86-2 Poly(vinyl chloride)) Among the tumors found,
carcinomas and adenocarcinomas of the cecum-colon were the most
frequent (16%). Sebaceous gland adenocarcinomas, mammary
carcinomas, and spinocellular carcinomas were also obsd. None of
the control animals showed tumors.
- RN - 9002-86-2
EM - 8112

- 68 SI - CA/095/155713V
AU - Soble M
AD - Hooker Chem. Corp., Burlington
TI - Automatic monitoring systems for determining time weighted average workplace levels: process gas chromatographs
SO - DHHS (NIOSH) Publ. (U. S.); ISS 81-107, Control Technol. Plast. Resins Ind., 1981,107-14
LA - ENG
CD - DNPSD
AB - CBAC COPYRIGHT: CHEM ABS The use of gas chromatog. systems for monitoring vinyl chloride and poly(vinyl chloride) levels in workplace ambient air in a poly(vinyl chloride) manufg. process is discussed. (75-01-4 Vinyl chloride)(9002-86-2 Polyvinyl chloride)
RN - 75-01-4; 9002-86-2
EM - 8111
- 69 SI - CA/095/155689S
AU - Sevecek P ; Filipi B ; Zapletalova I
AD - Univ. Mining, Ostrava
TI - Modification of the oxygen index test for better evaluation of the relative flammability
SO - Fire Mater.; VOL 5, ISS 1, 1981,39-40
LA - ENG
CD - FMATD
AB - CBAC COPYRIGHT: CHEM ABS The O index test for evaluation of material flammability was modified to carry out the test with bottom ignition with upward burning or with the sample horizontal. Bottom ignition was the most advantageous complement to the normal top ignition test. The modified tests were made on synthetic and natural polymers. Most materials exhibited increased flammability arising from change of the flame position against the sample.
RN - 3281-96-7; 9002-86-2; 9003-07-0; 9003-53-6; 9003-56-9; 9011-14-7; 25035-04-5; 25038-54-4; 25038-59-9; 37208-02-9; 52439-05-1
EM - 8111
- 70 SI - CA/095/156615B
TI - Plastic materials for clinical uses
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 81 83357 07/07/81 (Green Cross Corp.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Plastic materials that can be sterilized by steam at high pressure and used for the manuf. of clin. materials such as blood bags and artificial blood vessels are prepd. by combining poly(vinyl chloride) resin and urethane polymers. (9002-86-2 Poly(vinyl chloride)) Thus, a blood bag was prepd. from a mixt. of poly(vinyl chloride) resin 100, polyurethane resin 80, a Zn-Ca stabilizer 1.5, and Ca stearate 0.7 part.
RN - 9002-86-2
EM - 8111

- 71 SI - CA/095/156482F
AU - Fessi H ; Marty JP ; Puisieux F ; Carstensen JT
AD - Fac. Pharm., Univ. Paris-Sud, Chatenay-Malabry
TI - Energy relations in compression of polymeric materials and granulations
SO - J. Pharm. Sci.; VOL 70, ISS 9, 1981,1005-7
LA - ENG
CD - JPMSA
AB - CBAC COPYRIGHT: CHEM ABS The Parmentier-Fuehrer(1974) equation for the value of the upper punch force as a function of displacement is used to deduce, math., energy vs. max. force relationships for energy input during tablet compression. An expression is obtained where the energy input is a linear function of the logarithm of maximally applied pressure. These relationships were substantiated exptl. during tablet compression of polymeric materials. The plots provided an est. of the point in the displacement of the upper punch where the powder or granulation was rearranged to its closest packing.
- 73 SI - CA/095/126583X
AU - Brierley JA ; Donaruma LG ; Lockwood S ; Mercogliano R ; Kitch S
AU - Warner RJ ; Depinto JV ; Edzwald JK
AD - Dep. Biol., New Mexico Inst. Min. Technol., Socorro
TI - Polythiosemicarbazides as antimicrobial polymers
SO - Polym. Sci. Technol.; VOL 14, ISS Biomed. Dent. Appl. Polym., 1981,227-39
LA - ENG
CD - POSTB
AB - CBAC COPYRIGHT: CHEM ABS Several polythiosemicarbazides, and in some cases their Cu complexes, exhibited antibacterial activities. The polymers were more effective against gram-pos. than gram-neg. bacteria, Cu complexes were more active than the parent polymers, and crosslinking of polymers seemed to enhance

their activities. The polymers were prepd. from materials not considered to be drugs.

- RN - 7440-50-8; 7664-93-9; 9002-86-2; 9002-89-5; 26374-91-4;
29931-28-0; 30395-31-4; 32029-38-2; 70446-50-3; 78333-26-3;
78333-27-4; 78333-28-5; 78333-29-6; 78335-17-8; 78336-13-7;
78336-14-8; 78336-15-9; 78336-16-0; 78336-17-1; 78336-19-3;
78336-20-6; 78336-22-8; 78336-23-9; 78336-24-0; 78336-25-1;
78336-30-8; 78350-99-9; 78351-00-5; 78362-30-8; 78362-32-0;
78362-33-1
EM - 8111

- 74 SI - CA/095/120311K
AU - Knox LC
AD - Catalytic, Inc., Philadelphia
TI - Design of a high-containment polymerization process
SO - DHHS (NIOSH) Publ. (U. S.); ISS 81-107, Control Technol. Plast.
Resins Ind., 1981,207-24
LA - ENG
CD - DNPSD
AB - CBAC COPYRIGHT: CHEM ABS A plant for the prodn. of PVC and
vinyl acetate-vinyl chloride copolymer is described which
provides several systems for reducing exposure of employees to
vinyl chloride in the atm. to acceptable levels. (9002-86-2
PVC)(9003-22-9 Vinyl acetate-vinyl chloride copolymer)(75-01-4
Vinyl chloride) The protective measures, discussed in detail,
are a breathing air network, gas chromatog. monitors, lower
explosive limit detector and alarm system, gas holder in recovery
system, fugitive emissions capture system, reactor safing
procedure and water displacement system, and double mech. seals.
RN - 9002-86-2; 9003-22-9; 75-01-4
EM - 8110

- 75 SI - CA/095/120310J
AU - Krajewski J
AD - Zakl. Chem. Zanieczyszczen Powietrza, Inst. Med. Pracy, Lodz
TI - Occupational exposure to toxic compounds occurring in the working
environment, exemplified by exposure due to poly(vinyl chloride)
production
SO - Med. Pr.; VOL 32, ISS 2, 1981,153-8
LA - POL
CD - MEPAA
AB - CBAC COPYRIGHT: CHEM ABS The usefulness of various methods for
the evaluation of occupational exposure to poly(vinyl chloride)
(I) was proved. (9002-86-2 Polyvinyl chloride) Concn. of I in
the air, collected in the respiratory area, were the most
reliable indexes of the individual exposure of workers in a
I-producing plant. No correlation was found between the urinary
concn. of thiodiglycollic acid and I concn. in the air or the
inhaled dose of I. (123-93-3 Thiodiglycollic acid) Retention of
I in the lung was independent of the I concn. in the air and
within 30 min was fixed on av. at the level of 42%.
RN - 9002-86-2; 123-93-3
EM - 8110

PVC

- 76 SI - CA/095/102867S
TI - Treatment of nonflammable radioactive wastes
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 81 50000 05/06/81 (Toyo Engineering Co., Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS High-level radioactive wastes are charged into a SiC container, and then elec. power is applied to dry-distill the wastes. Optionally, a SiC heating element is used instead of the SiC container. Thus, waste PVC sheet was charged in a SiC tube; then 50 V and 15 A was applied. (9002-86-2 PVC) The SiC tube reached .gtoreq.1000.degree., and a coke-like residue was obsd. in the tube.
RN - 9002-86-2
EM - 8110
- 77 SI - CA/095/102851G
TI - Phosphate ion adsorbent
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 81 53742 05/13/81 (Takeda Chemical Industries, Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Ti, Zr, and/or Sn hydrated oxides are mixed with an 0.1-3-fold amt. of thermoplastic resin as a melt or in a solvent and solidified. The pellets are strong. Thus, 100 mL aq. 1M ZnOCl₂ was neutralized to pH 6.0 with 6N aq. NH₃, the ppt. was filtered, washed with deionized H₂O, dried at <50.degree. (yield 16 g), and powd. to <120 .mu.. A 14 g portion was kneaded with 6 g PVC (softening temp. .apprx.150.degree., d.p. 1100) in 20 mL THF at 50.degree., dried at <70.degree., and crushed to <120 .mu.. (9002-86-2 PVC) Simulated wastewater (100 mL), contg. 500 ppm PO₄³⁻ at pH 3, was shaken with 0.65 g of the adsorbent for 24 h to decrease the PO₄³⁻ to 10 ppm.
RN - 9002-86-2; 12164-98-6
EM - 8110
- 78 SI - CA/095/102267W
AU - Gajewski JB ; Szaynok A
AD - Inst. Environ. Protect. Eng., Tech. Univ. Wroclaw, Wroclaw
TI - Charge measurement of dust particles in motion
SO - J. Electrostat.; VOL 10,, 1981,229-34
LA - ENG
CD - JOELD
AB - CBAC COPYRIGHT: CHEM ABS The charging of dusts or powders formed in a discontinuous flux in air is measured with a novel non-contactive method. A special ring probe was designed to measure the resultant elec. charge of dust particles passing through the probe without disturbing the flow. The influence of mass, equil. moisture content, and velocity of motion on the electrification of PVC dusts were detd. (9002-86-2 PVC) Expts. were made to study the generation of charge in the initial stage of flux formation. A math. model was derived to describe the response of the measuring system to the flowing resultant charge and its velocity. After the measuring system had been calibrated

PVC

the empirical equation was obtained. The resultant charge (qr) and the initial rate of charge accumulation in the flux are strongly dependent on the velocity of the air carrier, which causes the dust particles to be torn from the metal surface of the feeder. The validity of this measuring procedure is proved by expts. The results obtained in terms of the math. model are consistent with the exptl. data.

RN - 9002-86-2

EM - 8110

79 SI - CA/095/121057U

AU - Stauffer GL ; Kleinberg ML ; Rogers KR ; Latiolais CJ

AD - Dep. Pharm., Ohio State Univ. Hosp., Columbus

TI - Water permeation through polyvinyl chloride bags without overwrap

SO - Am. J. Hosp. Pharm.; VOL 38, ISS 7, 1981,998-1001

LA - ENG

CD - AJHPA

AB - CBAC COPYRIGHT: CHEM ABS Water loss by permeation from poly(vinyl chloride) i.v. containers (Viaflex) without an overwrap is reported. (9002-86-2 Poly(vinyl chloride)) Viaflex bags without the overwrap contg. 0.9% NaCl injection or 5% dextrose injection in 50-mL, 100-mL, 500-mL, and 1000-mL sizes were used. All sizes were stored at room temp. (25.degree.) and in a refrigerator (4-8.degree.); the 2 smaller sizes were addnl. stored in a frost-free freezer (-20.degree.) and in a non-frost-free freezer (-20.degree.). Ten bags of each type were stored for 84 days; each container was weighed on days 0, 7, 14, 21, 28, 42, 56, 70, and 84 days. Based on the wt. change exhibited during this initial period, the time required to lose 10% of the wt. was predicted. The bags were stored for that period of time and then weighed. The wt. loss exhibited zero-order kinetics. At room temp., the 50-mL containers of both solns. lost >10% during the 84-day period. During this time, the 100-mL containers of both solns. lost 9% of their wt. Wt. loss in the larger sizes was <5% during the 84-day period at room temp. Under the colder storage conditions wt. loss averaged much <5% for all sizes during the 84 days. During extended storage, wt. loss continued at the same rate for the 100-mL container but was slower for the larger sizes. The Viaflex container without the overwrap may be stored in a refrigerator or freezer for up to 84 days without substantial loss of water by permeation.

RN - 9002-86-2; 7732-18-5

EM - 8110

80 SI - CA/095/109613Q

AU - Girard-Wallon C ; Proteau J ; Ripault J ; Emmerich E ; Neauport C

AD - Unites Enseign Rech., Univ. Pierre-et-Marie-Curie, Paris

TI - Experimental study on behavior and toxicity of structural and decorative materials subjected to thermal degradation

SO - Ann. Falsif. Expert. Chim. Toxicol.; VOL 74, ISS 795, 1981,195-221

LA - FRE

CD - AFETD

AB - CBAC COPYRIGHT: CHEM ABS CO evolution in thermal degrdn. of 8

structural and decorative materials was the only or main cause of death of mice exposed to increasing or const. concns. of thermal degrdn. products. The rate of oxycarbonemia buildup was dependent on atm. CO concn., and exposure time. Products of cotton and polyamide fabric, and poplar wood degrdn. inhibited the cellular respiration of brain. HCN evolution from degrading polyamide could have contributed to mortality, as indicated by relatively low atm. and survivor blood CO levels. Polypropylene degrdn. products stimulated cellular respiration in the liver by the action of evolving aldehydes and ketones, and possibly also org. peroxides. (9003-07-0 Polypropylene) Only the poplar wood and polyurethane foam degrdn. products caused delayed mortality, occurring within 2 wk after the exptl. termination. Lung lesions were found in mice which died from the degrdn. products of polyurethane, cotton, and wood particle board agglomerated with urea-formaldehyde resin or PVC. (9011-05-6 urea-formaldehyde resin)(9002-86-2 PVC) Only poplar wood, particle boards, and cotton were ignited; PVC-impregnated cotton and other above materials were decompd. by heat added to radiation.

RN - 9003-07-0; 9011-05-6; 9002-86-2; 74-90-8; 630-08-0
EM - 8110

- 81 SI - CA/095/103339H
TI - Blood containers
SO - Jpn. Kokai Tokkyo Koho PATENT NO. 81 41240 04/17/81 (Sekisui Chemical Co., Ltd.)
LA - JPN
AB - CBAC COPYRIGHT: CHEM ABS Containers for blood and infusion solns. are prep'd. from a mixt. of carbon monoxide-ethylene-vinyl acetate copolymer (I) 5-200, MgO or CaO powder 0.01-10.0, and vinyl chloride resin 100 parts by wt. (26337-35-9 Carbon monoxide-ethylene-vinyl acetate copolymer) Thus, poly(vinyl chloride) 100, I 80, MgO 0.1, a Ca-Zn stabilizer 0.7, and epoxidized soybean oil 5.0 parts were mixed at 120.degree. and made into a 0.4 mm-thick sheet. (9002-86-2 Poly(vinyl chloride))
The usefulness of this sheet in the prodn. of blood transfusion bag is demonstrated.

RN - 26337-35-9; 9002-86-2; 1305-78-8; 1309-48-4; 25037-78-9;
25085-46-5; 25265-90-1
EM - 8110

- 82 SI - CA/095/085372G
AU - Subbotin AI ; Kulibabin YA ; Kashnikov YV
TI - Detoxication of waste gases from the production of multilayer sheets from ABS plastic and polyvinyl chloride
SO - Plast. Massy; ISS 4, 1981,53-4
LA - RUS
CD - PLMSA
AB - CBAC COPYRIGHT: CHEM ABS A combined method was developed for treating waste gases (contg. various org. substances) from the manuf. of multilayered sheets from ABS polymer and PVC. (9003-56-9 ABS)(9002-86-2 PVC) Org. substances are removal by adsorption on activated C, the activated C is regenerated. With

live steam and the effluent from the regeneration is thermally treated in a furnace of used for heat treatment of industrial wastewater. The method makes it possible to remove 98% of the org. impurities.

RN - 9003-56-9; 9002-86-2; 7440-44-0
EM - 8109

83 SI - CA/095/085370E

AU - Edgerley PG

AD - Plast. Div., ICI Ltd., Welwyn Garden City/Herts.

TI - Study of fume evolution at polymer processing temperatures

SO - Plast. Rubber Process. Appl.; VOL 1, ISS 1, 1981,81-6

LA - ENG

CD - PPAPD

AB - CBAC COPYRIGHT: CHEM ABS Several plastics evolved CO, HCHO, and acrolein fumes when heated to their normal processing temps. (140-340.degree.). (50-00-0 Formaldehyde)(107-02-8 Acrolein) The amts. of pollutants were low except near the very top of the temp. range. Tests near 4 extruders showed that the evolved gases were not a health hazard to workers because of adequate ventilation.

RN - 50-00-0; 107-02-8; 64-19-7; 71-43-2; 74-90-8; 100-42-5; 108-05-4; 630-08-0; 7647-01-0; 7664-41-7; 9002-86-2; 9002-88-4; 9003-07-0; 9003-18-3; 9003-53-6; 9003-56-9; 9011-14-7; 24937-78-8; 32131-17-2
EM - 8109

84 SI - CA/095/067459M

AU - Kosiewicz ST

AD - Los Alamos Natl. Lab., Univ. California, Los Alamos

TI - Gas generation from organic transuranic wastes. I. Alpha radiolysis at atmospheric pressure

SO - Nucl. Technol.; VOL 54, ISS 1, 1981,92-9

LA - ENG

CD - NUTYB

AB - CBAC COPYRIGHT: CHEM ABS Gas generation rates from the alpha-radiolysis of typical org. transuranic wastes are affected by the org. matrix, dose rate, dose, and temp. The matrixes under test were cellulose, plastics, and rubber materials. Gas generation rates from cellulose were dose-rate independent and dose dependent. Increasing the temp. increased the rate of gas generation for cellulose.

RN - 74-82-8; 124-38-9; 630-08-0; 1333-74-0; 9002-84-0; 9002-86-2; 9002-88-4; 9004-34-6; 12266-32-9; 22840-34-2
EM - 8109

85 SI - CA/095/067185U

AU - Ballistreri A ; Montaudo G ; Puglisi C ; Scamporrino E

AU - Vitalini D

AD - Ist. Dip. Chim. Chim. Ind., Univ. Catania, Catania

TI - A comparative approach to the determination of the smoke emission from burning polymers

SO - Chim. Ind. (Milan); VOL 63, ISS 3, 1981,167-71

LA - ENG

- CD - CINMA
AB - CBAC COPYRIGHT: CHEM ABS Smoke d. and scattering increase linearly with temp. in the 400-500.degree. range, where the PVC combustion is in smoldering conditions. (9002-86-2 Poly(vinyl chloride)) At 500.degree. self-ignition of PVC occurs with a decrease of the both smoke d. and scattering. At 600.degree. the smoke d. increases again and remains const. up to <900.degree.; whereas the smoke scattering drastically decreases in the flaming conditions. The smoke d. is measured with a hot-air furnace coupled with the photometer recording in absorbance; the smoke scattering, recording at 90.degree. from the incident light.
- RN - 9002-86-2
EM - 8109
- 86 SI - CA/095/067162J
AU - Weeks RW Jr ; McLeod MJ
AD - Robert A. Taft Lab., Natl. Inst. Occup. Saf. Health, Cincinnati
TI - Permeation of protective garment material by liquid halogenated ethanes and a polychlorinated biphenyl
SO - DHHS (NIOSH) Publ. (U. S.); ISS 81-110,, 1981,41 pp.
LA - ENG
CD - DNPSD
AB - CBAC COPYRIGHT: CHEM ABS A study was done to det. the protective properties of some protective garment materials, e.g., butyl rubber, milled nitrile rubber, neoprene rubber, polyethylene, poly(vinyl alc.), surgical rubber, Teflon, Viton, butyl rubber-coated nylon, polyethylene-coated Tyvek, polyurethane-coated nylon, and poly(vinyl chloride)-coated nylon, against 1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane, and polychlorinated biphenyl. (9002-88-4 Polyethylene)(9002-89-5 Poly(vinyl alcohol))(9002-84-0 Teflon)(9002-86-2 PVC)(107-06-2 1,2-Dichloroethane)(71-55-6 1,1,1-trichloroethane) The breakthrough time at which each liq.-phase compd. permeated these materials was studied by the time lag-method. The results indicated that most materials currently used in the construction of protective garments are unsatisfactory.
- RN - 9002-88-4; 9002-89-5; 9002-84-0; 9002-86-2; 107-06-2; 71-55-6; 92-52-4
EM - 8109
- 87 SI - CA/095/048212J
AU - Ivanov G
AD - Med. Akad., Sofia
TI - Determination of atmospheric selenium by flameless atomic absorption spectrometry with atomization in graphite tube CR-63
SO - Khig. Zdraveopaz.; VOL 24, ISS 1, 1981,90-5
LA - BUL
CD - KHZDA
AB - CBAC COPYRIGHT: CHEM ABS Air samples (45 dm³) were aspirated through a perchlorovinyl filter at a rate of 15 dm³/min and the Se content was detd. by flameless at. absorption spectrophotometry with atomization in a graphite tube. The

sensitivity of the method was 10 ng/cm³ in a vol. of 10 µL, and the coeff. of variation was 5-25%.

RN - 7782-49-2; 9002-86-2
EM - 8109

- 88 SI - CA/095/056190R
AU - Tracy TE ; Lewis AJ
AD - Dep. Hortic., Virginia Polytech. Inst. and State Univ., Blacksburg
TI - Effects of antitranspirants on hydrangea
SO - HortScience; VOL 16, ISS 1, 1981,87-9
LA - ENG
CD - HJHSA
AB - CBAC COPYRIGHT: CHEM ABS Antitranspirants (Exhalt 4-10, Gard or Wilt Pruf, and Folicote) were more phototoxic when applied to detached florets than to detached leaves of hydrangea (Hydrangea macrophylla cv Improved Merveille). (78206-84-5 Exhalt 4-10)(9002-86-2 Wilt Pruf)(12772-86-0 Folicote) Transpiration was high from hydrangea flowers as well as leaves. Folicote applied to intact flowering plants at concns. of 1.25-5.00% was effective in reducing transpiration 10-15% compared with untreated plants.

RN - 78206-84-5; 9002-86-2; 12772-86-0
EM - 8109

- 89 SI - CA/095/049348V
AU - Spring MS
AD - Pharm. Dep., Manchester Univ., Manchester
TI - The granulation of a hydrophobic powder using a modified starch
SO - Drug Dev. Ind. Pharm.; VOL 7, ISS 4, 1981,405-9
LA - ENG
CD - DDIPD
AB - CBAC COPYRIGHT: CHEM ABS Granules suitable for tableting were prepd. from a hydrophobic powder, poly(vinyl chloride) and either H₂O and modified starch (25%) or a surfactant soln. and modified starch (.gtoreq.5%). (9002-86-2 Poly(vinyl chloride)) Compacts produced from a coarse size fraction of these granules disintegrated readily only if the granulation liq. contained surfactant. All compacts had adequate strength to withstand handling but those contg. surfactant were weaker.

RN - 9002-86-2; 577-11-7; 9005-25-8
EM - 8109

- 90 SI - CA/095/036506V
AU - Picart PE ; Guerbet M ; Delcroix JP ; Jouany JM ; Presles JM
AD - Div. Chim. Toxicol., Lab. Cent. Biol. Aerospat., Paris
TI - A new test chamber for the toxicological study of combustion or pyrolysis products
SO - J. Combust. Toxicol.; VOL 8, ISS Feb., 1981,3-18
LA - ENG
CD - JCTOD
AB - CBAC COPYRIGHT: CHEM ABS A chamber for the study of the toxicity of pyrolysis products of synthetic materials is described in detail. The thermal decompn. products of poly(vinyl

chloride) (PVC), poplar, and polyurethane foams were studied both at a const. 450.degree. temp. and under temps. gradually rising from 20 to 250.degree.. (9002-86-2 Polyvinyl chloride) The major toxic products released from the 3 materials were CO, HCl, and HCN, resp. The crit. temp. at which max. release of the major toxic product occurred were 350, 345, and 515.degree., resp. CO2, NOx, and hydrocarbons were also detected.

RN - 9002-86-2
EM - 8109

91 SI - CA/095/029367X

AU - Tardon S

AD - Vedeckovyzk. Uhelny Ustav, Ostrava-Radvanice

TI - Gravimetric determination of solid particles in smoke

SO - Plasty Kauc.; VOL 18, ISS 1, 1981,19-22

LA - CZE

CD - PLKCA

AB - CBAC COPYRIGHT: CHEM ABS The amt. of smoke particles produced in controlled thermal and oxidative degrdn. (440-940.degree., 0-21% O) of polymers decreased in the series: polypropylene (PP, 59%, 440.degree., 21% O), polyethylene (PE, 46.2%, 800.degree., 0% O), polyamide (PA, 40.8%, 800.degree., 0% O), polystyrene (PS, 39.2%, 440.degree., 21% O), PVC (20.6% 800.degree., 0%, O), wood (19.5%, 800.degree., 0% O), and poly(vinyl acetate) (PVAC, 18.9%, 940.degree., 0% O). (9003-07-0 Polypropylene)(9002-88-4 Polyethylene)(9003-53-6 Polystyrene)(9002-86-2 PVC)(9003-20-7 Poly(vinyl acetate)) The amt. of smoke at 440.degree. either decreased with increasing concn. of O (PP, PE, PS) or was independent (PVC, PVAC, PA, wood); at 800 and 940.degree., however, PP, PE, and PA produced more smoke at low concn. of O and the amt. produced by PVC, PVAC, PS, and wood was const. Wood produced almost the same amt. of smoke at all temps. and concns. of O. Smoke particles were removed by filtration and detd. gravimetrically.

RN - 9003-07-0; 9002-88-4; 9003-53-6; 9002-86-2; 9003-20-7
EM - 8108

92 SI - CA/095/012233C

AU - Phillips PC ; Philips RJ

TI - Low temperature incineration of plutonium contaminated waste assisted by irradiation

SO - Eur. Appl. Res. Rep., Nucl. Sci. Technol. Sect.; VOL 2, ISS 6, 1981,1332-77

LA - ENG

CD - EARRD

AB - CBAC COPYRIGHT: CHEM ABS A technique of low temp. incineration of org. polymer material was developed as a means of dealing with Pu contaminated combustible waste. Incineration serves the purpose of mass and vol. redn. to a residue from which the Pu may be extd. Low temp. incineration is desirable to minimize sintering of the inorg. residue and thereby maximize the efficiency of subsequent extn. of Pu. The promotional effects of ionizing radiation and chem. catalysts in this process were

evaluated. Both assisted the process, although the more significant beneficial effect is attributed to chem. catalysis of the combustion of the char derived from polymer waste by degnrn.

Methods of limiting the temp. of the oxidn. reaction were studied. The use of an oxidizing gas, which is lean in O₂ (5% O₂ in N₂), provided an effective means of temp. control.

RN - 497-19-8; 1332-82-7; 7440-07-5; 7681-11-0; 7681-82-5; 7758-95-4;
9002-86-2; 10043-35-3; 10099-74-8; 11132-78-8; 15078-94-1
EM - 8108

93 SI - CA/095/012232B

AU - Molecke MA

AD - Sandia Natl. Lab., Albuquerque

TI - Degradation of transuranic-contaminated wastes under geological isolation conditions

SO - Manage. Alpha-Contam. Wastes, Proc. Int. Symp.; 1981,653-66

LA - ENG

CD - 45NIA

AB - CBAC COPYRIGHT: CHEM ABS Results of extensive exptl. studies on the degnrn. of existing defense transuranic-contaminated (TRU) wastes are presented. Environmental conditions for waste degnrn. are representative of deep geol. isolation of TRU wastes in a bedded-salt repository, as anticipated for the proposed Waste Isolation Pilot Plant in southeastern New Mexico. TRU-contaminated waste matrixes investigated include cellulose, plastics, rubbers, mixed org. composite, bitumen, a developmental concrete-TRU ash matrix, mild steel, and inorg. process sludges. Degrn. mechanisms studied were alpha-radiolysis, microbial action, thermal decompn. and dewatering, and chem. corrosion. Exptl. variables are waste compn., alpha-contamination level, temp., pressure, time, water or brine content, aerobic or anaerobic conditions. Results of waste degnrn. are presented in terms of gas generation rates, gas compns., container corrosion rates, effectiveness of anticorrosion coatings, microbial formation and degnrn. of chelating agents. The relative quantities of gas generated by individual mechanisms acting on the org. matrix wastes can be ranked as follows: (1) microbial action, (2) thermal decompn. (at .gtoreq.40.degree.), (3) alpha-radiolysis, and (4) corrosion. Corrosion of metallic waste canisters and realistic bedded-salt repository conditions does not have a significant effect on potential waste retrievability. The tech. data provided in these studies are used in assessments to det. whether existing forms of TRU wastes are acceptable for safe geol. isolation.

RN - 9002-84-0; 9002-86-2; 9002-88-4; 12587-46-1; 12597-69-2
EM - 8108

- 94 SI - CA/095/012228E
AU - Birkhoff G ; Bremner WB
AD - Jt. Res. Cent., Kernforschungszent. Karlsruhe, Karlsruhe
TI - Calibration and interpretation of plutonium waste measurements
SO - Manage. Alpha-Contam. Wastes, Proc. Int. Symp.; 1981,465-87
LA - ENG
CD - 45NIA
AB - CBAC COPYRIGHT: CHEM ABS A systematic approach to the calibration of nondestructive measurements on Pu-contaminated wastes by radiometric techniques is described. This approach is backed by the math. model of the measurement process. It describes the influence of interaction of obsd. radiation with the waste materials and takes into account the geometry of measured waste items. Waste items of a certain shape and vol. loaded with contaminated materials are transformed by the theor. model into spheres of certain radius of ref. materials (1-dimensional model) of which the effective radiation escape probabilities are detd. exptl. The models are further adjusted by measurements with synthetic wastes and by periodic comparison with destructive analyses of selected items from the monitored waste streams. This procedure provides for improvement of error anal. with the no. of waste items monitored, hence reducing systematic errors and improving inventory in waste store. The methodol. and results are presented from verification measurements using passive n techniques on 3 different types of Pu-bearing materials. The validity of the theor. model for the calibration and interpretation of passive n measurements on solid Pu wastes was confirmed.
- RN - 7440-07-5; 9002-86-2; 9002-88-4; 12586-31-1; 14119-33-6
EM - 8108
- 95 SI - CA/095/012221X
AU - Elliot MN ; Longstaff B ; Cains PW ; Grover JR
AD - AERE, Harwell/Didcot/Oxon.
TI - The low-temperature pyrolysis of combustible plutonium-contaminated materials (PCM)
SO - Manage. Alpha-Contam. Wastes, Proc. Int. Symp.; 1981,247-69
LA - ENG
CD - 45NIA
AB - CBAC COPYRIGHT: CHEM ABS Low-temp. pyrolysis seeks to retain the benefits of incineration while, by limiting the operating temp., controlling the problems of corrosion and Pu extn. The process involves the low-temp. (500-700.degree.) treatment of the waste in an inert atm. to produce a carbonaceous char, followed by a 2nd, air-oxidn. stage, again at low temp. Primary offgas treatment by after-burning is envisaged. The results of bench-scale and small-scale pilot plant work to exam. these conditions are reported.
- RN - 7440-07-5; 9002-84-0; 9002-86-2; 9002-88-4; 9003-53-6; 9004-34-6; 9011-14-7
EM - 8108

- 96 SI - CA/095/012220W
AU - Vietzke H ; Hofmann J
AD - Nukem G.m.b.H., Hanau
TI - Volume reduction of alpha-waste by pyrohydrolysis
SO - Manage. Alpha-Contam. Wastes, Proc. Int. Symp.; 1981,241-5
LA - ENG
CD - 45NIA
AB - CBAC COPYRIGHT: CHEM ABS Combustible waste from Pu fuel element fabrication contains .apprx.50% poly(vinyl chloride), 20% paper, 20% rubber, and 10% plastics. For vol. redn. and recovery of Pu from the ash, a pyrohydrolysis process was developed which is the reaction of the waste with steam at 800.degree.. In the constructed line, the combustible waste is shredded, homogenized and tangentially fed into a ring slab reactor made from metal such as Inconel-600. (12606-02-9 Inconel-600) The ring slab space is formed by 2 cylinders, a fixed outside cylinder and a rotating inside cylinder. The reactor is criticality-safe. The material is converted to ash and combustible offgas (H₂, CO, hydrocarbons). Ash falls down through a grate to the bottom gate. The offgas is fed into a burner chamber and oxidized to CO₂ and H₂O. Then, the Venturi scrubber HCl-gas is absorbed in the H₂O at a pH 5, the steam condenses in a heat exchanger, and the offgas (only CO₂) passes through a fine filter to the stack. This process is also used for waste redn. of spent solvent. At 500.degree., the TBP completely decomp. in the presence of CaO, forming Ca₃(PO₄)₂ and butene and butenol. Using a fluidized-bed system, a mixt. of TBP/dodecane and CaO is fed into a sand bed. The offgas is fed to an after-burner or condensed for recovery.
- RN - 12606-02-9; 126-73-8; 630-08-0; 1305-78-8; 1333-74-0; 7440-07-5; 7758-87-4; 9002-86-2; 25167-67-3; 57323-59-8
EM - 8108
- 97 SI - CA/095/012219C
AU - Wieczorek H ; Kemmler G ; Krause H ; Lahr H
AD - Inst. Nukl. Entsorgungstech., Kernforschungszent. Karlsruhe G.m.b.H., Karlsruhe
TI - Acid-digestion treatment of plutonium-containing waste
SO - Manage. Alpha-Contam. Wastes, Proc. Int. Symp.; 1981,211-18
LA - ENG
CD - 45NIA
AB - CBAC COPYRIGHT: CHEM ABS At the Karlsruhe Nuclear Research Center, research and development work concerned with the acid digestion of combustible waste with high Pu content is being carried out. The main objectives are the redn. of the waste vol., the recovery of the Pu and the transformation of the process residues into a product suitable for final disposal. For this purpose, an inactive demonstration plant with a throughput of 1.5 kg/h was constructed. In the 1st version, the reactor of this plant was a tray reactor of the HEDL type. During test operations, the sedimentation of a residue was obsd. on the tray. The d. of this residue was higher than that of the residue suspended in the reaction acid. Expts. using Ta oxide (d = 8.4

g/cm³) to simulate the Pu oxide ($d = 11.5$ g/cm³) verified this observation. This means that in active operation a sedimentation of Pu oxide on the tray is to be expected. With respect to these results, a new reactor was developed where the settling of the residue is avoided by appropriate design and high circulation velocity of the reaction acid. The reactor consists of a tube 50-80 mm in diam., which is curved to form a closed loop with an arm length of about 1 times. 1 m. Its behavior is very stable. The velocity of the reaction acid in the heater is 0.5-1 m/s. A settling of residues or Ta oxide was not obsd. The throughput attained is comparable to that of the tray reactor, but the space requirement is a factor of 3 smaller, and the vol. of the reaction acid a factor of 4 smaller.

RN - 7440-07-5; 7664-93-9; 7697-37-2; 9002-86-2; 9002-88-4; 9004-34-6
EM - 8108

98 SI - CA/095/012013F

AU - Koenig RA ; Draper WE ; Neuls AS ; Neumyer JM

AD - Los Alamos Sci. Lab., Los Alamos

TI - Controlled-air incineration of alpha-bearing solid wastes

SO - Manage. Alpha-Contam. Wastes, Proc. Int. Symp.; 1981,283-99

LA - ENG

CD - 45NIA

AB - CBAC COPYRIGHT: CHEM ABS The Los Alamos Scientific Lab. is completing a study of controlled-air incineration (CAI) as a technique for vol. redn. and stabilization of combustible transuranic-contaminated solid wastes. To demonstrate feasibility, a process was assembled and operated on synthetic and contaminated combustibles. The CAI project history, process design, provisions for radioactive operation, exptl. results to date, and future plans are discussed. Achievements include operation at the design feed rate as well as combustion of sep. feed compns. including cellulose, polyethylene, poly(vinyl chloride) (PVC), and latex rubber. The ability of the system to process high concns. of PVC was demonstrated with no Cl--induced degrdn. detected. Cl- and SO₂- removal from the offgas was excellent with concns. reaching 8 and 10 ppm max., resp., in the process condensate.

RN - 9002-86-2; 9002-88-4; 9004-34-6

EM - 8108

99 SI - CA/095/011994Q

AU - Shakhbazyan GK ; Shevchenko AM ; Goncharuk GA ; Pushkar MP

AU - Yavorovskii AP

AD - Kiev. Med. Inst., Kiev

TI - Biological effects of aerosols of poly(vinyl chloride) and epoxy plastics

SO - Vestn. Akad. Med. Nauk SSSR; ISS 1, 1981,58-62

LA - RUS

CD - VAMNA

AB - CBAC COPYRIGHT: CHEM ABS PVC and epoxy resins (UP 650 and UP 650T) injected ventriculally into lab. animals produced gastric, central nervous system, respiratory, and circulatory

disturbances. (9002-86-2 PVC)(68665-19-0 UP 650)(68665-20-3 UP 650T) Statistical studies of workers engaged in synthesis of these polymers and thus exposed to toxic aerosols showed all the above-indicated disturbances, dermatitis, and, in females, also showed menstruation irregularities, premature infant births, natural abortions, and other sex-related problems. For epoxy resins, their toxic effects increased as their epoxy nos. increased and their mol. wts. decreased.

RN - 9002-86-2; 68665-19-0; 68665-20-3
EM - 8108

- 100 SI - CA/094/197578Q
AU - Flynn VJ
TI - Radiopaque polyurethane resin compositions
SO - U.S. PATENT NO. 4250072 02/10/81
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS X-ray opaque compns. for medical devices, esp. medical surgical tubing, contain a resin consisting of 100-33 parts by vol. of a thermoplastic polyurethane and 0-67 parts of a polymer or copolymer of a halogenated vinyl monomer, and a radiopacifier consisting of a diiodo- or tetraiodobenzoate, I (R = alkyl or alkoxyalkyl; R1 = H or iodo) or their mixts. Thus, a compn. contg. 1800 parts Rucothene 3713 polyurethane and 500 parts Bu 2,3,4,6-tetraiodobenzoate was mixed, granulated, and extruded into medical-surgical single-wall tubing with properties suitable for use as intubation sets and in catheter needles. (34869-32-4 Butyl 2,3,4,6-tetraiodobenzoate)
RN - 34869-32-4; 9002-86-2; 9003-07-0; 16170-35-7
EM - 8107

- 101 SI - CA/094/197472A
AU - Amidon GL ; Taylor J ; Sorkness R
AD - Sch. Pharm., Univ. Wisconsin, Madison
TI - A convective diffusion model for estimating drug loss to tubing: sorption of vitamin A
SO - J. Parenter. Sci. Technol.; VOL 35, ISS 1, 1981,13-17
LA - ENG
CD - JPATD
AB - CBAC COPYRIGHT: CHEM ABS A convective diffusion model for solute transport in an absorbing tube was applied to the sorption of vitamin A to plastic and glass tubing under clin. perfusion conditions. (68-26-8 Vitamin A) Tritium labeled retinol was used for the study. The tubing had a high capacity for absorption of vitamin A, but the equilibration of concn. (diffusion) within the tubing wall appeared to be relatively slow. Using an effective or apparent wall permeability for vitamin A, the transport model accounted well for the flow rate and tubing length dependence of the sorption phenomena of vitamin A. The amt. of vitamin A lost to the tubing wall from the total parenteral nutrition with multivitamin soln. was less than that from total parenteral soln. alone, presumably due to the presence of surfactants in the multivitamin prepn.
RN - 68-26-8; 9002-86-2

EM - 8107

102 SI - CA/094/186759Y

AU - Erickson CM ; Williams MC ; Goren SL

AD - Dep. Chem. Eng., Univ. California, Berkeley

TI - A threshold phenomenon in coating porous surfaces with aerosols.
Applications to antitranspirant delivery

SO - AIChE J.; VOL 27, ISS 2, 1981,309-12

LA - ENG

CD - AICEA

AB - CBAC COPYRIGHT: CHEM ABS Gas exchange by stomata in the presence of antitranspirants was studied in a model system with polycarbonate membranes with pores of diams. $D = 0.8, 5, \text{ and } 10 \mu\text{m}$, lengths $10, 10, \text{ and } 8 \mu\text{m}$, and pore (void) fractions $0.151, 0.078, \text{ and } 0.078$, resp. Coatings of silicones, vegetable oil, and Wilt Pruf were applied by aerosol deposition. (9002-86-2 Wilt Pruf) Plots of percentage flux redn. for gases vs. the degree of deposition (D) for $5 \mu\text{m}$ pores showed a crit. threshold value for D (D_c) at $D \text{ .simeq. } 5-8 \text{ .times. } 10^{-4} \text{ kg/m}^2$ manifested by silicone and oil coatings. Water vapor flux in stagnant and CO_2 and O fluxes in flowing gas environment dropped by .apprx.65, .apprx.80, and .apprx.90%, resp. Wilt Pruf was less effective as a vapor barrier and had a less dramatic threshold, perhaps because its deposition was sequential rather than continuous. Thresholds for water permeation for pores of $d = 0.8 \text{ and } 10 \mu\text{m}$ in the presence of vegetable oil were at $D_c \text{ .simeq. } 25 \text{ .times. } 10^{-4}$ and $D_c \text{ .apprxeq. } 2 \text{ .times. } 10^{-4} \text{ kg/m}^2$. $D_c \text{ .times. } d$ was nearly const. ($20-30 \text{ .times. } 10^{-10} \text{ kg/m}$); thus small-pore surfaces (e.g. leaves with stomata nearly closed) will be difficult to occlude, and very large D will be required to achieve significant flux redn.

RN - 9002-86-2; 124-38-9; 7732-18-5; 7782-44-7

EM - 8107

103 SI - CA/094/180259P

AU - Vadekar M

TI - Removing oil from oily wastewater streams

SO - U.S. PATENT NO. 4248705 02/03/81 (Exxon Research and Engineering Co.)

LA - ENG

AB - CBAC COPYRIGHT: CHEM ABS An improved process for removing oil from oily waste water streams, particularly from aq. refinery streams wherein the oil is present as a stable oil-in-water emulsion, comprises passing the stream through a filter bed of particulate, unprocessed PVC or its copolymers mixed with a granular, inert and preferably porous filler material such as particles of coke or activated carbon. (9002-86-2 PVC) The improvement substantially increases bed life and has unexpectedly resulted in higher oil-absorption capacity.

RN - 9002-86-2; 7440-44-0

EM - 8106

PVC

- 104 SI - CA/094/179878H
AU - Michel A ; Bert M ; Guyot A ; Lahaye J
AD - Lab. Mater. Organ., CNRS, Lyon Vernaison
TI - Nature of the carbonaceous part of smoke in combustion of rigid PVC: effect of copper oxide as smoke suppressor
SO - J. Fire Flammability; VOL 12, ISS 1, 1981,72-80
LA - ENG
CD - JFFLA
AB - CBAC COPYRIGHT: CHEM ABS The formation of smoke from PVC samples self-ignited in air at 500-700.degree. can be nearly completely suppressed by adding CuO which promotes combustion to CO2 of carbonaceous residues produced from PVC before its self-ignition. (9002-86-2 PVC) The smoke consists of tar aerosols and small soot particles. Its optical d. is max. at .apprx.500.degree. for PVC without CuO or other smoke suppressant. The addn. of CuO not only decreases the optical d. of smoke, but also shifts its max. to .apprx.600.degree..
RN - 9002-86-2; 1317-38-0
EM - 8106
- 105 SI - CA/094/179877G
AU - Hilado CJ ; Huttlinger PA
AD - Prod. Safety Corp., Sunnyvale
TI - Pyrolysis of polymeric materials. III. Effect of chemical structure and temperature on carbon monoxide evolution
SO - J. Fire Flammability; VOL 12, ISS 1, 1981,65-71
LA - ENG
CD - JFFLA
AB - CBAC COPYRIGHT: CHEM ABS The pyrolysis was carried out of 61 common plastic and elastomer samples to det. CO evolution levels; only poly(Me methacrylate) and poly(oxymethylene) gave off more CO than hardwood or softwood samples. (9011-14-7 Poly(methyl methacrylate))(9002-81-7 Poly(oxymethylene)) The lowest CO emissions were obtained from nylon 6, ABS (polymer), poly(ether sulfone), and nitrile rubber. (25038-54-4 nylon 6)(9003-56-9 ABS(polymer)) The emissions of CO increased as the pyrolysis temp. was increased and generally decreased with increasing sample wt.
RN - 9011-14-7; 9002-81-7; 25038-54-4; 9003-56-9; 108-80-5; 630-08-0; 9002-86-2; 9002-88-4; 9003-07-0; 9003-53-6; 25585-20-0; 62238-79-3
EM - 8106
- 106 SI - CA/094/180712F
AU - Sugitachi A ; Takagi K ; Yabushita Y
TI - Process for preparing antithrombogenic polymeric material
SO - Brit. PATENT NO. 1583008 01/21/81 (Unitika Ltd.)
LA - ENG
AB - CBAC COPYRIGHT: CHEM ABS Antithrombogenic polymers are manufd. by treating a polymeric material with a soln. of synthetic fibrinolytic compd. and/or enzyme to bond covalently or ionically or to adsorb the compd. onto the polymer. Thus, 3N HCl was circulated 30 min at 10 mL/min and 30.degree. through a 3-mm-bore

nylon 6 tube, the tube was washed with H₂O, and 100 mL 10% aq. polyethyleneimine in 500 mL MeOH was circulated 2 h at 100 mL/min and 20-30.degree.. (25038-54-4 nylon 6) The tube was treated 6 h with 200 mL 5% MeOH soln. of dicyclohexylcarbodiimide (I) at 100 mL/min, washed with MeOH, dried, and treated 5 h at 50 mL/min with a soln. prepd. by dissolving 760 mg mixed 2-carboxyethyl derivs. of phenylbutazone and 620 mg I in 20 mL dioxane. (50-33-9 Phenylbutazone) The tube was washed with dioxane and dried at <1 atm to give a material with phenylbutazone covalently bonded to the inside of the nylon tube, which had thrombus time >45 min compared with 10 and 20 min for untreated nylon 6 and silicone tubes, resp.

RN - 25038-54-4; 50-33-9; 53-86-1; 61-68-7; 129-20-4; 530-78-9;
590-92-1; 9002-86-2; 9002-88-4; 9002-89-5; 9003-01-4; 9003-07-0;
9004-34-6; 9004-35-7; 9005-32-7; 9011-14-7; 9011-16-9; 9039-53-6;
24937-16-4; 24937-72-2; 24991-23-9; 25014-41-9; 25035-04-5;
25038-59-9; 25068-14-8; 25068-38-6; 25513-46-6; 26099-09-2;
26937-45-1; 27470-51-5; 32131-17-2; 70680-62-5; 70680-63-6;
70994-07-9; 70994-08-0

EM - 8106

RNW 1739

107 SI - CA/094/169453B

AU - Hennart C ; Rousselot F

TI - Systemic controlled-diffusion insecticide composition

SO - Ger. Offen. PATENT NO. 3027167 02/12/81 (Airwick A.-G.)

LA - GER

AB - CBAC COPYRIGHT: CHEM ABS Slow-release formulations are given, contg. a known systemic oxime carbamate insecticide, such as Butocarboxim, methomyl, and thiofanox, as well as PVC and a release-regulating hydrophobic dilg. agent. (34681-10-2 Butocarboxim)(16752-77-5 Methomyl)(39196-18-4 thiofanox)(9002-86-2 PVC) Thus, a compn. contg. Butocarboxim 20, PVC 34, dioctyl phthalate 34, and poly(vinyl acetate) (70% hydrolyzed) 12, buried in soil, showed much less butocarboxim release than the same compn. without poly(vinyl acetate).

RN - 34681-10-2; 16752-77-5; 39196-18-4; 9002-86-2; 9003-20-7

EM - 8106

- 109 SI - CA/094/108443B
AD - Research Triangle Park
TI - National emission standards for hazardous air pollutants;
alternative test method for vinyl chloride in solvents and
poly(vinyl chloride) resins
SO - Fed. Regist.; VOL 46, ISS 29, 1981,12188-90
LA - ENG
CD - FERE
AB - CBAC COPYRIGHT: CHEM ABS An alternative to EPA method 107 for
detg. vinyl chloride in PVC resin, resin slurry, wet resin,
latex, resin-solvent solns., and solvents is proposed under the
Federal Clean Air Act. (75-01-4 Vinyl chloride)(9002-86-2 PVC)
The alternative method involves direct injection of a liq. sample
into a gas chromatograph equipped with a column of 20% Tergitol
E-35 on 60-80 mesh Chromosorb W AW and a flame ionization
detector. The limit of detection in dry PVC resin is 0.2 ppm.
RN - 75-01-4; 9002-86-2
EM - 8104
- 110 SI - CA/094/109259H
AU - Artem'ev AI ; Anikina NV ; Griboedova AV ; Trakman YG ; Bobrova LM
AU - Kiseleva GS
AD - Vses. Nauchno-Issled. Inst. Farm., Moscow
TI - Industrial manufacture of powdered drugs in single-dose packages
SO - Khim.-Farm. Zh.; VOL 15, ISS 1, 1981,96-100
LA - RUS
CD - KHFZA
AB - CBAC COPYRIGHT: CHEM ABS Pharmaceutical properties of .apprx.20
drugs dispensed in single-dose packages were examd. Some of
these included sieve anal., vol. anal., friability, type of
packaging, and the frequency of use (turnover). Al foil,
polyethylene, PVC, and polyethylene-cellophane films may be used
for packaging these powd. drugs. (9002-88-4
polyethylene)(9002-86-2 PVC)
RN - 9002-88-4; 9002-86-2; 50-78-2; 50-81-7; 58-15-1; 63-68-3;
63-74-1; 76-29-9; 133-10-8; 147-24-0; 1303-96-4; 1319-82-0;
7429-90-5; 7439-89-6; 7487-88-9; 7647-15-6; 7722-64-7; 7757-82-6;
7758-02-3; 8000-95-1; 8049-47-6; 10043-35-3; 10043-52-4;
14807-96-6
EM - 8104

111 SI - CA/094/077570J
AU - Timms P
AD - Anim. Res. Inst., Queensland Dep. Primary Ind., Wacol
TI - Inhibition of Babesia spp. by plastics
SO - Appl. Environ. Microbiol.; VOL 41, ISS 1, 1981,17-19
LA - ENG
CD - AEMID
AB - CBAC COPYRIGHT: CHEM ABS Five com. available plastic containers were compared with glass for toxicity toward B. rodhaini and B. bigemina. Comparisons were made by using infectivity tests in mice (B. rodhaini) and cattle (B. bigemina). Low-d. polypropylene and polystyrene containers were not toxic, but 2 of the 3 polyvinyl chloride containers tested significantly reduced the viability of both species of Babesia. (9003-07-0 Polypropylene)(9003-53-6 Polystyrene)(9002-86-2 Polyvinyl chloride) Plasticizer present in various amts. on the surface of the toxic containers was most likely the inhibitory material.
RN - 9003-07-0; 9003-53-6; 9002-86-2
EM - 8104

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