

This article was downloaded by:

On: 22 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



The Journal of Adhesion

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713453635>

Contents Lists and Abstracts from the China Journal “Technology of Adhesion & Sealing”

To cite this Article (1991) 'Contents Lists and Abstracts from the China Journal “Technology of Adhesion & Sealing”', The Journal of Adhesion, 35: 2, 163 – 168

To link to this Article: DOI: 10.1080/00218469108030443

URL: <http://dx.doi.org/10.1080/00218469108030443>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Contents Lists and Abstracts from the China Journal “Technology of Adhesion & Sealing”

Vol. 10, No. 4, August 1989

Contents

Study on the synthesis and properties of an acrylic ionomer used as hot melt pressure sensitive adhesive. I. Study on the synthesis, characterization and bonding property of a tercopolymer from BA/MMA/AA..... Xu Yuan, Zhang Kai, Dai Molan and Shun Shaoyu	[1]
Curable acrylate solution adhesive—Development of the adhesive for compounding polypropylene film and paper with printing ink Zhu Xuegang and Tian Wangang	[9]
Studies on the properties of epoxy resin modified by hydroxy-terminated butadiene-acrylonitrile copolymer Han Xiaozu, Guo Fenchun, Wang Lianzhi, Cai Yanbin and Zhang Qingyu	[15]
Adhesive for composite film for food packages Ou Ya	[18]
Aqueous emulsion-A polyurethane adhesive Yu Lanping	[21]
Adhesive KD-320 Jiang Huanshen and Li Li	[24]
Adhesive-bonding of magnet steel in the rotor of high centrifugal force and high power DC brush-less motor..... Li Baoku	[26]
Self-locking and adhesive-bonding of cutting tools Li Yacheng	[29]
An elementary introduction to a test for the resistivity of electric conductive adhesives Liu Songmao	[32]
Technique for drainage and blocking up holes and its application Liu Yongshan	[34]
Application of bonding technology to textile machinery Yang Pingxi	[39]
Manufacturing vacuum plastics-absorbing die with bonding technology Lu Yuming	[43]
Repairing a large clearance ball bearing with bonding technique..... Guo Zaochen	[44]

Study on the Synthesis and Properties of an Acrylic Ionomer Used as a Hot Melt Pressure Sensitive Adhesive. I. Study on the Synthesis, Characterization and Bonding Strength of a Tri-copolymer from BA/MMA/AA

Xu Yuan, Zhang Kai, Dai Molan

(Polymer Research Institute, Chengdu University of Science and Technology)

Shun Shaoyu

(Chenguang Research Institute of Chemical Industry)

Abstract

The synthesis and characterization of a tri-copolymer derived from BA/MMA/AA and the relationship between the composition of the copolymer and its bonding strength are described in this paper. The effect of reaction parameters of copolymerization, such as polymerization time, temperature, monomer ratio, initiator concentration, on polymerization rate and composition of copolymer are also discussed. The copolymer is proved to be a random tri-copolymer by IR, ¹HNMR, ¹³CNMR and DSC. The copolymer will be a new PSA because its peel strength to PET film is 10 to 40 N/25mm.

Curable Acrylate Solution Adhesive—Development of the Adhesive for Compounding Polypropylene Film and Paper with Printing Ink

Zhu Xuegang, Tian Wangang

(Beijing Chemical Engineering Institute)

Abstract

The authors of this paper have determined the optimum formulation and technique of the adhesive for compounding polypropylene film and paper with printing ink. Polymerization temperature is controlled in the range from 90 to 110°C. The mixture ratio between the acetic ether and toluene used in mixed solvent is 0.8 to 0.2:1. The optimum content of initiator AIBN in 100g monomer is 1.0g. The optimum content of acrylamide, acrylonitrile and hydroxypropyl acrylate in 100g monomer is 0.5g, 7g and 3g respectively. The optimum dosage of bisphenol A epoxy resin in 100g copolymer is 10g. The weight ratio between the curing agent, 4,4',4"-triphenylmethane triisocyanate (chlorobenzol solution) and copolymer is 10:100.

Studies on the Properties of Epoxy Resin Modified by Hydroxy-terminated Butadiene-acrylonitrile Copolymer

Han Xiaozu, Guo Fengchun, Wang Lianzhi, Cai Yanbin, Zhang Qingyu

(Changchun Institute of Applied Chemistry, Academia Sinica)

Abstract

Modified epoxy resin was produced by adding the isocyanate-terminated prepolymer obtained from hydroxy-terminated butadiene-acrylonitrile copolymer (HTBN). The effect of the amounts of curing agent and prepolymer on the properties of cured epoxy resins was investigated. The results showed that the modified epoxy resin has excellent bonding and electrical properties and good oil and heat resistance.

Vol. 10, No. 5, October 1989

Contents

Development and application of EF Acrylate Emulsion Bonding Agent for electrostatic printing and flocking Yang Yukun, Li Zongyu and Huang Jiaqi [1]

- Epoxy Resin Adhesive (#2) for water environment Zhong Songhui,
Lu Sangheng and Xie Juniang [6]
- Development of resorcinol diepoxide ether adhesive Yin Hongru [12]
- Study on petroleum-fermented nylon modified-epoxy adhesive Liu Kaiqing [15]
- Organo-silicon adhesives for bonding and sealing optical components Hou Ruixiang [20]
- One-part polyurethane adhesive prepared by liquid polymerization Yang Lin,
Wang Xiangsen and Ruan Zhaoling [25]
- New colourless curing agent-Xinxin Brand Curing Agent for
chloroprene adhesive Cheng Yuliang and Li Sufen [27]
- A way of modifying the adhesive for the front of oil immersion objective
of microscopic system Hou Ruixiang [28]
- Using an adhesive to bond soft polyvinyl chloride to glass fibre reinforced plastic
with a coat of paint Deng Shaoqiu [31]
- Rubber horseshoe adhesive and its uses Pan Dunning [34]
- Leveling of the surface of the separator of high-speed centrifugal air
compression blower Li Defa [36]
- A test for the adhesive-bonding of foamed rubber-plastic soles of shoes Xue Junqi [38]
- Adhesive-bonding of the seat cushions of civil aircraft Li Yonggen [42]

Development and Application of EF Acrylate Emulsion Bonding Agent for Electrostatic Printing and Flocking

Yang Yukun, Li Zongyu

(Institute of Chemistry, Academia Sinia)

Huang Jiaqi

(Textile Industry Designing Institute, the Ministry of Textile Industry)

Abstract

The special requirements of electrostatic printing and flocking processes for the emulsion bonding agent for flocking are analyzed. EF Acrylate Emulsion Bonding Agent, which may be specially used for electrostatic printing and flocking processes has been successfully developed based on the analyses. The main problems met in the course of the development of the EF Bonding Agent and the main mechanical and rheological properties and usage are also discussed.

Epoxy Resin Adhesive (#2) for Water Environment

Zhong Songhui, Lu Sangheng, Xie Juniang

(Guangzhou Institute of Chemistry, Academia Sinica)

Abstract

An epoxy resin adhesive which can bond metal, concrete, glass and other rigid materials firmly both in water and dry environments is described. The shear strength of the adhesive to steel in water at normal temperature is up to 28.4 to 30.4 MPa and the non-uniform tearing strength is 29 to 39 kN/m.

The various components and their contents in this special adhesive are given. The properties of the adhesive are tested and a discussion is given in this paper.

Development of Resorcinol Diepoxide Ether Adhesive

Yin Hongru

(Jilin Institute of Technology)

Abstract

Resorcinol diepoxide ether adhesive is a high strength adhesive curing at room temperature. Synthetic mechanism and process are described and the preparation, properties and application of the adhesive are introduced briefly in this paper.

Study on Petroleum-fermented Nylon Modified Epoxy Adhesive

Liu Kaiqing

(Kaifeng Chemical Institute)

Abstract

Petroleum-fermented nylon modified epoxy adhesive has high bonding strength and good shock resistance, moisture resistance and thermal stability. The optimum compounding and bonding technique of the adhesive are researched, and its moisture resistance and thermal stability are tested. Concentration of its parts (nylon, epoxy resin and dicyandiamide curing agent), nylon-epoxy resin ratio and the effect of curing conditions on the bonding strength are discussed.

Vol. 10, No. 6, December 1989

Contents

Study on high-temperature adhesives	Yu Shuyong, Zhang Yao and Xie Jing	[1]
Study on emulsion copolymerization of butyl acrylate-acrylonitrile initiated by redox systems. IV. Stability of the emulsion	Wu Limin, Cheng Shiyuan and Li Jianzong	[7]
The surface composition of cured polyurethane adhesives	Liu Yiyuan, Zhong Kai and Zhang Lin	[10]
Development of a room temperature curing agent, metaphenylene dimethylamine polycondensate, for epoxy resin	Li Zhengming, Ma Hualian and Li Zongxing	[14]
Pressure-sensitive adhesive tape cured with electron beam	Pu Bingwei, Zhang Guonian and Wang Shu	[18]
The properties of Adhesive EA-I for oily surfaces	He Yunnan	[23]
The influence of separating agent upon the unwinding force of pressure-sensitive adhesive	Wang Fengguo	[25]
The precuring action on the formation by mounting and bonding	Li Yonggen	[27]

- Using polymer-modified cement mortar as the bonding material for fresh and original concrete Yao Yuewei [30]
- The characteristics of TF soft belt guiding material and its bonding technique Wang Zuoyu [33]
- Application of bonding technology to machine tool manufacture and repair Ma Changfu [36]
- Application of bonding technology to machinery Tiang Youmiao [38]
- Bonding process for new type electrical machinery components Zhang Mingyou [40]
- Medical polymer coating agent and its clinical uses Ding Fengquan, Wang Jianmin and Chen Mengmei [42]

Study on High-Temperature Adhesives

Yu Shuyong, Zhang Yao

(Hunan Machinery Research Institute)

Xie Jing

(Haihong Ship Painting Limited Company)

Abstract

The high-temperature adhesives were studied from the standpoint of high-temperature resistance and heat expansion. The influence of the various components upon the melting points of high-temperature adhesives was analyzed and the content range of the components were obtained. The authors of this paper used the experimental results to prepare GW Series High-Temperature Adhesives successfully.

Study on Emulsion Copolymerization of Butyl Acrylate-Acrylonitrile Initiated by Redox Systems. IV. Stability of the Emulsion

Wu Limin

(Department of Chemical Engineering, Zhejiang University)

Cheng Shiyuan, Li Jianzong

(Department of Chemistry, Hubei University)

Abstract

The stability of emulsions were studied by using some redox systems to initiate the emulsion copolymerization of butyl acrylate-acrylonitrile. The results showed that the heat-stability of the emulsions is worse as oxidant/reductant >1 (mole ratio) than as oxidant/reductant <1 . The acid resistance of the emulsion obtained by the redox system is better than the resistance to alkali and added electrolytes lower the stability of the emulsion.

The Surface Composition of Cured Polyurethane Adhesives

Liu Yiyuan, Zhang Kai, Zhang Lin

(Institute of Polymer Materials, Chengdu University of Science and Technology)

Abstract

The surface composition of polyurethane adhesive films cured on some substrates has been studied by ESCA. It is found, by using atomic percent of N to represent the hard segment composition in polyurethane adhesive, that the air-facing surface has more hard segment as cured on a non-polar substrate and the interface has more hard segment as cured on a polar substrate or one having high surface free energy. The authors inferred that a more suitable bonding mechanism of polyurethane adhesive, to substrates having polar groups or high surface free energy, is the interaction of the carbamate hard segment with a corresponding polar or ester group in the substrate surface.

Development of a Room Temperature Curing Agent, Metaphenylene Dimethylamine Polycondensate, for Epoxy Resin

Li Zhengming, Ma Hualian, Li Zongxing

(Steel and Iron Research Institute, Maanshan Steel and Iron Company)

Abstract

The condensation reaction mechanism and condensation process of a room temperature curing agent, metaphenylene dimethylamine polycondensate, for epoxy resin, the main properties of the cured product and the preparation of the skeleton nickel catalyst are described.