

DAFTAR PUSTAKA

1. Kowara, R.A., *Analisis Sistem Proteksi Kebakaran Sebagai Upaya Pencegahan Dan Penanggulangan Kebakaran*. Jurnal Manajemen Kesehatan Yayasan RS. Dr. Soetomo, 2017. **3**(1): p. 69-84.
2. Nasional, B.S., *SNI 03-1736-2000. Tata Cara Perencanaan Sistem Proteksi Pasif Untuk Pencegahan Bahaya Kebakaran Pada Bangunan Rumah Dan Gedung*, 2000.
3. Mustika, S.W., R.S. Wardani, and D.B. Prasetyo, *Penilaian Risiko Kebakaran Gedung Bertingkat*. Jurnal Kesehatan Masyarakat Indonesia, 2018. **13**(1).
4. Jakarta, B.K.d.I.D.P.K.d.P.P.D. *Kaleidoskop Kejadian Kebakaran di Provinsi DKI Jakarta Selama Tahun 2023*. 2024.
5. Nelfira, W. *788 Kebakaran Terjadi di Jakarta Selama 2024, Paling Banyak Akibat Korsleting Listrik*. 2025.
6. Zulfar, M.H. and A. Gunawan, *Evaluasi Sistem Proteksi Kebakaran pada Bangunan Hotel UNY 5 Lantai Di Yogyakarta*. Semesta Teknik, 2018. **21**(1): p. 65-71.
7. Farida, F., A. Sofwan, and A. Surahman, *A review of preliminary experimental factors of making geopolimer paste as passive fire protection system* Int. Journal on Advance Science Engineering Information Technology, 2021. **11**(2): p. 674-681.
8. Jamal, M., M. Indra, and F.N. Abdi, *Analisis Variasi Kandungan Semen Terhadap Kuat Tekan Beton Ringan Agregat Pumice Dan Material Lokal*. JURNAL SIPIL SAINS, 2023. **13**(1).
9. Miller, S.A., et al., *Cement and Alternatives in the Anthropocene*. Annual Review of Environment and Resources, 2024. **49**.
10. Ekaputri, J.J. and O. Damayanti, *Sifat mekanik beton geopolimer berbahan dasar fly ash jawa power paiton sebagai material alternatif*. Jurnal Pondasi, 2007. **13**(2): p. 124-134.
11. Utami, N.M., M.A. Baihaki, and D. Nurtanto, *Korelasi Kuat Tekan Beton Dan Ketahanan Sulfat Pada Beton Normal Dengan Penambahan Kaolin Sebagai Substitusi Parsial Semen*. Teras Jurnal: Jurnal Teknik Sipil, 2023. **13**(1): p. 173-182.
12. Risdanareni, P., P. Puspitasari, and E.J. Jaya. *Chemical and physical characterization of fly ash as geopolimer material*. in *MATEC Web of Conferences*. 2017. EDP Sciences.
13. INDONESIA, K.S.N.R., *Peraturan Pemerintah (PP) Nomor 22 Tahun 2021 tentang Penyelenggaraan Perlindungan dan Pengelolaan Lingkungan Hidup*, K.S.N.R. INDONESIA, Editor. 2021: Jakarta.
14. Setiawati, M., S. Martini, and R. Nurulita, *Variasi Molaritas Naoh Dan Alkali Aktivator Beton Geopolimer*. Jurnal deformasi, 2022. **7**(1): p. 56-64.
15. Hamdi, F., et al., *Teknologi Beton*. 2022: Tohar Media.

16. Erdoğan, S. *Use of perlite to produce geopolymers*. in *31st Cement and Concrete Science Conference, Novel Developments and Innovation in Cementitious Materials*, London. 2011.
17. Aziz, A., et al., *Effect of acidic volcanic perlite rock on physio-mechanical properties and microstructure of natural pozzolan based geopolymers*. *Case Studies in Construction Materials*, 2021. **15**: p. e00712.
18. Tayeh, B.A., et al., *Influence of microsilica and polypropylene fibers on the fresh and mechanical properties of ultra-high performance geopolymer concrete (UHP-GPC)*. *Case Studies in Construction Materials*, 2022. **17**: p. e01367.
19. Aulia, T.B., et al., *Analisis Kuat Tekan Beton Mutu Tinggi Pasca Bakar Menggunakan Serat Polypropylene*. *Media Komunikasi Teknik Sipil*, 2020. **26**(1): p. 118-127.
20. Lahoti, M., et al., *Effects of Si/Al molar ratio on strength endurance and volume stability of metakaolin geopolymers subject to elevated temperature*. *Ceramics International*, 2018. **44**(5): p. 5726-5734.
21. Ali, A., Y.W. Chiang, and R.M. Santos, *X-ray diffraction techniques for mineral characterization: A review for engineers of the fundamentals, applications, and research directions*. *Minerals*, 2022. **12**(2): p. 205.
22. Khan, H., et al., *Experimental methods in chemical engineering: X-ray diffraction spectroscopy—XRD*. *The Canadian journal of chemical engineering*, 2020. **98**(6): p. 1255-1266.
23. Hasyim, A. and D. Kartikasari, *Pembuatan Beton Campuran Styrofoam Menggunakan Agregat Pasir Bengawan Solo*. *UKaRsT*, 2020. **4**(1): p. 27-38.
24. Indonesia, S.N., *SNI-03-2847-2002-Tata Cara Perhitungan Struktur Beton Untuk Bangunan Gedung*, in *Jakarta Badan Standar Nas*. 2002.
25. Amelia, R., S. Suhendra, and K.R. Amalia, *Hubungan Faktor-Faktor yang Mempengaruhi Kuat Tekan Beton*. *Jurnal Talenta Sipil*, 2021. **4**(2): p. 225-235.
26. Arkis, Z., *Pengaruh metode perawatan beton terhadap kuat tekan beton normal*. *Jurnal Teknik Sipil Institut Teknologi Padang*, 2020. **7**(2): p. 5-5.
27. Davidovits, J., *Geopolymers: inorganic polymeric new materials*. *Journal of Thermal Analysis and calorimetry*, 1991. **37**(8): p. 1633-1656.
28. Li, Z., Z. Ding, and Y. Zhang. *Development of sustainable cementitious materials*. in *Proceedings of international workshop on sustainable development and concrete technology, Beijing, China*. 2004.
29. Munir, M., *Pemanfaatan abu batubara (fly ash) untuk hollow block yang bermutu dan aman bagi lingkungan*. 2008, program Pascasarjana Universitas Diponegoro.
30. Syaputra, D.A., et al., *Studi experimental pengaruh perbedaan molaritas aktivator pada perilaku beton geopolimer berbahan dasar fly ash*. *Jurnal Karya Teknik Sipil*, 2018. **7**(1): p. 89-98.

31. Bienia, J., et al., *Microstructure and corrosion behaviour of aluminum fly ash composites*. Journal of optoelectronics and advanced materials, 2003. **5**(2): p. 493-502.
32. Putera, A. and L. Herlina. *PENGARUH MOLARITAS TERHADAP KUAT TARIK BELAH BETON GEOPOLIMER DENGAN CAMPURAN DUA TIPE FLYASH YANG BERBEDA*. in *Prosiding Seminar Intelektual Muda*. 2021.
33. Irani, M., M. Amjadi, and M.A. Mousavian, *Comparative study of lead sorption onto natural perlite, dolomite and diatomite*. Chemical Engineering Journal, 2011. **178**: p. 317-323.
34. Angelopoulos, P.M., D.I. Gerogiorgis, and I. Paspaliaris, *Mathematical modeling and process simulation of perlite grain expansion in a vertical electrical furnace*. Applied Mathematical Modelling, 2014. **38**(5-6): p. 1799-1822.
35. Singh, M. and M. Garg, *Perlite-based building materials—a review of current applications*. Construction and Building Materials, 1991. **5**(2): p. 75-81.
36. Torab-Mostaedi, M., et al., *Removal of strontium and barium from aqueous solutions by adsorption onto expanded perlite*. The Canadian journal of chemical engineering, 2011. **89**(5): p. 1247-1254.
37. Kabra, S., S. Katara, and A. Rani, *Characterization and study of Turkish perlite*. International Journal of Innovative Research in Science, Engineering and Technology, 2013. **2**(9): p. 4319-4326.
38. Darmawan, D.A., et al. *Characterization of perlite and expanded perlite from West Sumatera, Indonesia*. in *IOP Conference Series: Earth and Environmental Science*. 2021. IOP Publishing.
39. Apriyatno, H., *KAPASITAS GESER BALOK BETON BERTULANG DENGAN OLYPROPYLENE FIBER SEBESAR 4% DARI VOLUME BETON*. Jurnal Teknik Sipil dan Perencanaan, 2010. **12**(2).
40. Sabara, A.I.R., et al., *Studi Eksperimental Pengaruh Variasi Panjang Polypropylene Fibre terhadap Performa Beton*. RekaRacana: Jurnal Teknil Sipil, 2023. **9**(2): p. 125.
41. Latifi, M.R., Ö. Biricik, and A. Mardani Aghabaglou, *Effect of the addition of polypropylene fiber on concrete properties*. Journal of Adhesion Science and Technology, 2022. **36**(4): p. 345-369.
42. Liu, Y., et al., *Review on the Durability of Polypropylene Fibre-Reinforced Concrete*. Advances in Civil Engineering, 2021. **2021**(1): p. 6652077.
43. Mohammadhosseini, H., et al., *Durability and thermal properties of prepacked aggregate concrete reinforced with waste polypropylene fibers*. Journal of Building Engineering, 2020. **32**: p. 101723.
44. Jurnal, R.T. *Analisis Pengaruh Besar Butiran Agregat Kasar Terhadap Kuat Tekan Beton Normal: Ika Sulianti, Amiruddin, Rio Shaputra, Daryoko*. in *Forum Mekanika*. 2018.

45. Nasional, B.S., *SNI 03-6820-2002 Spesifikasi agregat halus untuk pekerjaan adukan dan plesteran dengan bahan dasar semen*. Badan Standardisasi Nasional. Jakarta: Badan Standardisasi Nasional, 2002.
46. He, H., et al., *Shape analysis of fine aggregates used for concrete*. Image Analysis and Stereology, 2016. **35**(3): p. 159-166.
47. Xie, J. and O. Kayali, *Effect of initial water content and curing moisture conditions on the development of fly ash-based geopolymers in heat and ambient temperature*. Construction and building materials, 2014. **67**: p. 20-28.
48. Nasional, B.S., *SNI 03-2461-2014 Spesifikasi agrgat ringan untuk beton struktural*. badan Standardisasi Nasional Indonesia. Jakarta : Badan Standardisasi Nasional, 2014.
49. Hamidi, R.M., Z. Man, and K.A. Azizli, *Concentration of NaOH and the effect on the properties of fly ash based geopolymer*. Procedia engineering, 2016. **148**: p. 189-193.
50. Kristy, D.P. and R. Zainul, *Analisis Molekular dan Transpor Ion Natrium Silikat*. 2019.
51. Zerfu, K. and J.J. Ekaputri. *Review on alkali-activated fly ash based geopolymer concrete*. in *Materials Science Forum*. 2016. Trans Tech Publ.
52. Ekaputri, J.J. and T. Triwulan, *Sodium sebagai aktivator fly ash, Trass dan Lumpur Sidoarjo dalam beton geopolimer*. Jurnal Teknik Sipil ITB, 2013. **20**(1): p. 1-10.
53. Polii, R.A., M.D. Sumajouw, and R.S. Windah, *Kuat tekan beton dengan variasi agregat yang berasal dari beberapa tempat di Sulawesi Utara*. Jurnal Sipil Statik, 2015. **3**(3).
54. Rozi, M.F., J. Tarigan, and A. Perwira, *Analisis Sifat Mekanik Beton Geopolymer Berbahan Dasar Fly Ash PLTU Pangkalan Susu*. . 2020. **1**(5): p. 567-579.
55. Mooy, M., P.H. Simatupang, and J.H. Frans, *Pengaruh Suhu Curing Beton Terhadap Kuat Tekan Beton*. Jurnal Teknik Sipil, 2017. **6**(1): p. 47-60.
56. Panjaitan, P.E. and L. Herlina, *Review Faktor-Faktor yang Mempengaruhi Karakteristik Kuat Tekan Beton Geopolimer*. Jurnal Rekayasa Konstruksi Mekanika Sipil, 2020. **3**(2): p. 65-79.
57. Setyowati, E.W. and R. Anggraini, *Pengaruh Perbedaan Proses Pendinginan Terhadap Perubahan Fisik Dan Kuat Tekan Beton Pasca Bakar*. Rekayasa Sipil, 2010. **4**(1): p. 1-9.
58. Nasional, B.S., *SNI 1974-2011 Cara Uji Kuat Tekan Beton dengan Benda Uji Silinder*. Badan Standardisasi Nasional Indonesia, 2011. **20**.
59. Oktamuliani, S., et al., *Identifikasi mineral pada batuan granit di geopark merangin provinsi jambi menggunakan x-ray diffraction (XRD) dan scanning electron microscopy*. Journal Online of Physics, 2015. **1**(1): p. 12-17.

60. Bunaciu, A.A., E.G. Udriștioiu, and H.Y. Aboul-Enein, *X-ray diffraction: instrumentation and applications*. Critical reviews in analytical chemistry, 2015. **45**(4): p. 289-299.
61. Ameh, E., *A review of basic crystallography and x-ray diffraction applications*. The international journal of advanced manufacturing technology, 2019. **105**(7): p. 3289-3302.
62. Agustianti, R., et al., *Metode Penelitian Kuantitatif Dan Kualitatif*. 2022: Tohar Media.
63. Zaiyar, *KRISTALINITAS MEMBRAN HIBRID POLISULFON-LEMPUNG PADA MEDIA KOAGULASI AIR DAN CAMPURAN AIR-2PROPANOL*. Jurnal Photon, 2015. **6**(1): p. 1-4.
64. Mukminin, A., *Analisis komposisi fasa dan parameter unit sel kristal hasil kalsinasi suhu tinggi abu cangkang (Paguroidea) dengan metode rietveld*. JST (Jurnal Sains Terapan), 2019. **5**(1): p. 44-48.
65. Setyaningrum, D. and Z. Anisa, *Analisis Struktur Kristal Silika (SiO₂) Pasir Pantai Dogolan Menggunakan Metode Rietveld*. Jurnal Sains dan Edukasi Sains, 2025. **8**(1): p. 7-12.
66. Photisan, M.S. and O. Sangphong, *Strength Development of Fly Ash-Perlite Based Geopolymer Mortar Using Recycled Waste Glass as Fine Aggregate*. Asian Health, Science and Technology Reports, 2023. **31**(1): p. 1-9.

