

DAFTAR PUSTAKA

- [1] O. Platnieks *dkk.*, “Adding value to poly (butylene succinate) and nanofibrillated cellulose-based sustainable nanocomposites by applying masterbatch process,” *Ind Crops Prod*, vol. 169, Okt 2021, doi: 10.1016/j.indcrop.2021.113669.
- [2] F. I. Aryanti, “Pembuatan Komposit Polimer Polipropilena/Talk/Masterbatch Hitam Pada Cover Tail,” *Jurnal Teknologi dan Manajemen*, vol. 19, no. 1, hlm. 1–6, Apr 2021, doi: 10.52330/jtm.v19i1.8.
- [3] S. Ammar, I. A. W. Ma, K. Ramesh, dan S. Ramesh, “Polymers-based nanocomposite coatings,” *Nanomaterials-Based Coatings: Fundamentals and Applications*, hlm. 9–39, Jan 2019, doi: 10.1016/B978-0-12-815884-5.00002-8.
- [4] Q. Larasati dan R. F. Ciptandi, “PENGAPLIKASIAN MATERIAL THERMOPLASTIC RUBBER SEBAGAI PRODUK AKSESORIS FESYEN.” [Daring]. Tersedia pada: <https://indonesian.alibaba.com>,
- [5] T. Nishi, T. Yamaguchi, K. Shibata, Y. Ito, dan K. Hokkirigawa, “Wear behavior of thermoplastic urethane for the outer soles of spike shoes,” 2021.
- [6] X. Sheng, Y. Zhao, L. Zhang, dan X. Lu, “Properties of two-dimensional Ti₃C₂ MXene/thermoplastic polyurethane nanocomposites with effective reinforcement via melt blending,” *Compos Sci Technol*, vol. 181, Sep 2019, doi: 10.1016/j.compscitech.2019.107710.
- [7] C. McGuire, K. Siliveru, K. Ambrose, dan S. Alavi, “Food Powder Flow in Extrusion: Role of Particle Size and Composition,” *Processes*, vol. 10, no. 1, hlm. 1–13, 2022, doi: 10.3390/pr10010178.
- [8] M. Yüçetürk dan M. Ö. Seydibeyoğlu, “Understanding dispersion of copper phthalocyanine alpha blue pigment in polyethylene masterbatch with the use of wax,” *Coloration Technology*, vol. 136, no. 6, hlm. 526–534, Des 2020, doi: 10.1111/cote.12506.
- [9] E. A. Coleman, “Plastics Additives,” dalam *Applied Plastics Engineering Handbook: Processing and Materials*, Elsevier, 2011, hlm. 419–428. doi: 10.1016/B978-1-4377-3514-7.10023-6.
- [10] K. Nassau, “Color Research & Application,” dalam *Color for Science, Art and Technology*, 6 ed., vol. 23, Elsevier, 1998, hlm. 428–431.
- [11] T. Xu, W. Shen, X. Lin, dan Y. M. Xie, “Mechanical properties of additively manufactured thermoplastic polyurethane (TPU) material affected by various processing parameters,” *Polymers (Basel)*, vol. 12, no. 12, hlm. 1–16, Des 2020, doi: 10.3390/polym12123010.
- [12] N. A. Kurniawan, F. Setiawan, dan E. Sofyan, “PENGUJIAN TARIK KOMPOSIT SPESIMEN CAMPURAN SERAT PISANG ALUR DIAGONAL DAN PASIR BESI DENGAN MATRIK RESIN POLYESTER DENGAN METODE HAND LAY-UP,” *Teknika STTKD: Jurnal Teknik, Elektronik, Engine*, vol. 8, no. 2, hlm. 281–288, Nov 2022, doi: 10.56521/teknika.v8i2.657.

- [13] W. Pudjiastuti, "POLIMER NANOKOMPOSIT SEBAGAI MASTER BATCH POLIMER BIODEGRADABLE UNTUK KEMASAN MAKANAN," *Jurnal Riset Industri*, vol. VI, no. 1, hlm. 51–60, 2012, Diakses: 13 April 2024. [Daring]. Tersedia pada: <https://media.neliti.com/media/publications/178725-ID-polimer-nano-komposit-sebagai-master-bat.pdf>
- [14] V. Janostik, V. Senkerik, L. Manas, M. Stanek, dan M. Cvek, "Injection-Molded Isotactic Polypropylene Colored with Green Transparent and Opaque Pigments," *Int J Mol Sci*, vol. 24, no. 12, Jun 2023, doi: 10.3390/ijms24129924.
- [15] J. Ullah *dkk.*, "The effect of masterbatch pigments on the crystallisation, morphology, and shrinkage behaviour of Isotactic Polypropylene," *Journal of Polymer Research*, vol. 29, no. 5, Mei 2022, doi: 10.1007/s10965-022-03028-z.
- [16] S. Aldrich, "Property of Polyurethane," Merck®. Diakses: 29 Maret 2024. [Daring]. Tersedia pada: https://www.sigmaaldrich.com/ID/en/search/polyurethane?facet=facet_related_category%3ASpecialty%20%26%20Smart%20Polymers&focus=products&page=1&perpage=30&sort=relevance&term=polyurethane&type=product
- [17] Omnexus®, "Thermoplastic Polyurethane (TPU) Material: Properties & Structure," Omnexus.SpecialChem. Diakses: 29 Maret 2024. [Daring]. Tersedia pada: <https://omnexus.specialchem.com/selection-guide/thermoplastic-polyurethanes-tpu>
- [18] T. A. Lin, J. H. Lin, dan L. Bao, "Polypropylene/thermoplastic polyurethane blends: Mechanical characterizations, recyclability and sustainable development of thermoplastic materials," *Journal of Materials Research and Technology*, vol. 9, no. 3, hlm. 5304–5312, 2020, doi: 10.1016/j.jmrt.2020.03.056.
- [19] T. Xu, W. Shen, X. Lin, dan Y. M. Xie, "Mechanical properties of additively manufactured thermoplastic polyurethane (TPU) material affected by various processing parameters," *Polymers (Basel)*, vol. 12, no. 12, hlm. 1–16, Des 2020, doi: 10.3390/polym12123010.
- [20] T. Nishi, T. Yamaguchi, K. Shibata, Y. Ito, dan K. Hokkirigawa, "Wear behavior of thermoplastic urethane for the outer soles of spike shoes," 2021.
- [21] J. H. Koo, W. K. Ho, dan O. A. Ezekoye, "Thermoplastic polyurethane elastomer nanocomposites: Morphology, thermophysical, and flammability properties," *J Nanomater*, vol. 2010, 2010, doi: 10.1155/2010/583234.
- [22] A. Haryńska *dkk.*, "Processing of polyester-urethane filament and characterization of fff 3d printed elastic porous structures with potential in cancellous bone tissue engineering," *Materials*, vol. 13, no. 19, hlm. 1–22, Okt 2020, doi: 10.3390/ma13194457.
- [23] IEMAI®, "Technical Data Sheet of TPU," 2020. Diakses: 31 Maret 2024. [Daring]. Tersedia pada: https://www.iemai3d.com/wp-content/uploads/2020/12/TPU_TDS.pdf

- [24] L. K. Muharrami, "European Journal of Hospitality and Tourism Research," 2013, [Daring]. Tersedia pada: <http://journal.trunojoyo.ac.id/jurnalrekayasa>
- [25] P. Intan, P. Ningrum, A. Mulyasuryani, dan R. Febriani, "Pengaruh Bahan Aditif Polimer Slip terhadap Karakteristik Film Polietilen," *Ind. J. Chem. Anal*, vol. 06, no. 01, hlm. 75–84, 2023, doi: 10.20885/ijca.vol6.iss1.art8.
- [26] Putu Eryani, Ms. Ni Made Yudiastari, Ms. Made Semaryani, dan D. Rai Sita Laksmi, *PENTINGNYA KEMASAN DALAM PEMASARAN PRODUK*. 2023.
- [27] M. Buccella, A. Dorigato, F. Rizzola, M. Caldara, dan L. Fambri, "Influence of the Processing Parameters on the Dispersion and Coloration Behavior of a Halogenated Copper Phthalocyanine-Based Masterbatch," *Advances in Polymer Technology*, vol. 37, no. 3, hlm. 778–785, Apr 2018, doi: 10.1002/adv.21721.
- [28] S. L. Murni dan Ali Amran, "Kelarutan Pigmen Anorganik Merah dan Biru Dalam Gelasi Mikroemulsi Water In Oil Dari Sistem Air, (SDBS), dan Pentanol Untuk Tinta Ballpoint," *Chemistry Journal of Universitas Negeri Padang*, vol. 10, no. 1, hlm. 33–36, 2021, doi: 10.3390/ma6010184.
- [29] F. Azhari Khalamudilah *dkk.*, "SINTESIS DAN KARAKTERISASI PIGMEN MERAH BESI(III) OKSIDA DARI SERBUK BESI LIMBAH BUBUT LOGAM," 2017.
- [30] B. Muller, "Colorants for Thermoplastic Polymers," dalam *Applied Plastics Engineering Handbook: Processing and Materials*, Elsevier, 2011, hlm. 435–440. doi: 10.1016/B978-1-4377-3514-7.10043-1.
- [31] D. Yiamsawas, Y. Wanna, dan U. Asawapirom, "Investigation of Nano-Colorant Master Batch," vol. 7, no. 1, hlm. 13–18, Jan 2011, [Daring]. Tersedia pada: <https://www.researchgate.net/publication/238660260>
- [32] F. Ghani, J. Kristen, dan H. Riegler, "Solubility properties of unsubstituted metal phthalocyanines in different types of solvents," *J Chem Eng Data*, vol. 57, no. 2, hlm. 439–449, Feb 2012, doi: 10.1021/je2010215.
- [33] M. Thoriq, A. Fath, M. Lubis, G. E. Ayu, dan N. F. Dalimunthe, "JURNAL TEKNIK KIMIA-USU Pengaruh Selulosa Nanokristal dari Serat Buah Kelapa Sawit sebagai Pengisi dan Kalium Klorida sebagai Agen Pendispersi Terhadap Sifat Fisik Bioplastik Berbasis Pati Biji Alpukat (*Persea americana*)," *Jurnal Teknik Kimia USU*, vol. 11, no. 2, hlm. 89–94, 2022, [Daring]. Tersedia pada: <https://talenta.usu.ac.id/jtk>
- [34] H. Kang *dkk.*, "Polyether-based waterborne synergists: effect of polymer topologies on pigment dispersion," *RSC Adv*, vol. 13, no. 44, hlm. 31092–31100, Okt 2023, doi: 10.1039/d3ra06427a.
- [35] P. Nurhidayati, D. G. Syarif, dan D. H. Aliah, "PENGARUH KONSENTRASI POLIETILEN GLIKOL (PEG) TERHADAP KARAKTERISTIK NANOFLUIDA AIR-ALUMINA," 2015.
- [36] F. O. H. Pirrung, P. H. Quednau, dan C. Auschra, "Wetting and Dispersing Agents," *Chimia (Aarau)*, vol. 56, no. 5, hlm. 170–176, 2002.
- [37] L. Fuso, D. Manfredi, S. Biamino, M. Pavese, P. Fino, dan C. Badini, "SiC-based multilayered composites containing short carbon fibres obtained by tape casting," *Compos Sci Technol*, vol. 69, no. 11–12, hlm. 1772–1776, Sep 2009, doi: 10.1016/j.compscitech.2008.07.001.

- [38] SpecialChem, “Technical DataSheet BYK-MAX P 4102,” Sep 2023. [Daring]. Tersedia pada: <http://polymer-additives.specialchem.com>
- [39] P. Marzbani *dkk.*, “Effect of polyethylene wax/soy protein-based dispersion barrier coating on the physical, mechanical, and barrier characteristics of paperboards,” *J Coat Technol Res*, vol. 18, no. 1, hlm. 247–257, Jan 2021, doi: 10.1007/s11998-020-00403-7.
- [40] Clariant Plastics & Coatings, “Certificate of Analysis Licowax PE 520 Powder,” Apr 2023. Diakses: 11 April 2024. [Daring]. Tersedia pada: <https://www.clariant.com/en/Solutions/Products/2014/03/18/16/33/Licowax-PE-520-powder?p=1>
- [41] M. D. Huynh, T. H. Trung, N. H. Dat, dan N. V. Giang, “The melting rheology, mechanical properties, thermal stability and morphology of polylactic acid/ethylene bis stearamide modified gypsum composite,” *Vietnam Journal of Chemistry*, vol. 58, no. 2, hlm. 251–255, Apr 2020, doi: 10.1002/vjch.201900187.
- [42] T. Q. Li, M. P. Wolcott, dan T. Q. Li, “Rheology of wood plastics melt, Part 2: Effects of lubricating systems in HDPE/maple composites,” *Polym Eng Sci*, vol. 46, no. 4, hlm. 464–473, Apr 2006, doi: 10.1002/pen.20505.
- [43] Palm-Oleo Sdn. Bhd., “Certificate of Analysis Palmowax Ethylene Bis Stearamide,” 2022.
- [44] M. Shahzad, H. Waqas, Rafi-ud-din, A. H. Qureshi, dan L. Wagner, “The roles of Zn distribution and eutectic particles on microstructure development during extrusion and anisotropic mechanical properties in a Mg-Zn-Zr alloy,” *Materials Science and Engineering: A*, vol. 620, hlm. 50–57, Jan 2015, doi: 10.1016/j.msea.2014.09.109.
- [45] H. Fransiscus, S. S. Tjandra, M. Pangestu, dan L. Handranto, “Perancangan Eksperimen Proses Ekstrusi Dengan Bahan Plastik Bekas Pakai,” *Jurnal Rekayasa Sistem Industri*, vol. 11, no. 2, hlm. 157–166, Okt 2022, doi: 10.26593/jrsi.v11i2.5750.157-166.
- [46] R. Ghanim, C. Budiyanoro, dan H. Sosiati, “KOMPARASI PARAMETER INJEKSI OPTIMUM PADA LDPE RECYCLED DAN VIRGIN MATERIAL,” *Jurnal Material dan Proses Manufaktur*, vol. 1, no. 1, hlm. 21–30, Jun 2017, Diakses: 13 April 2024. [Daring]. Tersedia pada: <http://journal.umy.ac.id/index.php/jmpm>
- [47] A. Nouri, A. Rohani Shirvan, Y. Li, dan C. Wen, “Biodegradable metallic suture anchors: A review,” *Smart Materials in Manufacturing*, vol. 1, hlm. 100005, 2023, doi: 10.1016/j.smmf.2022.100005.
- [48] F. I. Aryanti dan E. C. Pasya, “Purge material berbasis campuran recycled HDPE dan lempung kaolin untuk ekstrusi polipropilena dan masterbatch,” *Majalah Kulit, Karet, dan Plastik*, vol. 37, no. 1, hlm. 17, Jul 2021, doi: 10.20543/mkcp.v37i1.6657.
- [49] P. B. Pathare, U. L. Opara, dan F. A. J. Al-Said, “Colour Measurement and Analysis in Fresh and Processed Foods: A Review,” 1 Januari 2013, *Springer Science and Business Media, LLC*. doi: 10.1007/s11947-012-0867-9.
- [50] Y. Kanbur dan U. Tayfun, “Development of multifunctional polyurethane elastomer composites containing fullerene: Mechanical, damping, thermal,

- and flammability behaviors,” *Journal of Elastomers and Plastics*, vol. 51, no. 3, hlm. 262–279, Apr 2019, doi: 10.1177/0095244318796616.
- [51] ASTM D1238-23, “Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer 1,” vol. 23, hlm. 1–11, doi: 10.1520/D1238-2.
- [52] S. M. Syam, R. S. Hapeni, dan C. M. Eka, “Pengaruh Suhu Dalam Penentuan Kapasitas Panas Kalorimeter dan Hubungan Konsentrasi NaOH Dalam Penentuan Panas Pelarutan juga Panas Netralisasi,” *SENASTITAS III*, hlm. 1–7, Mar 2023.
- [53] C. Leyva-Porras *dkk.*, “Application of differential scanning calorimetry (DSC) and modulated differential scanning calorimetry (MDSC) in food and drug industries,” 1 Januari 2020, *MDPI AG*. doi: 10.3390/polym12010005.
- [54] G. Lawer-Yolar, B. Dawson-Andoh, dan E. Atta-Obeng, “Novel phase change materials for thermal energy storage: Evaluation of tropical tree fruit oils,” *Biotechnology Reports*, vol. 24, Des 2019, doi: 10.1016/j.btre.2019.e00359.
- [55] M. Asensio, V. Costa, A. Nohales, O. Bianchi, dan C. M. Gómez, “Tunable structure and properties of segmented thermoplastic polyurethanes as a function of flexible segment,” *Polymers (Basel)*, vol. 11, no. 12, Des 2019, doi: 10.3390/polym11121910.
- [56] M. Pluta, J. Bojda, E. Piorkowska, M. Murariu, L. Bonnaud, dan P. Dubois, “The effect of halloysite nanotubes and N,N'- ethylenebis (stearamide) on the properties of polylactide nanocomposites with amorphous matrix,” *Polym Test*, vol. 61, hlm. 35–45, Agu 2017, doi: 10.1016/j.polymertesting.2017.04.016.
- [57] G. de Avila Bockorny, M. M. C. Forte, S. Stamboroski, M. Noeske, A. Keil, dan W. L. Cavalcanti, “Modifying a thermoplastic polyurethane for improving the bonding performance in an adhesive technical process,” *Applied Adhesion Science*, vol. 4, no. 1, 2016, doi: 10.1186/s40563-016-0060-x.
- [58] A. M. Ferreira, I. Sucena, V. Otero, E. M. Angelin, M. J. Melo, dan J. A. P. Coutinho, “Pretreatment of plastic waste: Removal of colorants from hdpe using biosolvents,” *Molecules*, vol. 27, no. 1, Jan 2022, doi: 10.3390/molecules27010098.
- [59] Z. Vuluga *dkk.*, “Morphological and tribological properties of PMMA/halloysite nanocomposites,” *Polymers (Basel)*, vol. 10, no. 8, Jul 2018, doi: 10.3390/polym10080816.
- [60] C. Agbo, W. Jakpa, B. Sarkodie, A. Boakye, dan S. Fu, “A Review on the Mechanism of Pigment Dispersion,” *J Dispers Sci Technol*, vol. 39, no. 6, hlm. 874–889, Jun 2018, doi: 10.1080/01932691.2017.1406367.