

# Prosiding Sri Wiwoho Mudjanarko 29

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## Plastic Waste of Low Density Polyethylene (Ldpe) Types in Asphalt Mixture

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### Abstract

Road damage is often one of the causes of accidents. Road damage is a lot of damaged factors which cause overloading of vehicles and changes in weather (rain). Almost half of the road surface in Indonesia is flexible pavement. Flexible pavement made of asphalt is easily damaged. The limitation of providing asphalt as a component of the main material has become a separate obstacle. One step that can be done is to test plastic waste material (LDPE) as a mixture of asphalt. The purpose of this research is to find out the most ideal cost in making plastic asphalt. Research method in the form of experiments by means of experiments in the laboratory to obtain the desired plastic composition. The optimum composition and content of asphalt are used with the addition of percentage variations of 6, 7, and 8% of LDPE (low density polyethylene) type plastic waste in hot asphalt mixtures for AC-WC (asphalt concrete wearing coarse) layers. Wear layer which must be fulfilled by the special hot interim mix asphalt specification standard using Plastic Waste Directorate General of Highways 2017.

### Keywords

Plastic Waste, LDPE (low density polyethylene), hot asphalt, Bina Marga 2017.

## **Biography**

**Zulfawardi** is a Bachelor of Civil Engineering, Narotama University and a Master of Civil Engineering degree in Institut Teknologi Sepuluh Nopember. He is an engineering officer of Bina Marga East Java Province of Indonesia

**Koespiadi** is a Lecturer / Supervisor, Departement of Civil Engineering, Narotama University, Surabaya Indonesia. Mr. Koespiadi holds a Bachelor of Civil Engineering degree in Civil Engineering from Institut Teknologi Sepuluh Nopember, a Master of Construction Management degree in Universitas 17 Agustus 1945 Surabaya dan a Doctor of Construction Management degree in Tarumanegara University, Indonesia. He has been recognized as a professional construction management consultant with more than 18 years of experience working with closely held businesses. He is member of the INTAKINDO Consultant Indonesia.

**Sri Wiwoho Mudjanarko**, is a Lecturer, Departement of Civil Engineering, Narotama University, Surabaya Indonesia. Sri Wiwoho Mudjanarko holds a Bachelor of Civil Engineering degree in Civil Engineering from Narotama University, a Master of Civil Engineering degree in Institut Teknologi Sepuluh Nopember dan a Doctor of Civil Engineering degree in University of Brawijaya, Indonesia. He has been recognized as a professional engineer with more than 27 years of experience working with closely held businesses. He is a member of the Indonesian Railway Society (MASKA) Indonesia.

**M. Ikhsan Setiawan** is a Lecturer / Supervisor, Departement of Civil Engineering, Narotama University, Surabaya Indonesia. Mr. M. Ikhsan Setiawan holds a Bachelor of Civil Engineering degree in Civil Engineering from University of Merdeka Malang, a Master of Construction Management degree in Indonesia University dan a Doctor of Construction Management degree in Tarumanegara University, Indonesia. He has been recognized as a professional construction management consultant with more than 8 years of experience working with closely held businesses.

**Agus Sukoco** is a Lecturer/Supervisor at Faculty of Economics and Business, Universitas Narotama, Surabaya Indonesia. He holds a Bachelor of Naval Engineering degree in Naval Engineering from Institut Teknologi Sepuluh Nopember, a Master of Management Business degree in Universitas Narotama and a Doctoral Student of Management Business degree in STESIA, Indonesia. He has been recognized as a professional construction management consultant with more than 18 years of experience working with closely held businesses. He is also a member of INTAKINDO Consultant Indonesia.

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**Prof. Dr. Abdul Talib Bin Bon** is a Professor Management from Faculty Management of Technology and Private Vocational School, Department of Position and Manufacture of Expertise Field, Economics, Business and Management, Operations Management. Field Of Specialization Operations Research / Management, Qualification Institution 2008 Doctor Falsafah Computer Science Universite De La Rochelle, 1998 Graduate Private Vocational School Of Universiti Kebangsaan Malaysia, 1991 Youth Mechanical Private Vocational School Universiti Technology Malaysia, Year 1986 Malaysia Mechanical Diploma Of Mechanical Teachers.

**Firdaus Pratama Wiwoho** is a Bachelor Student of Environmental Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

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