

- Akyıldız, M.H., Yetiz, F., 2022. A Comparison of EPS Geofoam Filling material and Ground Filling Materials in Terms of Economic and Transport Strength Deformation. *Arabian Journal of Geosciences* 15. <https://doi.org/10.1007/s12517-022-10838-4>
- Alragi, A.F., Elkholy, S.M., 2017. Reducing Dynamic Lateral Loads on Earth Retaining Structures Utilizing EPS Geofoam.
- American Society for Testing and Materials (ASTM C 578-95), 1995. Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- American Society for Testing and Materials (ASTM D 7012), 2014. Standard Test Method for Compressive Strength and Elastic Modulus of Intact Rock Core Specimens under Varying States of Stress and Temperatures. West Conshohocken.
- Anwar, M.B.E.-D., Abdelsalam, S.S., Eskander, S.S., 2019. Use of EPS for Roadway Embankments on Soft Soils.
- Arellano, D., Stark, T.D., Horvath, J.S., Leshchinsky, D., 2013. Guidelines for Geofoam Applications in Slope Stability Projects. Transportation Research Board, Washington, D.C. <https://doi.org/10.17226/22630>
- Badan Standardisasi Nasional, 2020. Standar Nasional Indonesia 8899:2020 Tata Cara Pemilihan dan Modifikasi Gerak Tanah Permukaan Untuk Perencanaan Gedung Tahan Gempa, 1 ed. Badan Standardisasi Nasional, Jakarta.
- Badan Standardisasi Nasional, 2019. Standar Nasional Indonesia 1726:2019 Tata Cara Perencanaan Ketahanan Gempa Untuk Struktur Bangunan Gedung dan Nongedung, 1 ed. Badan Standardisasi Nasional, Jakarta.
- Badan Standardisasi Nasional, 2017. Standar Nasional Indonesia 8460:2017 Persyaratan Perancangan Geoteknik, 1 ed. Badan Standardisasi Nasional, Jakarta.
- Barrett, J.C., Valsangkar, A.J., 2009. Effectiveness of Connectors in Geofoam Block Construction. *Geotextiles and Geomembranes* 27, 211–216. <https://doi.org/10.1016/j.geotexmem.2008.11.010>



- Beju, Y.Z., Mandal, J.N., 2017. Expanded Polystyrene (EPS) Geofoam: Preliminary Characteristic Evaluation, dalam: *Procedia Engineering*. Elsevier Ltd, hlm. 239–246.
<https://doi.org/10.1016/j.proeng.2017.05.038>
- Bowles, J.E., 1996. *Foundation analysis and design*. McGraw-Hill.
- Bowles, J.E., 1979. *Physical and Geotechnical Properties of Soils*, 1 ed. McGraw Hill International Book Company, Tokyo.
- Budhu, M., 2010. *Soil Mechanics and Foundations*, 3 ed. John Wiley & Sons, Inc., Hoboken.
- Cao, W., Zheng, J., Yu, H., Zhang, J., 2016. Numerical Analysis of the Embankment Suffering Heavy Asymmetric Traffic Load, dalam: *1st International Conference on Transportation Infrastructure and Materials*. hlm. 38–46.
- Darwis, 2018. *Dasar-Dasar Mekanika Tanah*, 1 ed. Pena Indis, Makassar.
- Das, B.M., 2008. *Advanced Soil Mechanics*, 3 ed.
- Das, B.M., 1995. *Mekanika Tanah (Prinsip-prinsip Rekayasa Geoteknis)*, 1 ed. Penerbit Erlangga, Jakarta.
- Das, B.M., Ramana, G. V., 2011. *Principles of Soil Dynamics*, 2 ed. Cengage Learning, Stamford.
- El-Kady, M.S., Badrawi, E.F., 2014. International Conference on Civil and Architecture Engineering Effect of Geofoam on Slope Stabilizing, dalam: *10th ICCAE-10-2014 International Conference on Civil and Architecture Engineering*. hlm. 27–29.
- Elragi, A., Negussey, D., Kyanka, G., 2001. Sample Size Effects on the Behavior of EPS Geofoam, dalam: *Soft Ground Technology*. American Society of Civil Engineers, Reston, VA, hlm. 280–291. [https://doi.org/10.1061/40552\(301\)22](https://doi.org/10.1061/40552(301)22)
- Elragi, A.F., 2006. *Selected Engineering Properties and Applications of EPS Geofoam*.
- Engineered Foam Products, 2023. *Technical Datasheet EPS Geofoam*.
- Eslamian, S., 2014. *Handbook of Engineering Hydrology*, 1 ed. CRC Press, Boca Raton.
<https://doi.org/10.1201/b15625>



Frydenlund, T.E., Aabø, R., 2001. Long Term Performance and Durability of EPS as a Lightweight Filling Material.

Gouw, T.-L., Gunawan, A., 2019. Protection of Slope Surface With Geofoam Versus Compacted-Fill, dalam: Advancement of Research, Practice, and Integrated Solution on Landslide. Bali, hlm. D51–D58.

Gunawan, A., 2020. Geofoam: A potential for Indonesia's soil problem, dalam: IOP Conference Series: Earth and Environmental Science. Institute of Physics Publishing. <https://doi.org/10.1088/1755-1315/426/1/012004>

Hardiyatmo, H.C., 2019. Mekanika Tanah 1, 7 ed. Gadjah Mada University Press, Yogyakarta.

Hatanaka, M., Uchida, A., 1996. Empirical Correlation Between Penetration Resistance and Internal Friction Angle of Sandy Soils. *Soils and Foundations* 36, 1–9.

Hunt, R.E., 2005. Geotechnical Investigation Methods A Field Guide for Geotechnical Engineers, 2 ed. CRC Press Taylor & Francis Group, Boca Raton.

Irsyam, M., Sengara, W., Aldiamar, F., Widiyantoro, S., Triyoso, W., Hilman, D., Kertapati, E., Meilano, I., Asrurifak, M., Ridwan, M., 2010. Ringkasan Hasil Studi Tim Revisi Peta Gempa Indonesia 2010. Bandung.

Jahanandish, M., Zeydabadinejad, M., 2019. An Investigation on the Effect of Intermediate Principal Stress on the Solution of Bearing Capacity Problems by the Method of Stress Characteristics. *Geotechnical and Geological Engineering* 37, 4211–4227. <https://doi.org/10.1007/s10706-019-00901-5>

Karol, R.H., 2013. *Soils And Soil Engineering*, 2 ed. Literary Licensing, LLC, Whitefish.

Kontoe, S., Pelecanos, L., Potts, D., 2013. An Important Pitfall of Pseudo-Static Finite Element Analysis. *Comput Geotech* 48, 41–50. <https://doi.org/10.1016/j.compgeo.2012.09.003>

Kramer, S.L., 1996. *Geotechnical Earthquake Engineering*, 1 ed. Prentice-Hall, Inc., New Jersey.

Laboratorium Mekanika Tanah Departemen Teknik Sipil dan Lingkungan Universitas Gadjah Mada, 2022. Laporan Hasil Uji Laboratorium Mekanika Tanah Departemen Teknik Sipil dan Lingkungan Fakultas Teknik Universitas Gadjah Mada. Yogyakarta.



Lacasse, S.L.T., 1988. Use of In Situ Tests For Foundation Design On Clay. International Journal of Rock Mechanics and Mining Sciences & Geomechanics Abstracts 25, A8.
[https://doi.org/10.1016/0148-9062\(88\)92781-7](https://doi.org/10.1016/0148-9062(88)92781-7)

Lambe, W.T., Whitman, R. V., 1969. Soil Mechanics, 1 ed. John Wiley & Sons, New York.

Lestari, A.S., Clementio, J., 2018. Efek EPS Geofoam Sebagai Material Pengisi Terhadap Nilai CBR Laboratorium Pada Tanah Kohesif Daerah Bandung. Geotechnical Engineering Journal of the SEAGC 2018.

Logan, D.L., 2007. A First Course in The Finite Element Method, 4 ed. Thomson, Toronto.

Look, B.G., 2007. Handbook of Geotechnical Investigation and Design Tables, 1 ed. Taylor & Francis Group, Leiden.

Maulana, A., Mochtar, N.E., Kumalasari, P.T., 2019. Alternatif Perencanaan Timbunan dan Perbaikan Tanah Dasar pada Jalan Tol Krian Legundi Bunder Manyar (STA 12+343 s/d STA 12+684). Jurnal Teknik ITS 8, E160–E167.

Meguid, M.A., Khan, M.I., 2019. On the Role of Geofoam Density on the Interface Shear Behavior of Composite Geosystems. International Journal of Geo-Engineering 10.
<https://doi.org/10.1186/s40703-019-0103-9>

Melo, C., Sharma, S., 2004. Seismic Coefficients for Pseudostatic Slope Analysis, dalam: 13th World Conference on Earthquake Engineering. Vancouver.

MIDAS IT Co. Ltd., 2019. Midas GTS NX Analysis Reference.

NCHRP REPORT 529, 2004. Guideline and Recommended Standard for Geofoam Applications in Highway Embankments. Washington, D.C.

Ossa, A., Romo, M.P., 2009. Micro- and Macro-Mechanical Study of Compressive Behavior of Expanded Polystyrene Geofoam. Geosynth Int 16, 327–338.
<https://doi.org/10.1680/gein.2009.16.5.327>

Partono, W., 2015. Pembuatan Peta Mikrozonasi Gempa Kota Semarang Melalui Pengembangan Program Seismic Hazard Dengan Mempertimbangkan Kondisi Fragility Bangunan (Disertasi). Universitas Diponegoro, Semarang.



Peck, R.B., Walter E. Hanson, Thomas H. Thornburn, 1974. *Foundation Engineering*, 2 ed. Wiley and Sons Inc., New York.

PT. Cipta Strada kso, 2021. *Laporan Faktual Survey Geolistrik Rencana Teknik Akhir (RTA) Pembangunan Jalan Tol Yogyakarta - Bawen*. Jakarta.

Puppala, A.J., Ruttanaporamakul, P., Congress, S.S.C., 2019. Design and Construction of Lightweight EPS Geofoam Embedded Geomaterial Embankment System for Control of Settlements. *Geotextiles and Geomembranes* 47, 295–305.
<https://doi.org/10.1016/j.geotexmem.2019.01.015>

Rahman, M.M., 2020. Foundation Design Using Standard Penetration Test (SPT) N-value 1–38.
<https://doi.org/10.13140/RG.2.2.23159.73123>

Rendon-Herrero, O., 1981. Universal Compression Index Equation. *International Journal of Rock Mechanics and Mining Sciences & Geomechanics Abstracts* 18, 48.
[https://doi.org/10.1016/0148-9062\(81\)91042-1](https://doi.org/10.1016/0148-9062(81)91042-1)

Salem, H.S., 2000. Poisson's Ratio and The Porosity of Surface Soils and Shallow Sediments, Determined From Seismic Compressional and Shear Wave Velocities. Nova Scotia.

Sayed, S.M., Sorour, T.M., Belal, M.S., 2020. Reduction of Earth Pressure for Non-Yielding Retaining Walls using EPS Geofoam. *Int J Sci Eng Res* 11.

Simatupang, P.T., 2011. Pengaruh Arah beban Gempa pada Stabilitas Lereng, dalam: *Proceeding 9th Indonesian Geotechnical Conference and 15th Annual Scientific Meeting*. Himpunan Ahli Teknik Tanah Indonesia, Jakarta, hlm. 423–431.

Skempton, A.W., 1986. Standard Penetration Test Procedures and The Effects in Sands of Overburden Pressure, Relative Density, Particle Size, Ageing and Overconsolidation. *Géotechnique* 36, 425–447. <https://doi.org/10.1680/geot.1986.36.3.425>

Srivastava, D.K., Srivastava, A., Misra, A.K., Sahu, V., 2019. Sustainability Assessment of EPS-Geofoam in Road Construction: A Case Study. *International Journal of Sustainable Engineering* 12, 341–348. <https://doi.org/10.1080/19397038.2018.1508319>

Stark, T.D., National Cooperative Highway Research Program., National Research Council (U.S.). Transportation Research Board., 2004. *Guideline and Recommended Standard for Geofoam*

- Syahbana, A.J., Sari, A.M., Soebowo, E., Irsyam, M., Hendriyawan, H., Asrurifak, M., 2019. The Sensitivity of Earthquake Input Motion Correlation With Arias Intensity and Amplification, Case Study: Yogyakarta Special Region, dalam: Journal of Physics: Conference Series. Institute of Physics Publishing. <https://doi.org/10.1088/1742-6596/1280/2/022069>
- Tefera, T.H., Aabøe, R., Bruun, H., Aunaas, K., 2011. FEM simulation of full scale and laboratory models test of EPS. Norway.
- Terzaghi, K., Peck, R.B., Mesri, G., 1996. Soil Mechanics in Engineering Practice, 3 ed. John Wiley & Sons, Inc., London.
- Van Dorp, T., 1988. Expanded Polystyrene Foam as Light Weight Fill and Foundation Material in Road Structures. Chemical Research Centre, Shell Louvain-la-Neuve, Belgium.