

Executive Summary

LEAD PAINT IN INDONESIA 2021

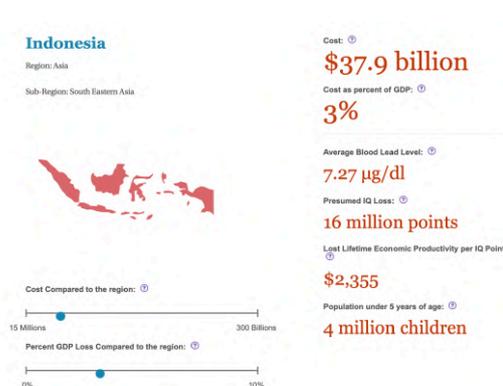
Background

Lead is a toxic metal that causes adverse effects on both human health and the environment. While lead exposure is also harmful to adults, lead exposure harms children at much lower levels, and the health effects are generally irreversible and can have a lifelong impact.

The younger the child, the more harmful lead can be, and children with nutritional deficiencies absorb ingested lead at an increased rate. The human fetus is the most vulnerable, and a pregnant woman can transfer lead that has accumulated in her body to her developing child.

Evidence of reduced intelligence caused by childhood exposure to lead has led the World Health Organization (WHO) to list “lead-caused mental retardation” as a recognized disease. WHO also lists it as one of the top ten diseases whose health burden among children is due to modifiable environmental factors.

Lead paint is a major source of childhood lead exposure. The term lead paint is used in this report to describe any paint to which one or more lead compounds have been added. The cut-off concentration for lead paint used in the report is 90 parts per million (ppm, dry weight of paint), the strictest legal limit enacted in the world today.



Most highly industrial countries adopted laws or regulations to control the lead content of decorative paints—the paints used on the interiors and exteriors of homes, schools, and other child-occupied facilities—beginning in the 1970s and 1980s. In Indonesia, there is currently no regulation limiting the amount of lead in paint for all uses.

When this report is being prepared, the National Standardisation Agency of Indonesia (*Badan Standarisasi Nasional/BSN*) is in the process of approving a stricter voluntary national standard, RSNI3 8011:2021, that limits the content of lead in enamel decorative paints produced in Indonesia to 90 ppm—a revision of SNI 8011:2014 which set a 600 ppm limit on lead in enamel decorative paints in 2014.

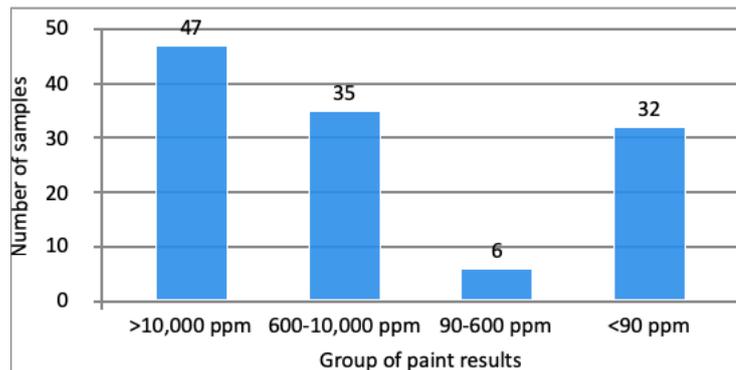
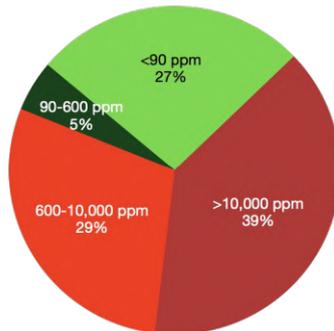
Sampling method

This study was conducted from March 2020 to March 2021 during the COVID-19 pandemic lockdowns and restrictions. The Nexus3 team purchased 115 cans of solvent-based paint sold for home use from stores in 10 cities in Indonesia—Jakarta, Bogor, Depok, Tangerang, Bekasi, Bandung, Yogyakarta, Surabaya, Sidoarjo, and Denpasar.



The paints represented 64 different brands produced by 47 manufacturers. An accredited laboratory analyzed all samples in the United States of America for their lead content based on the dry weight of the paint. The laboratory participates in the Environmental Lead Proficiency Analytical Testing (ELPAT) program operated by the American Industrial Hygiene Association (AIHA), assuring the reliability of the analytical results.

Results



- 23 out of 101 solvent-based paints for home use (23 percent of paints) contained lead concentrations at or below 90 ppm, suggesting that the technology to produce paint without lead ingredients exists in Indonesia.
- 88 out of 120 analyzed paints for home use and industrial purposes (73% of paints) were lead paints, i.e., they contained lead concentrations above 90 parts per million (ppm, of dry weight paint). The concentration of 90 ppm is the regulatory limit for lead in decorative paint in many countries, e.g., India, the Philippines, and the United States of America.
- 47 paints (39% of paints) contained extremely high lead concentrations above 10,000 ppm. The highest lead concentrations detected were **250,000 ppm in a yellow road-line industrial paint**, and **150,000 ppm in a yellow decorative paint** sold for home use. Both paints were manufactured by Japan-based companies.
- 54 out of 66 analyzed brands (82% of paint brands) sold at least one lead paint, i.e., paint with a lead concentration above 90 ppm.
- 38 out of 66 analyzed brands (58% of paint brands) sold at least one lead paint with extremely high lead concentrations above 10,000 ppm.

The most dangerous colors:

- 10 out of 11 orange paints (91% of orange paints) contained lead levels above 10,000 ppm;
- 24 out of 41 yellow paints (59% of yellow paints) contained lead levels above 10,000 ppm;
- 4 out of 7 green paints (57% of green paints) contained lead levels above 10,000 ppm; and
- 9 out of 45 red paints (20% of red paints) contained lead levels above 10,000 ppm.



Comparison of Lead Concentration in New Solvent-Based Paints from Current Study (2021) with Earlier Studies (2015 and 2013)

Data	2021 Study	2015 Study	2013 Study
Number of paint samples	120	121	78
Number of brands	66	63	43
Percentage of paints with lead below 90 ppm (number of paints)	27% (n=32)	17% (n=20)	23% (n=18)
Percentage of paints with lead above 90 ppm (number of paints)	73% (n=88)	83% (n=101)	77% (n=60)
Percentage of paints with lead above 10,000 ppm (number of paints)	39% (n=47)	41% (n=50)	33% (n=26)
Average lead concentration, ppm (decorative/solvent-based paints)	25,387	20,843	17,300
Average lead concentration, ppm (anticorrosive, industrial and spray paints)	45,000	N/A	N/A
Maximum lead concentration, ppm (brand name)	150,000 (Ftalit)	102,000 (Kuda Terbang)	116,000 (Altex)
	250,000 (Nippon road-marking paint)		

In general, paint can labels did not carry meaningful information about lead content or lead paint hazards.

- 23 out of 101 solvent-based paints (23% of paints) provided information about lead content on their labels.
- Two paints from Primatan brand contained 12,000 ppm and 8,900 ppm lead levels despite having a “no added lead” claim on its labels.
- Most warning symbols on the paint cans indicated the flammability of the paints.
- There were no further warnings about the dangers of lead and the effect of lead dust on children and pregnant women. Most paints carried little information about any ingredients on paint can labels.
- Most paints were merely labelled as “solvents, pigments, and resin,” with no further details on the type of solvents and pigments (organic or inorganic) provided on paint can labels.
- 94 out of 120 paints (78 % of paints) included the manufacturing dates or batch numbers on lables.



Recommendations

For Government and Government Agencies

Since the Global Alliance to Eliminate Lead Paint (GAELP) aimed a global goal to eliminate lead in paint by 2020,¹ the Ministry of Industry, Ministry of Trade, and Ministry of Environment and Forestry should immediately draft a regulation that will ban the manufacture, import, export, distribution, sale and use of all paints that contain total lead concentrations exceeding 90 ppm, the standard recommended in the Model Law and Guidance for Regulating Lead Paint,² developed by GAELP and published by the UN Environment Programme.

The Ministry of Environment and Forestry, Ministry of Trade, and Ministry of Health should also require paint companies to display sufficient information indicating harmful content, such as solvents, on paint can labels. To protect consumers from lead hazards, paint companies must also provide easily readable and visible labels on possible lead dust hazards when disturbing painted surfaces.

The Ministry of Trade should prohibit the importation, trade and use of lead-based pigment for paint manufactured in Indonesia. Also, prohibit the importation of lead-based paint for use and trade in Indonesia.

The Ministry of Public Works and Housings (PUPR) should include technical specifications of non-lead-based road marking paints and spray paints in all biddings. The Ministry of Public Works and Housings should also develop the guidance document for construction companies to strip off lead-based paints safely.

For Paint Industry

Paint companies that still produce lead paints should expeditiously stop using leaded paint ingredients in paint formulations. Paint companies that have shifted to non-lead paint production should get their products certified through independent, third-party verification procedures to increase the customer's ability to choose paints with no added lead.

For Individual, Household and Institutional Consumers

Paint consumers should demand paints with no added lead from paint manufacturers and retailers, and full disclosure of a paint product's content. Household and institutional consumers should ask for, consciously buy, and apply only paints with no added lead in places frequently used by children such as homes, schools, daycare centres, parks, and playgrounds.

¹ <https://sdg.iisd.org/news/global-alliance-to-eliminate-lead-paint-announces-2020-elimination-goal/>

² <https://www.unenvironment.org/resources/publication/model-law-and-guidance-regulating-lead-paint>



Consumers' rights are protected by Law No. 8 year 1999 concerning consumer protection.³ Article 7 of Law No. 8/1999 stipulates one of the obligations of producers "to provide the correct, accurate, and honest information about the condition and assurance of products or services and provide explanations on how to use, repair and maintain them."

Furthermore, Article 9 of the law stipulates that business actors are "prohibited from offering, promoting, advertising goods and/or services incorrectly, and/or as if the goods do not contain hidden defects."

For Organizations and Professional Groups

Public health groups, consumer organizations and other concerned entities should support the elimination of lead paint and conduct activities to inform the public and protect children from lead exposure through lead paint, lead in dust and soil, and other sources of lead.

All Stakeholders

All stakeholders should unite to promote a strong policy that will eliminate lead paint in Indonesia.

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³ Undang-undang Nomor 8 tahun 1999 tentang Perlindungan Konsumen. Accessed by 20 July 2021, <https://peraturan.bpk.go.id/Home/Details/45288/uu-no-8-tahun-1999>