



NATIONAL REPORT

LEAD IN INDIA'S ENAMEL HOUSEHOLD PAINTS



Toxics Link
for a toxics-free world



NATIONAL REPORT

LEAD IN INDIA'S

ENAMEL

HOUSEHOLD PAINTS

National Report - Lead in India's Enamel Household Paints

Produced as part of the Asian Lead Paint Elimination Project

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We also acknowledge the great efforts of our partners in collecting the samples from different regions of the country.

Special thanks to Toxics Link colleagues for their unfailing support in preparation of the samples and providing their valuable inputs to the report.

ABBREVIATIONS

AES	Atomic emission spectrophotometer
BIS	Bureau of Indian Standards
CDC	Centers for Disease Control and Prevention
ELPAT	Environmental Lead Proficiency Analytical Testing
EU	European Union
GAELP	Global Alliance to Eliminate Lead Paint
ICCM	International Conference on Chemicals Management
ICP	Inductively Coupled Plasma
IPEN	International POP's Elimination Network
NGO	Non Government Organization
Pb	Lead
PPM	Parts Per Million
SAICM	Strategic Approach to International Chemicals Management
SMEs	small and medium-size enterprises
SSNC	Society for Nature Conservation
UNEP	United Nations Environmental Programme
WHO	World Health Organization

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FOREWORD

This report presents new data on the lead content of household paints for sale on the Indian market. This is the fourth time that the paints have been analyzed to determine their lead content in India. Toxics Link conducted previous studies in 2007, 2009 and 2011, which included a total of 104 samples of paints including 62 enamel and 42 latex. The objective of the study carried out in year 2007 was to determine the total concentration of lead (Pb) in decorative paints of all types viz., plastic (water based or latex) and enamel (oil based) intended for residential uses. The objective of the study carried out in 2009 was to determine the total lead (Pb) concentration in new decorative paints available in various developing countries in the world in order to know the amount of lead being used in developing countries. In this study the paint samples were collected from 10 countries other than India. The objective of the study carried out in 2011 was to test the hypothesis that decorative household paints available in South Asia had varied levels of lead content across identical brands in different countries. In this study some common paint brands samples were collected from India, Bangladesh and Nepal.

This current report presents detailed findings from this most recent round of analysing household paints for lead content and compares these results with results from previous studies. We also review national policy frameworks that are in place to ban or restrict the national manufacture, import, sale and use of leaded household paints and discuss how changes in lead levels in paints that may have resulted from changes in that regulatory framework since the last study. The report also presents background information on why the use of household paints with high lead content is a source of serious concern, especially to children's health and it proposes recommendations for taking action to protect children and others from lead in paint.

The report is prepared by Toxics Link (The Just Environment Charitable Trust) with the support and assistance from the Asian Lead Paint Elimination Project. The Asian Lead Paint Elimination Project has been established to eliminate lead in paint and raise widespread awareness among business entrepreneurs and consumers about the adverse human health impacts of lead-based decorative paints, particularly on the health of children under six years old.

The Asian Lead Paint Elimination Project is being implemented by IPEN over a period of three years in seven countries (Bangladesh, India, Indonesia, Nepal, Philippines, Sri Lanka, and Thailand) with funding from the European Union (EU) totaling 1.4 million. While this publication has been produced with the assistance of the European Union, the contents of the publication are the sole responsibility of Toxics Link together with IPEN, and can in no way be taken to reflect the views of the European Union. In addition, this document was produced with financial contributions from the Swedish Environment Protection Agency, Swedish public development co-operation aid through the Swedish Society for Nature Conservation, SSNC. The views herein shall not necessarily be taken to reflect the official opinion of any of these donors, including SSNC or its donors.

Ravi Agarwal
Director, Toxics Link

EXECUTIVE SUMMARY

In November 2012 to February 2013, Toxics Link purchased 250 cans of oil-based (enamel) house paints from stores in and around Delhi, Haryana, Uttar Pradesh, Karnataka, Andhra Pradesh, Maharashtra, Gujarat and West Bengal and sent samples of the paints to be analyzed for lead content by a laboratory in Italy accredited by ACCREDIA – the Italian Accreditation System. The lab participates in the Environmental Lead Proficiency Analytical Testing (ELPAT) proficiency testing program operated by the American Industrial Hygiene Association under a system created by the US Environmental Protection Agency. Paints from 147 paint brands were analyzed. The results were compared with previous studies of lead levels in enamel household paints conducted in 2007 (published as a peer-reviewed study in 2008), 2009 and 2011 by Toxics Link, as well as two other peer-reviewed studies published in 2006 and 2009.

SUMMARY OF RESULTS OF ENAMEL PAINT LEAD LEVELS IN INDIA

Year	No. of paints analyzed	% paints with lead levels over 90 ppm	% paints with lead levels over 600 ppm	% paints with lead levels over 10,000 ppm	Highest level detected (ppm)
2013	250	90	83	44	1,60,000
2011	09 ¹	22	22	22	34,700
2009	22 ²	36	36	36	49,600
2009	72 ³	88	82	47	2,17,000
2007	31 ⁴	84	84	84	1,40,000
2006	17 ⁵	100	100	59	1,87,000

Comparison of results from paint analyzes performed in 2013, 2011, 2009, 2007 and 2006.

- 1 Double Standard: Investigating Lead (Pb) Content in Leading Enamel Paint Brands in South Asia (2011), Toxics Link, New Delhi (India).
- 2 Global Study: Lead in New Decorative Paints (2009), Toxics Link-IPEN. (http://www.ipen.org/ipenweb/documents/work%20documents/global_paintstudy.pdf)
- 3 Clark C. S., Rampal K. G., Thuppil V., Roda S. M., Succop P., Menrath M., Chen C. K., Adebamowo E. O., Agbede O. A., Sridhar M. C., Adebamowo C. A., Zakaria Y., El-Safty A., Shinde R. J., Jiefei Yu. Lead levels in new enamel household paints from Asia, Africa and South America (2009), Environmental Research. 109: 930-936.
- 4 A Brush with Toxics: An Investigation on Lead in Household Paints in India, (2007) Toxics Link, New Delhi, (India). (Later published as Kumar A and Gottesfeld P (2008) Lead Content in Household Paint in India, Science of the Total Environment 407:333-337).
- 5 Clark, C. S., K. G. Rampal, V. Thuppil, C. K. Chen, R Clark, S. Roda. The lead content of currently available new residential paint in several Asian countries (2006) Environmental Research. 102, 9-12.

Major paint manufacturers consistently added lead to decorative paints till 2007, with only one paint manufacturer claiming it produced paints without adding lead. Today all major paint manufacturers are slowly phasing out lead (not adding) from decorative paints. This phase out of lead in paint by India's market leaders is an indicator of the impact of Toxic Link's (www.toxiclink.org) lead in paint campaign which began in 2006. Toxics Link's earliest research on this issue in 2007 reported 1,40,000 parts per million (ppm) of lead as highest value detected in Indian decorative paint. The study in 2009 reported 49,600 ppm of lead as highest value and another study in 2011 also showed 34,700 ppm of lead as highest value. However in each study conducted during 2007 to 2013, gradual reduction of lead levels has been observed in the paints produced by major manufacturers.

Dangerous levels of lead were mainly found in household decorative paints manufactured by the small and medium-size enterprises (SMEs). This suggests that paint already used in children's environments constitute a route of exposure of lead to the young and most vulnerable population. The extent of lead use by SMEs is largely unknown, but this study indicates that many SMEs are adding high amounts of lead in their enamel decorative paints.

Study Results

A total of 250 cans of new enamel decorative paint from 147 brands were purchased in India and analyzed for total lead content. The sample results are expressed as parts per million (ppm), based on the dry weight of the digested sample.

The average lead concentration of all analyzed paints was found to be 22,800 ppm. Very high lead concentrations above 10,000 ppm were found in 111 of the 250 paints analyzed; 96 of the paints had concentrations between 10,000 and 600 ppm, and 17 of the paints had concentrations between 600 and 90 ppm. None of these paints would qualify for sale on the international market. The remaining 26 paints had low (below 90 ppm) lead concentrations. The highest concentration detected was 1,60,000 ppm. The highest concentration was observed in yellow colored paint sample.

Lead Concentration by Brand - Lead was detected between 12 and 1,60,000 ppm in 246 paints from 144 brands. Overall, the paint produced by SMEs had very high lead concentrations in their paints. A total of 111 paints from 103 brands contained dangerously high lead levels above 10,000 ppm.

Only 16 paints from 13 brands produced by SMEs and 10 paints from 5 brands produced by major paint manufacturers were found to contain lead at levels less than 90 ppm. Four paints from three major paint brands contained lead below detection.

Fourteen paint cans were labeled with "no added lead." All of these paints contained lead levels less than 90 ppm, except for one black Japan colored sample. This was produced by a manufacturer from SME sector, and was labeled *lead free paint* but found to contain lead at a concentration of 560 ppm.

Lead Concentration by Color - The majority of paints from all collected colors contained lead concentrations above 90 ppm; 102 out of 109 paints of yellow color (94%), 105 out of 121 paints of white color (87%), 8 of 10 paints of dark colors (black, brown and grey) (80%) and 9 of 10 paints of other bright colors (green, blue and red) (90%).

Conclusions

Paints with high lead content continue to be widely sold in India

The lead levels in the paints included in the present study varied from below 8 ppm to 1,60,000 ppm with an average concentration of 22,800 ppm. Out of 250 samples only 26 (10%) paints were found with lead concentrations of less than 90 ppm

Ninety percent of all paints included in the study contained lead concentrations above 90 ppm, which is the proposed draft Bureau of Indian Standards (BIS) standards for enamel, interior paints and internationally considered an acceptable level of lead.

Paint companies with the largest market share are producing paints with low lead levels

The paint industry in India can be broadly segmented into major paint manufacturers and micro, small and medium enterprises. Major paint manufacturers comprise almost 64% of the market share of paint in India. The lead concentration in paints produced by the 5 major paint manufacturers (Asian Paint, Kansai Nerolac, Berger Paints, ICI /Akzo Nobel and Shalimar) included in this study all were less than 90 ppm (ranging from <8 – 32 ppm) in both yellow and white colored paints. Hence, their claim that their paints contain no added lead was found to be satisfactory. When compared to earlier studies, these results indicate a reduction of lead levels in the paint produced by major manufacturers.

Some of the smaller sector paint manufacturers produce low lead paint, indicating that the technology exists to make a shift to low lead products in this sector.

Paints from 13 brands in the small sector were found to have lead level less than 90 ppm (ranging from 12 – 77 ppm). This indicates that some of the small sector manufacturers are also aware about the hazards of lead in paint, and have the technology to produce paint without using lead compounds.

Brightly colored paints have the highest concentrations of lead

Yellow colored paints were found to contain higher amount of lead than white and other colors. These patterns of concentration by color are similar to those found in other countries.

Recommendations

At the National Level (to the government)

- Create and enforce national standards for lead in paint
- Monitor in order to achieve stricter compliance with national standards
- Create an infrastructure for blood lead level testing
- Create greater consumer awareness of the health and environmental hazards of lead in paint
- Establish a mandatory public procurement process to procure lead safe paint

At the consumers level (to consumers)

- Purchase lead safe paint from the market
- Be especially aware of paint contents when choosing the paint for children's rooms

At the scientific, environmental and health association's level

- Share this study/data on lead levels in paints in public forums
- Arrange public awareness programme or campaigns
- Recommend blood lead level tests when appropriate and caution how to reduce and prevent exposure
- Set guidelines for painters when repainting or restoring surface painted with lead paint

Recommendations to paint manufacturers, vendors, and large purchasers

- Produce paint without using lead compounds
- Become part of a third-party lead certification process
- Include uniform logos (lead-safe or unleaded paint) on products and set guidelines for safe use of home decorative or industrial and commercial paints
- Produce informational material highlighting the guidelines for safe use, lead hazards and cautions
- Post information about lead in paint in shops where paint is being sold.

1

INTRODUCTION AND BACKGROUND TO THE LEAD PAINT ISSUE

Lead is a toxic metal, which can be found in paints when a paint manufacturer intentionally adds one or more lead compounds to the paint for some purpose. The lead compounds most commonly added to paint are pigments that give the paint its color. Lead compounds commonly used as paint pigments include: lead chromates, lead oxides, lead molybdates, and lead sulfates. These are added to produce bright colors such as yellow, red and green. Lead compounds may also be added to paint to serve as drying agents and catalysts in oil-based paints. These make the paint dry faster and more evenly. Lead-based corrosion resistance agents are sometimes added to paints that are used on metal surfaces in order to inhibit rust and corrosion. The most common of these is lead tetroxide, sometimes called red lead or minimum.

Good, cost-effective substitutes for all the lead compounds that are used in making household paints have been widely available since the 1980's and before. Any paint manufacturer that currently produces household paints with added lead compounds could easily reformulate its paints using these substitutes with very little (if any) impact on the characteristics of the paints they produce or on the price. There is no good reason for a paint manufacturer to continue producing paints with added lead compounds, especially since the childhood health hazards associated with lead paint are very serious and well-documented.

When a paint manufacturer does not intentionally add lead compounds in the formulation of its paints, the lead content of the paint will be very low – almost always less than 90 parts per million (ppm) (total lead, dry weight). If a paint manufacturer is careful in selecting ingredients that do not contain lead as a contaminant, the lead content of the paint will often be as low as 10 parts per million or less.

In almost all cases where recent studies have been conducted, water-based paints (sometimes called latex or acrylic paints) do not contain added lead. On the other hand, in most developing countries and countries with economies in transition where paints have recently been analyzed for their lead content, many of the oil-based paints (sometimes called *enamel paints*) contain high lead content. For this reason, the current study, *Lead in India's Enamel Household Paints*, selected to only analyze oil-based paints for lead content.

Lead Exposure to Children and its Health Effects

Children are not generally exposed to lead from paint while the paint is still in the can or even when the paint is being newly applied to a previously unpainted or uncoated surface. Rather, the lead exposure generally occurs after the lead paint has already dried on the wall or on the article that has been painted.

Painted surfaces age, weather, and chip with time. Any lead that is in the paint then enters indoor and outdoor dusts and soils in and around the painted home or building. Children have an innate curiosity to explore their world and engage in developmentally appropriate hand-to-mouth behavior. When playing in lead contaminated environments, the dust and soil that they ingest will carry lead. This is especially true for children in the six years and under age group, the group most easily harmed by exposure to lead. For example, a typical one to six year old child ingests approximately 100 milligrams of house dust and soil each day.⁶

Paint chips can be especially harmful since their lead content can be much higher than what is typically found in dust and soils. In some cases, children may pick up paint chips and put them into their mouth. In addition, when toys or other articles are painted with lead paint, children may chew on them and directly ingest the lead-contaminated dried paint. However, the most common way in which children ingest lead is thought to be through lead-containing dust.

Children and workers are especially at risk when surfaces that were previously painted with lead paint are repainted or disturbed by construction or other activities. Workmen may sand, dry scrape, grind, or in other ways disturb the old painted surface and produce large quantities of dust with very high lead content.

Exposure to lead is much more harmful to children than adults, and the health effects are generally irreversible and can have a lifelong impact.⁷ The younger the child, the more harmful lead can be. The human fetus is the most vulnerable and a pregnant woman can transfer lead that has accumulated in her body to that of her developing child. That means that lead can poison several generations, and not only one person during active exposure.

6 *Childhood Lead Poisoning*, World Health Organization (2010), p.18. (<http://www.who.int/ceh/publications/leadguidance.pdf>)

7 *Childhood Lead Poisoning*, World Health Organization (2010), p.12.

Children are more biologically susceptible to lead than adults for several reasons including:

- A child's brain undergoes very rapid growth, development and differentiation and lead interferes with this process. Brain damage caused by chronic, low-level exposure to lead during early years is irreversible and untreatable.
- Exposure to lead early in life can re-program genes, which can lead to altered gene expression and an associated increased risk of disease later in life.
- Gastrointestinal absorption of lead is enhanced in childhood. Up to 50 percent of ingested lead is absorbed by children, as compared with 10 percent in adults. (Pregnant women may also absorb more ingested lead than other adults). In those children who suffer from nutritional deficiencies, ingested lead is absorbed at an even more increased rate.

Evidence of reduced intelligence caused by childhood exposure to lead has led the World Health Organization 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 factors⁸. Recently WHO identified lead as "one of ten chemicals of major public health concern and lead requires action by Member States in order to protect the health of workers, children and women of reproductive age."⁹

In recent years, medical researchers have been documenting significant health impacts on children from lower and lower lead exposures.¹⁰ In response, the U.S. Centers for Disease Control and Prevention (CDC) and other authorities have concluded that there is no known acceptable lead exposure level for children.¹¹

International Context

The use of lead in household paints is a matter of global concern. At an International Conference on Chemicals Management (ICCM) held in 2009, lead paints were identified by consensus to be international priority issues of concern. Representatives of the Government of India participated in this conference and accepted the decisions.

In response to the ICCM decision, the United Nations Environmental Programme (UNEP) and the World Health Organization (WHO) jointly initiated a global partnership to eliminate the use of lead compounds in paints in order to protect public health and the environment. This partnership

8 *Preventing disease through healthy environments*, p. 6. (http://www.who.int/quantifying_ehimpacts/publications/preventingdisease.pdf)

9 Stop lead poisoning, World Health Organization media statement, 18 October 2013, <http://www.who.int/mediacentre/news/notes/2013/lead-20131018/en/index.html>

10 Needleman, H., *Lead Poisoning*. (2004), *Annu. Rev. Med.* 55, 209–22. (http://www.rachel.org/files/document/Lead_Poisoning.pdf)

11 Scientific Opinion on Lead in Food, EFSA Panel on Contaminants in the Food Chain (CONTAM) (2010), *EFSA Journal*. (<http://www.efsa.europa.eu/en/efsajournal/doc/1570.pdf>)

is called the Global Alliance to Eliminate Lead Paint (GAELP), and its overall goal is to prevent children's exposure to lead via paints containing lead and to minimize occupational exposures to lead in paint. GAELP's broad objective is to phase out the manufacture and sale of paints containing lead and, eventually, to eliminate the risks from such paint

In the third meeting of ICCM held in Nairobi in 2012, a strategy was developed for global plan of action to phase out lead in paints. The Conference agreed by consensus to call upon governments, civil society organizations, and the private sector to contribute to GAELP in various ways including by:

- Raising awareness about the toxicity to human health from lead in paint including for young children, paint users, and the workers in paint production facilities;
- Filling information gaps by analyzing paints for their lead content in countries where little or no data is available;
- Promoting national regulatory frameworks, as appropriate, to stop the manufacture, import, export, sale and use of lead paints and products coated with lead paints;
- Encouraging paint manufacturing companies to substitute lead compounds added to paint with safer alternatives; and
- Establishing prevention programs to reduce exposure in and around housing, childcare facilities, schools and other buildings where lead paint has been used in the past.

2

INDIAN FRAMEWORK FOR ELIMINATING LEAD PAINT

Most highly industrial countries enacted laws, regulations or mandatory standards to protect the health of their people in the 1970's and 1980's. These laws generally prohibit the manufacture, import, sale or use of lead paint for interiors or exteriors of homes, schools and commercial buildings. In recent years, these regulations have become increasingly stringent. The standard adopted by the United States imposes an upper limit of 90 parts per million (ppm) on total lead (dry weight) for house paints and many other paint categories. Other countries have adopted mandatory limits in the range of 90 to 600 ppm total lead (dry weight). Toxics Link and the NGOs across the globe associated with the IPEN network generally promote the 90-ppm standard as one that is fully achievable and maximally protective.

For decades, household paints that are produced for sale in highly industrial countries have not used added lead compounds as pigments, drying agents or for other purposes. Most paint manufacturers that produce paints for sale in the developing world know the reason why. It is unfortunate that lead paints for household use are still being produced, sold and used. This practice must now end.

Toxics Link did the first study in India on lead content in paints in 2007 and found high content of lead in paints in all major brands sold in India. The study created significant impact at the policy level and the issue was also discussed in the Parliament of India, and the relevant ministries assured in the Indian Parliament that suitable actions would be initiated. However, to date, the Bureau of Indian Standard (BIS) has only circulated a draft standard stating that the lead content would be fixed as 90 ppm. (In this revision, restriction of lead content at 90 ppm level max. has been introduced to prevent lead exposure of children and adults in consumer homes / residential premises and consequent adverse impact on human health and safety). The standards created by BIS can be made mandatory by the concerned ministry by a separate order.

In due course of time, some of the major brands have initiated voluntary actions to limit the lead content in paints. The present test result confirms the positions taken by major brands in limiting the lead content in paints. The results also reflect that, because there is no standard, the small and medium sectors companies are continuing to use in lead in paints above the prescribed limit.

Moreover, there are also debates in India on the voluntary standards of lead as proposed by BIS and whether adopting a mandatory standard would be the best possible way to achieve lead free paints in the country.

Major Paint Brands in India

The paint industry in India can be broadly segmented into major paint manufacturers and micro, small and medium enterprises. Major manufacturer make up almost 64% of the total market share for paint in India. The paint industry has slowed down somewhat in the last few years due to global economics, and uncertainties, but experts expect stronger growth over next three years and the industry might reach approximately Rs. 49,545 crore by FY16.

In FY12, the paint industry stood at Rs 26,040 crore. The decorative segment contributed nearly 71 percent at Rs 18,490 crore, while the remaining Rs 7,550 crore was contributed by the industrial segment. In terms of volume, the industry produced 3.11 million tonnes of paint of which decorative segment accounted for nearly 77 percent.¹²

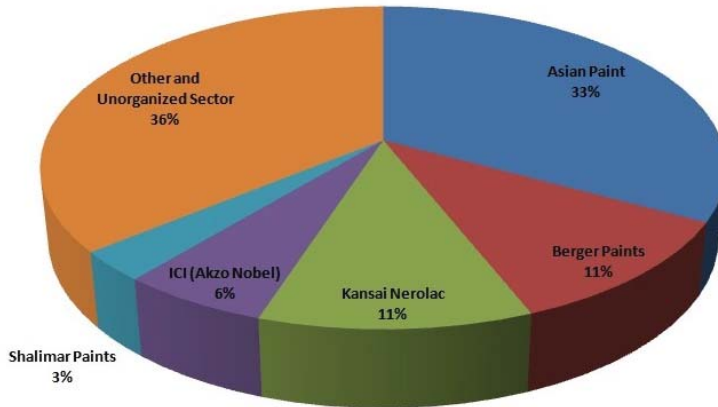
Small and medium sized manufacturing plants control around 36% of the paint market. The remainder of the market is controlled by 5 companies (Fig. 1);

- Asian Paint (Overall market leader due to leadership in decorative segment)
- Kansai Nerolac (Market leader in automobile industrial paint segment, also into decorative segment)
- Berger Paints (Major revenue comes from the decorative segment, as well as industrial paints)
- ICI /Akzo Nobel (Major revenue comes from the decorative segment, also automotive paints)
- Shalimar Paints (Primarily decorative paints and non automobile industrial coatings)

¹² http://www.moneycontrol.com/news/business/indian-paint-industry-to-touch-rs-50000-crore-by-fy16-ipa_810115.html

Market Share

FIGURE 1 – MARKET SHARE OF THE PAINTS IN INDIA (BASED ON MARKET RESEARCH REPORT: PAINT INDUSTRY IN INDIA 2011)¹³



¹³ <http://www.slideshare.net/JanneKekalainen/paint-industry-in-india-2011>

3

MATERIALS AND METHODS

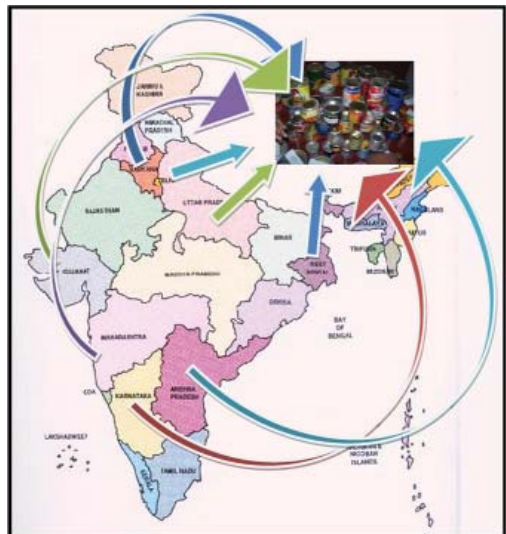
In 2013, Toxics Link purchased 250 cans of oil-based (enamel) house paints from stores in and around Delhi, Haryana, Uttar Pradesh, Karnataka, Andhra Pradesh, Maharashtra, Gujarat and West Bengal (Fig. 2). These paints were from 147 different brands. In most cases, the selection was one white and one bright color such as green or yellow. The availability of these paints in retail establishments suggested that they were intended to be used within home environments. Excluded were automotive and industrial paints that are not typically used for domestic housing applications or to paint toys.

Paint sample preparation kits containing individually numbered, untreated wood pieces, single-use brushes and stirring utensils made from untreated wood sticks were assembled and shipped to Toxics Link by staff of the IPEN partner NGO, Arnika, in the Czech Republic. Each paint was thoroughly stirred in the can and applied by a separate unused single-use brush to duplicate, individual, numbered, unused, wood pieces by staff of Toxics Link (Fig. 3).

Each stirring utensil and paintbrush was used only once, and care was taken to avoid cross contamination. After drying, the wood pieces were placed in individual plastic bags and shipped for analysis of lead content to Certottica laboratory in Italy.

Certottica is accredited by ACCREDIA – the Italian Accreditation System, which is the Italian National Accreditation Body appointed by the State. This laboratory participates in the Environmental Lead Proficiency Analytical Testing (ELPAT) program

FIGURE 2 – PAINT SAMPLES COLLECTED FROM INDIA



operated by the American Industrial Hygiene Association under a program established by the US Environmental Protection Agency.

The laboratory scraped paint off the wood pieces they received. The paint was then weighed into a hot block digestion tube and the paint chips digested according to method CPSC-CH-E1003-09.1. A quantity of paint was removed from the sample by abrasion. The paint was placed in a beaker of borosilicate, in which were added 3 mL of HNO₃ and 1 mL of 30% H₂O₂. The beaker was first covered with a glass and then was heated on a hotplate (surface temperature of approximately 140° C, from 85 initially to 100° C) until most of the acid evaporated. This treatment was repeated twice more. The beaker containing the sample was removed from the plate and let cool to room temperature. Following the watch glass was rinsed with a quantity of HNO₃ 10% from 3 to 5 mL and the solution was left to hot evaporate slowly and let cool to room temperature. Finally, it was added 1 mL of HNO₃ to the residue, which was agitated to dissolve the soluble species. The walls of the beaker and the bottom of the watch glass were rinsed and the whole was transferred into a flask and brought to volume with deionized water.

Lead in the digestates was analyzed by an Inductively Coupled Plasma-Atomic emission spectrophotometer (ICP-AES), Thermo Scientific iCAP 6000 Series, using yttrium (2 mg/L) as internal standard.

The laboratory's lower limit of detection for the lead concentration in the paint samples is dependent on the amount of paint in the samples. Generally, for 100 mg of paint scraped off the wood pieces the lowest detection limit is 8 ppm, but for a smaller amount of paint the detection limit increases. Therefore, the lead content in the samples from three of the paints is reported as below 8 ppm and below 9 ppm in samples from one paint.

TABLE 1 – PAINT SAMPLE PROFILE

No. of Samples	Number of Brands
250	147
Country of Production	Manufacturer
India	Manufacturer - 104 Marketed by*- 5 No visible information on can due to spill - 12
Type of Paint	Color
Enamel	Yellow - 109 White - 121 Dark Colors (Black, Brown Grey) - 10 Bright Colors (Green, Red, Blue) - 10
Lead content information	
14	

*The paints are marketed by particular company and the name of the manufacturer are not printed on the label

FIGURE 3 - PREPARATION OF PAINT SAMPLE ON WOODEN STICKS



4

STUDY RESULT

A total of 250 cans of new enamel decorative paint from 147 brands were purchased in India and analyzed for total lead content. The details of the paints are listed in appendix 1. The sample results are expressed as parts per million (ppm), based on the dry weight of the digested sample (Fig. 4, Appendix 2).

The average concentration of all analyzed paints was 22,800 ppm. Very high lead concentrations above 10,000 ppm were found in 111 of the 250 paints analyzed; 96 of the paints contained concentrations between 10,000 and 600 ppm; 17 of the paints contained concentrations between 600 and 90 ppm. None of these paints would qualify for sale on the international market. In total, 26 paints representing 18 brands were found to contain concentrations less than 90 ppm, concentrations which varied between below detection limits of <8 and 77 ppm. The highest concentration detected was 1,60,000 ppm.

Lead Concentration by Brand

Lead was detected between 12 and 1,60,000 ppm in 246 paints from 144 paint brands (Appendix 3). Overall, the paint produced by SMEs had very high lead concentrations in their paints. A total of 111 paints from 103 brands contained dangerously high lead levels above 10, 000 ppm.

Only 16 paints from 13 brands produced by SMEs and 10 paints from 5 brands produced by major paint manufacturers were found to contain lead at levels less than 90 ppm. Four paints from three major paint brands contained lead below detection.

Fourteen paint cans were labeled with “no added lead”. All of these contained lead at levels less than 90 ppm, except for one black Japan colored sample. This was produced by a manufacturer from SME sector, and was labeled *lead free paint* but found to contain lead at a concentration of 560 ppm.

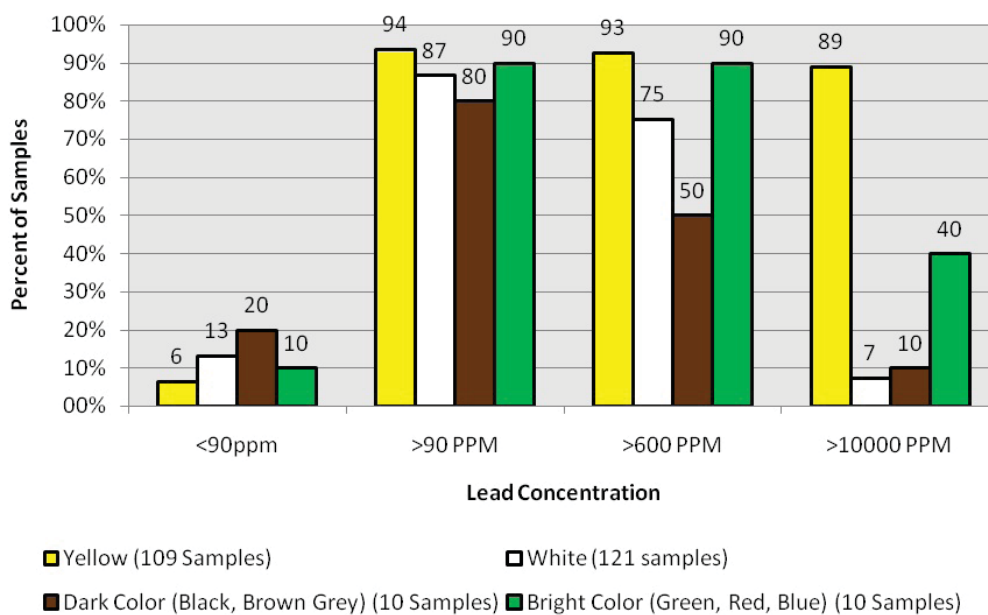
FIGURE 4 - LEAD CONCENTRATION OF ANALYZED PAINT SAMPLES



Lead Concentration by Color

The majority of paints from all collected colors contained lead concentrations above 90 ppm (Fig. 5 and Appendix 4). Lead concentrations above 90 ppm were found in 102 out of 109 paints of yellow color (94%), 105 out of 121 paints of white color (87%), 8 of 10 paints of dark colors (black, brown and grey) (80%) and 9 of 10 paints of other bright colors (green, blue and red) (90%).

FIGURE 5 - LEAD CONCENTRATIONS IN ANALYZED PAINTS BY PERCENT OF SAMPLES IN VARIOUS CONCENTRATION GROUPS ARRANGED ACCORDING TO COLOR



5 CONCLUSIONS

Paints with high lead content continue to be widely sold in India

The lead levels in the paints included in the present study varied from below 8 ppm to 1,60,000 ppm with an average concentration of 22,800 ppm. Out of 250 samples only 26 (10%) paints were found with lead concentrations of less than 90 ppm

Ninety percent of all paints included in the study contained lead concentrations above 90 ppm, which is the proposed draft Bureau of Indian Standards (BIS) standards for enamel, interior paints and internationally considered an acceptable level of lead.

Paint companies with the largest market share are producing paints with low lead levels

The paint industry in India can be broadly segmented into major paint manufacturers and micro, small and medium enterprises. Major paint manufacturers comprise almost 64% of the market share of paint in India. The lead concentration in paints produced by the 5 major paint manufacturers (Asian Paint, Kansai Nerolac, Berger Paints, ICI /Akzo Nobel and Shalimar) included in this study all were less than 90 ppm (ranging from <8 – 32 ppm) in both yellow and white colored paints. Hence, their claim that their paints contain no added lead was found to be satisfactory. When compared to earlier studies, these results indicate a reduction of lead levels in the paint produced by major manufacturers.

Some of the smaller sector paint manufacturers produce low lead paint, indicating that the technology exists to make a shift to low lead products in this sector.

Paints from 13 brands in the small sector were found to have lead level less than 90 ppm (ranging from 12 – 77 ppm). This indicates that some of the small sector manufacturers are also aware about the hazards of lead in paint, and have the technology to produce paint without using lead compounds.

Brightly colored paints have the highest concentrations of lead

Yellow colored paints were found to contain higher amount of lead than white and other colors. These patterns of concentration by color are similar to those found in other countries.

6

RECOMMENDATIONS

At the National Level (to the government)

- Create and enforce national standards for lead in paint
- Monitor in order to achieve stricter compliance with national standards
- Create an infrastructure for blood lead level testing
- Create greater consumer awareness of the health and environmental hazards of lead in paint
- Establish a mandatory public procurement process to procure lead safe paint

At the consumers level (to consumers)

- Purchase lead safe paint from the market
- Be especially aware of paint contents when choosing the paint for children's rooms

At the scientific, environmental and health association's level

- Share this study/data on lead levels in paints in public forums
- Arrange public awareness programme or campaigns
- Recommend blood lead level tests when appropriate and caution how to reduce and prevent exposure
- Set guidelines for painters when repainting or restoring surface painted with lead paint

Recommendations to paint manufacturers, vendors, and large purchasers

- Produce paint without using lead compounds
- Become part of a third-party lead certification process
- Include uniform logos (lead-safe or unleaded paint) on products and set guidelines for safe use of home decorative or industrial and commercial paints
- Produce informational material highlighting the guidelines for safe use, lead hazards and cautions
- Post information about lead in paint in shops where paint is being sold.

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I

APPENDIX

Details of Enamel Decorative Paints Purchased in India and Analyzed for Lead Content

Sample Number	Brand Name	Color of Paint	Paint Can Size	Price (INR)	Manufacture, Date / Batch No.	Date of Purchase	Website on Label
IND-400	York	Golden Yellow	200ml	60	July*2012	1/11/2012	No Website found
IND-401	Dutch Stag	Golden Yellow	100g	42	May*2011/B. No. 1	1/11/2012	No Website found
IND-402	Novinil	Black Japan	500ml	85	Feb*2012	1/11/2012	No Website found
IND-403	Dutch-Stag	Golden Yellow	100ml	42	May*2011/B. No. 1	1/11/2012	No Website found
IND-404	Jacko	Pale Yellow	100ml	30	Not Properly Seen	1/11/2012	No Website found
IND-405	Briston	White	1 L	158	Sep*2012, B. No.-121021	6/11/2012	No Website found
IND-406	Briston	G. Yellow	1 L	158	May*2012, B. No.-120508	6/11/2012	No Website found
IND-407	Hen's Paints	G. Yellow	1 L	158	Sep*2012, B. No.-121003	6/11/2012	No Website found
IND-408	Vasco	G. Yellow	500ml	85	Sept*2012, B.No.-121021	6/11/2012	No Website found
IND-409	Hen's Paints	White	500ml	85	Apr*2012, B.No.-123412	7/11/2012	No Website found
IND-410	Universal	G.Yellow	500ml	74	2011	7/11/2012	No Website found
IND-411	Universal	White	500ml	85	Mar-12	7/11/2012	No Website found
IND-412	Delux	White	500ml	85	Mar 2012, B.No.-011	7/11/2012	No Website found
IND-413	Karam	Black Japan	1L	110	Oct-2012, B.No.-007	7/11/2012	No Website found

Sample Number	Brand Name	Color of Paint	Paint Can Size	Price (INR)	Manufacture, Date / Batch No.	Date of Purchase	Website on Label
IND-414	Maruti Delux	G. Yellow	200 ml	55	Jul-10	11/11/2012	No Website found
IND-415	Maruti Delux	White	200 ml	55	Jul-10	11/11/2012	No Website found
IND-416	Asons Premium	G. Yellow	50 ml	18	Jul-12	11/11/2012	No Website found
IND-417	Lakshmi	G. Yellow	200 ml	60	Jun-12	11/11/2012	No Website found
IND-418	Lakshmi	White	200 ml	53	Aug-11	11/11/2012	No Website found
IND-419	Kiran	G. Yellow	200 ml	70	Apr-12	11/11/2012	No Website found
IND-420	Kiran	White	200 ml	70	Sep-12	11/11/2012	No Website found
IND-421	Ascolit	White	500 ml	95	Mar-12	11/11/2012	No Website found
IND-422	Ascolit	G. Yellow	500 ml	95	Mar-12	11/11/2012	No Website found
IND-423	Champion	G. Yellow	500 ml	68	Dec. 2010	11/11/2012	No Website found
IND-424	National	G. Yellow	200 ml	50	Mar-11	11/11/2012	No Website found
IND-425	National	White	200 ml	65	Oct-12	11/11/2012	No Website found
IND-426	Homecare Premium	Ultra White	100ml	36	Jul-2010, B. No-532MFG	21/11/2012	www.glossypaints.com
IND-427	Homecare Premium	Golden Brown	100ml	34	Jul-2010 B. No-531MFG	21/11/2012	www.glossypaints.com
IND-428	Vespa	White	200ml	80	May-12	21/11/2012	No Website found
IND-429	Vespa	Golden Yellow	200ml	80	Mar-12	21/11/2012	No Website found
IND-430	Lakshay	Golden Yellow	500 ml	85	Oct-12	21/11/2012	talwarpaints@gmail.com
IND-431	Lakshay	White	500 ml	70	Oct-12	21/11/2012	talwarpaints@gmail.com
IND-432	Glow (Xtra)	Ultra White	200ml	55	Nov-12	21/11/2012	No Website found
IND-433	Glow (Xtra)	Brown	200ml	55	Nov-12	21/11/2012	No Website found
IND-434	Snowlac	Bus Green	200ml	55	Aug-12	21/11/2012	No Website found
IND-435	Snowlac	P. O. Red	200ml	56	Oct-12	21/11/2012	No Website found
IND-436	Deluxe	White	100ml	25	Feb-12	21/11/2012	No Website found
IND-437	Deluxe	Golden Yellow	50ml	15	Feb-12	21/11/2012	No Website found
IND-438	Glaxo	Golden Yellow	200ml	60	May-09	21/11/2012	No Website found

Sample Number	Brand Name	Color of Paint	Paint Can Size	Price (INR)	Manufacture, Date / Batch No.	Date of Purchase	Website on Label
IND-439	Glaxo	Super White	200ml	60	May-09	21/11/2012	No Website found
IND-440	Super Shine	White	200ml	41	Aug-12	21/11/2012	No Website found
IND-441	Marino	White	100ml	60	May-09	21/11/2012	No Website found
IND-442	Glaxci	G. Yellow	1000ml	208	Nov-12	24/11/2012	No Website found
IND-443	Glaxci	White	500ml	111	Jun-12	24/11/2012	No Website found
IND-444	Deepali	White	200ml	50	Jun-12	24/11/2012	No Website found
IND-445	Decco	G. Yellow	100ml	25	2012	24/11/2012	No Website found
IND-446	Bittu Gold	White	100ml	25	No	24/11/2012	No Website found
IND-447	British Paint	Ultra White	200ml	67	B NO. B5945, 2/2012	24/11/2012	www.britishpaints.in
IND-448	British Paint	Smoke Grey	200ml	67	B NO. 0129, 4/2011	24/11/2012	www.britishpaints.in
IND-449	Glamour	Golden Yellow	500ml	78	Not Seen Properly	24/11/2012	No Website found
IND-450	Dumux	Golden Brown	500ml	90	Dec-08	24/11/2012	No Website found
IND-451	Bittu Gold	G. Yellow	200	43	2011	24/11/2012	No Website found
IND-452	Galleria Premium	Smoke Grey	200ml	50	Oct*2010	24/11/2012	No Website found
IND-453	Jet Plus Premium	Yellow	200ml	40	No	24/11/2012	No Website found
IND-454	Walson	Ox Blue	50ml	28	Feb-07	24/11/2012	No Website found
IND-455	Sunlac	Brilliant White	200ml	64	May 2012, B. No 24/05	24/11/2012	No Website found
IND-456	Sunlac	Golden Yellow	200ml	73	May 2012, B. No 24/05	24/11/2012	No Website found
IND-457	Deepali	Brown	200ml	50	Jun-12	24/11/2012	No Website found
IND-458	BPL Gold	White	100ml	25	Oct-08	24/11/2012	No Website found
IND-459	BPL Gold	Blue	100ml	25	No Sticker	24/11/2012	No Website found
IND-460	Galaxy	White	100ml	25	No	24/11/2012	No Website found
IND-461	Asian Paint Premium	Blz White	100ml	42	Pkd Dt-06/2012	6/1/2013	www.asianpaints.com

Sample Number	Brand Name	Color of Paint	Paint Can Size	Price (INR)	Manufacture, Date / Batch No.	Date of Purchase	Website on Label
IND-462	Asian Paint Premium	G. Yellow	100ml	39	Pkd Dt-08/2012	6/1/2013	www.asianpaints.com
IND-463	Shalimar	Golden Yellow	500ml	138	3120002711, May-2012	6/1/2013	www.shalimarpaints.com
IND-464	Shalimar	Dazz White	500ml	140	3120003997, August-2012	6/1/2013	www.shalimarpaints.com
IND-465	Berger Luxol	Golden Yellow	200ml	73.4	000360 (Mf code), 710/26301, 10/2012	6/1/2013	www.bergerpaints.com
IND-466	Berger Luxol	Snow White	500ml	144.8	003991, B. No-720/21086, MfD-11/12	6/1/2013	www.bergerpaints.com
IND-467	Nerolac	Brill White	200ml	75	09/2012, B No.-P/377	6/1/2013	www.nerolac.com
IND-468	Nerolac	Golden Yellow	500ml	127	09/2011-JB	6/1/2013	www.nerolac.com
IND-469	ICI Dulux	Blazing White	1 L	273	Nov 2012, Bx-M07246017, -282000	11/1/2013	http://www.akzonobel.com/
IND-470	ICI Dulux	Golden Yellow	1 L	249	Feb 2012, Bx-M07208014-280456	11/1/2013	http://www.akzonobel.com/
IND-471	Brolac	Golden Yellow	200ml	65	Mfg:09/10BS 203	25/01/2013	www.jnpaints.com
IND-472	Brolac	SPK. White	200ml	65	Mfg.:08/10BS 807	25/01/2013	www.jnpaints.com
IND-473	Unik	Yellow	1L	140	Mar-11	25/01/2013	No Website found
IND-474	Spartan Velox	Royal Ivory	1L	138	Dec -1997, B No. - 1297108	25/01/2013	No Website found
IND-475	Western	White	500 ml	98	N/A	2013	No Website found
IND-476	Hindlux	Pale Cream	50 ml	19	4-May-12	2013	No Website found
IND-477	Hindlux	Spl White	50 ml	20	1-Aug-12	2013	No Website found
IND-478	Premier	Super White	100 ml	28	1-Oct	2013	premier181@vsnl.net
IND-479	Premier	Golden Yellow	50ml	19	1-Jul-11	2013	premier181@vsnl.net
IND-480	Max	Spl White	50 ml	30	May-12	2013	No Website found
IND-481	Max	G. Yellow	50 ml	26	Feb-12	2013	No Website found
IND-482	Western	G. Yellow	200 ml	52	11	2013	No Website found
IND-483	Painter's Choice	G. Yellow	100 ml	30	13-Dec-11	2013	No Website found
IND-484	Painter's Choice	Spl White	100 ml	34	1-Jun-12	2013	No Website found

Sample Number	Brand Name	Color of Paint	Paint Can Size	Price (INR)	Manufacture, Date / Batch No.	Date of Purchase	Website on Label
IND-485	Jecolite	G. Yellow	50 ml	23	September	2013	No Website found
IND-486	Jecolite	White	50 ml	21	November, 2011	2013	No Website found
IND-487	Deb	Sup White	500 ml	110	Feb-12	2013	No Website found
IND-488	Rose	S. White	500 ml	95	Oct-12	2013	No Website found
IND-489	Unilax	G. Yellow	50 ml	18	Apr-12	2013	unilax@vsnl.net
IND-490	Sunshine	G. Yellow	500 ml	105	22-Aug-12	2013	No Website found
IND-491	Sunshine	White	500 ml	80	5-May-10	2013	No Website found
IND-492	Oscar Plus	Yellow	100 ml	33	June	2013	No Website found
IND-493	Oscar Plus	White	100 ml	25	Not Available	2013	No Website found
IND-494	Shivam	Pale Cream	500 ml	80	Sep-11	2013	No Website found
IND-495	Shivam	Sup white	500 ml	100	Nov-12	2013	No Website found
IND-496	Kingcolac	G. Yellow	50 ml	22	Nov-12	2013	No Website found
IND-497	Kingcolac	White	50 ml	23	Oct-12	2013	No Website found
IND-498	Eurosyn	G. Yellow	500 ml	85	Nov*2012	2013	No Website found
IND-499	Eurosyn	White	500 ml	85	Nov*2012	2013	No Website found
IND-500	Prolite	Exp White	100ml	41	Nov-12	2013	No Website found
IND-501	Double Power	BRL White	100 ml	26	00/100	2013	No Website found
IND-502	Double Power	G. Yellow	100 ml	23	00/100	2013	No Website found
IND-503	Glory	White	100 ml	35	Jun-12	2013	No Website found
IND-504	Peacolac	White	50 ml	19	2012	2013	No Website found
IND-505	Peacolac	Yellow	50 ml	17	Oct-11	2013	No Website found
IND-506	Eagle	Pale Cream	50 ml	40	May-10	2013	No Website found
IND-507	Eagle	White	50 ml	20	NA	2013	No Website found
IND-508	Ujala	white	100 ml	25	2012	2013	No Website found
IND-509	Ujala	yellow	50 ml	15	2012	2013	No Website found
IND-510	Goutam	Spl White	500 ml	140	Dec-12	2013	No Website found
IND-511	Goutam	Golde Yellow	500 ml	126	Oct-12	2013	No Website found
IND-512	Daffodil	Golde Yellow	100	36	Sep-12	2013	No Website found
IND-513	Daffodil	White	100	40	Nov-12	2013	No Website found
IND-514	Deb	Pale Cream	500 ml	95	Sep-11	2013	No Website found
IND-515	Lion	Golden Yellow	50 ml	19	Jun-10	2013	No Website found

Sample Number	Brand Name	Color of Paint	Paint Can Size	Price (INR)	Manufacture, Date / Batch No.	Date of Purchase	Website on Label
IND-516	Lion	Super White	50 ml	20	Dec-10	2013	No Website found
IND-517	Rolac	Golden Yellow	50 ml	20	No	2013	No Website found
IND-518	Rolac	white	100 ml	30	No	2013	No Website found
IND-519	Star	White	100ml	30	No	2013	No Website found
IND-520	Star	Golden Yellow	100ml	30	No	2013	No Website found
IND-521	Glory	Pale cream	50 ml	18	10-Dec	2013	No Website found
IND-522	Triton	White	50 ml	32	Aug-11	2013	No Website found
IND-523	Kohinoor	Brl White	500 ml	100	Oct*2012: B. No 579	2013	No Website found
IND-524	Kohinoor	Yellow	500 ml	100	Dec*2011: B. No 370	2013	No Website found
IND-525	Vibrant	White	200 ml	38	Feb*2012: A02	2013	No Website found
IND-526	Vibrant	Golden Yellow	200 ml	67	June*2012 A02	2013	No Website found
IND-527	Sunrise	White	200 ml	50	Nov. 2012	21/01/2013	No Website found
IND-528	Sunrise	Gol. Yellow	200 ml	50	Nov. 2012	21/01/2013	No Website found
IND-529	Autolite	White	200 ml	64	Dec. 2012	21/01/2013	No Website found
IND-530	Autolite	Yellow	200 ml	64	Sept. 2012	21/01/2013	No Website found
IND-531	Sunbrite	White	200 ml	60	Dec*2012: B. No. 25	21/01/2013	No Website found
IND-532	Sunbrite	Golden Yellow	200 ml	60	Nov*2012: B. No. 3	21/01/2013	No Website found
IND-533	Jay	White	500 ml	95	B. No. 1	21/01/2013	No Website found
IND-534	Milan	White	200 ml	44	Nov. 2012 : PP 203	21/01/2013	No Website found
IND-535	Milan	Golden Yellow	200 ml	46	April. 2012 : PP 086	21/01/2013	No Website found
IND-536	Swastik	Ul. White	200 ml	55	Mar. 2012	21/01/2013	No Website found
IND-537	Swastik	Golden Yellow	200 ml	50	Apri. 2012	21/01/2013	No Website found
IND-538	Maruti	Royal White	200 ml	60	Oct. 2012: B. No 25	21/01/2013	No Website found
IND-539	Maruti	Golden Yellow	200 ml	60	Jan. 2012: B. No 4	21/01/2013	No Website found
IND-540	Sonata	White	200 ml	53	Dec. 2012	21/01/2013	No Website found
IND-541	Sonata	Golden Yellow	200 ml	53	Dec. 2012	21/01/2013	No Website found
IND-542	Tirupati	B R White	200 ml	60	Nov. 2012	21/01/2013	No Website found

Sample Number	Brand Name	Color of Paint	Paint Can Size	Price (INR)	Manufacture, Date / Batch No.	Date of Purchase	Website on Label
IND-543	Tirupati	Yellow	200 ml	60	Nov. 2012	21/01/2013	No Website found
IND-544	Prime Coat	White	200 ml	50	May. 2011	21/01/2013	No Website found
IND-545	Prime Coat	Gol. Yellow	200 ml	37	Apr. 2008	21/01/2013	No Website found
IND-546	Gemini	Sup White	200 ml	58	July. 2012	21/01/2013	No Website found
IND-547	Gemini	Gol. Yellow	200 ml	37	July. 2012	21/01/2013	No Website found
IND-548	Real Utsav	Br. White	200 ml	60	Oct. 2012 : PP 701	21/01/2013	pacific_paint@yahoo.com
IND-549	Real Utsav	G. Yellow	200 ml	60	Nov 2012 : PP 288	21/01/2013	pacific_paint@yahoo.com
IND-550	Star Lite	White	200 ml	55	May. 2012	24/01/2013	No Website found
IND-551	Star Lite	Golden Yellow	200 ml	55	Aug. 2012	24/01/2013	No Website found
IND-552	Asha Lite	Br. White	200 ml	54	July. 2012	21/01/2013	No Website found
IND-553	Asha Lite	Golden Yellow	200 ml	54	Dec. 2012	21/01/2013	No Website found
IND-554	New Wilson	White	200 ml	65	Feb. 2012	24/01/2013	No Website found
IND-555	New Wilson	G. Yellow	200 ml	55	Sep. 2011	24/01/2013	No Website found
IND-556	Armour	White	200 ml	65	June. 2012	24/01/2013	No Website found
IND-557	Armour	G. Yellow	200 ml	70	July. 2012	24/01/2013	No Website found
IND-558	Durable	BR White	200 ml	40	May. 2012	24/01/2013	No Website found
IND-559	Durable	G. Yellow	200 ml	40	Dec. 2009	24/01/2013	No Website found
IND-560	Platinum	White	200 ml	53	Oct. 2011	24/01/2013	No Website found
IND-561	Platinum	G. Yellow	200 ml	53	July. 2011	24/01/2013	No Website found
IND-562	Subh	White	200 ml	45	29 Oct. 2007	30/01/2013	No Website found
IND-563	Subh	Golden Yellow	200 ml	50	22 June. 2008	30/01/2013	No Website found
IND-564	Flora	White	200 ml	53	Oct. 2011	30/01/2013	No Website found
IND-565	Flora	Go. Yellow	200 ml	46	May. 2009	30/01/2013	No Website found
IND-566	Ajanta	White	200 ml	53	Sep. 2011	30/01/2013	No Website found
IND-567	Ajanta	Gol. Yellow	200 ml	55	Sep. 2011	30/01/2013	No Website found
IND-568	Goodluck	White	200 ml	42	Aug. 2012	30/01/2013	No Website found
IND-569	Goodluck	G. Yellow	200 ml	43	Oct. 2011	30/01/2013	No Website found
IND-570	Amul	White	500 ml	90	Sep. 2011	30/01/2013	No Website found
IND-571	Amul	Golden Yellow	200 ml	50	Sep. 2011	30/01/2013	No Website found

Sample Number	Brand Name	Color of Paint	Paint Can Size	Price (INR)	Manufacture, Date / Batch No.	Date of Purchase	Website on Label
IND-572	Mox	White	200 ml	52	Dec. 2012	30/01/2013	No Website found
IND-573	Mox	G. Yellow	100 ml	32	Aug. 2012	30/01/2013	No Website found
IND-574	Mox	G. Yellow	100 ml	32	Aug. 2012	30/01/2013	No Website found
IND-575	Gayatri	White	200 ml	65	Oct. 2012	24/01/2013	No Website found
IND-576	Gayatri	Golden Yellow	200 ml	65	Feb. 2012	24/01/2013	No Website found
IND-577	Asia Coat	White	200ml	58	Mar-10	1/11/2012	No Website found
IND-578	Asia Coat	Yellow	200ml	75	Jun-12	1/11/2012	No Website found
IND-579	Flora	White	200ml	65	Dec-12	1/11/2012	No Website found
IND-580	Flora	Golden Yellow	200ml	65	Dec-12	1/11/2012	No Website found
IND-581	Decolite	White	200ml	76	Jan-13	1/11/2012	No Website found
IND-582	Decolite	Golden Yellow	200ml	76	Jan-13	1/11/2012	No Website found
IND-583	Cona	Br. White	200ml	62	May-12	1/11/2012	No Website found
IND-584	Cona	Yellow	200ml	62	Dec-12	1/11/2012	No Website found
IND-585	Rayol Gold	White	200ml	56	Jan-13	1/11/2012	No Website found
IND-586	Royal Gold	Mint Green	200ml	56	Jan-13	1/11/2012	No Website found
IND-587	Magicoat	White	200ml	58	Jan-13	1/11/2012	No Website found
IND-588	Magicoat	Mint Green	200ml	58	Jan-13	1/11/2012	No Website found
IND-589	Jaycolite	White	200ml	60	Feb-11	1/11/2012	No Website found
IND-590	Jaycolite	White	200ml	60	Feb-11	1/11/2012	No Website found
IND-591	Kalpana	white	200ml	60	Dec-12	1/11/2012	No Website found
IND-592	Kalpana	yellow	200ml	60	Jul-12	1/11/2012	No Website found
IND-593	Nine 9 pemium	Golden Brown	200ml	64	Dec-12	1/11/2012	No Website found
IND-594	Nine 9 pemium	D. Green	200ml	64	Jul-12	1/11/2012	No Website found
IND-595	Hero Synthtic	phiroza	200ml	64	Dec-12	1/11/2012	No Website found
IND-596	Hero Synthtic	Smoke Grey	200ml	64	Nov-12	1/11/2012	No Website found
IND-597	Jycolite	Mint Green	200ml	60	Dec-12	1/11/2012	No Website found
IND-598	JPC S	White	200ml	60	Jul-12	1/11/2012	No Website found

Sample Number	Brand Name	Color of Paint	Paint Can Size	Price (INR)	Manufacture, Date / Batch No.	Date of Purchase	Website on Label
IND-599	Wonderman	Mint Green	200ml	80	Jul-12	1/11/2012	No Website found
IND-600	Wonderman	White	200ml	80	Sep-12	1/11/2012	No Website found
IND-601	Maxicoat	white	200ml	70	Nov-12	1/11/2012	No Website found
IND-602	Sri Balaji	White	200ml	70	Dec-12	1/11/2012	No Website found
IND-603	Decotite	White	200ml	75	Jan-13	1/11/2012	No Website found
IND-604	Krishna	white	200ml	45	Jul-12	1/11/2012	No Website found
IND-605	Krishna	Yellow	200ml	45	Jan-12	1/11/2012	No Website found
IND-606	GP	white	200ml	60	Dec-12	1/11/2012	No Website found
IND-607	GP	yellow	200ml	60	Dec-12	1/11/2012	No Website found
IND-608	Vitty	White	200ml	62	Jan-13	1/11/2012	No Website found
IND-609	Vitty	Yellow	200ml	62	Jan-13	1/11/2012	No Website found
IND-610	Decor	Yellow	200ml	60	Jan-13	1/11/2012	No Website found
IND-611	Deluxe	yellow	200ml	62.5	Dec-09	1/11/2012	No Website found
IND-612	3apples	white	200ml	50	Dec-09	1/11/2012	No Website found
IND-613	3apples	yellow	200ml	50	Dec-09	1/11/2012	No Website found
IND-614	MB	white	200ml	66	Mar-12	1/11/2012	No Website found
IND-615	MB	yellow	200ml	66	Feb-12	1/11/2012	No Website found
IND-616	Rassi	G. Yellow	200ml	64	Feb-12	1/11/2012	No Website found
IND-617	Fine Touch	G. Yellow	200ml	60	No Label	1/11/2012	No Website found
IND-618	Gem paints	White	500ml	131	Nov-12	1/11/2012	www.sheenlak.in
IND-619	Shenlack	Golden Yellow	500ml	126	Jan 2012/H-5681	1/11/2012	www.gempaints.com
IND-620	Inside	White	1liter	169	Nov. 08, B.No.65	1/11/2012	No Website found
IND-621	Kiran	White	200 ml	54	Jul-12	1/11/2012	No Website found
IND-622	Kiran	Golden Yellow	200 ml	62	Nov-12	1/11/2012	No Website found
IND-623	Gem	Golden Yellow	200 ml	61	356/Feb-2012	1/11/2012	No Website found
IND-624	Aqua	White	1 lit	150	Jun-12	1/11/2012	No Website found
IND-625	Ultralite	Yellow	500 ml	93	Aug-12	1/11/2012	No Website found
IND-626	Dimond	White	500 ml	85	Mar-08	1/11/2012	No Website found
IND-627	Ultralite	White	1000ml	185	Sep-12	1/11/2012	No Website found
IND-628	Libra	White	1000ml	75	25/2012	1/11/2012	No Website found
IND-629	Emerald	White	500ml	157	Dec-2012 (A) 0/50339	1/11/2012	No Website found

Sample Number	Brand Name	Color of Paint	Paint Can Size	Price (INR)	Manufacture, Date / Batch No.	Date of Purchase	Website on Label
IND-630	Emerald	Golden Yellow	500ml	157	Nov 12 (B) 50286	1/11/2012	No Website found
IND-631	Palrecha	BR White	500ml	105	Sep-12	1/11/2012	No Website found
IND-632	Palrecha	Golden Yellow	500ml	105	Apr-12	1/11/2012	No Website found
IND-633	Harmony	White	50ml	126	439/Oct-2012	1/11/2012	No Website found
IND-634	Harmony	Yellow	500ml	100	380/June-2012	1/11/2012	No Website found
IND-635	Phinex	Yellow	500 ml	105	-	20/5/2013	No Website found
IND-636	Jai Coat	Yellow	200 ml	42	-	20/5/2013	No Website found
IND-637	Shreeji	Yellow	200 ml	42	-	20/5/2013	No Website found
IND-638	Vaastava	Yellow	500 ml	64	-	20/5/2013	No Website found
IND-639	Unnati	Yellow	500 ml	128	-	20/5/2013	No Website found
IND-640	Kushal	White	100 ml	45	-	20/5/2013	No Website found
IND-641	Kushal	Yellow	200 ml	65	-	20/5/2013	No Website found
IND-642	Sony coat	Yellow	1000 ml	150	-	20/5/2013	No Website found
IND-643	Royal	White	100 ml	42	-	20/5/2013	No Website found
IND-644	Sun coat	Yellow	500 ml	108	-	20/5/2013	No Website found
IND-645	Premier	White	500 ml	90	-	25/5/2013	No Website found
IND-646	Premier	Yellow	500 ml	90	-	25/5/2013	No Website found
IND-647	Durocoat	White	1000 ml	180	-	25/5/2013	No Website found
IND-648	Toplite	Yellow	100 ml	40	-	25/5/2013	No Website found
IND-649	Balaji	Yellow	500 ml	70	-	25/5/2013	No Website found

II

APPENDIX

Results of Paint Analysis and Purchase Information for New Enamel Decorative Paints Purchased in India

Sample Number	Brand Name	Color of Paint	Parts Per Million Lead (dry weight)	Brand Headquarters' Country	Country Where Manufactured	Is there information on can about lead content of paint?
IND-400	York	Golden Yellow	24,000	India	India	No
IND-401	Dutch Stag	Golden Yellow	98,000	India	India	No
IND-402	Novinil	Black Japan	3,300	India	India	No
IND-403	Dutch-Stag	Golden Yellow	57,000	India	India	No
IND-404	Jacko	Pale Yellow	4,700	India	India	No
IND-405	Briston	White	450	India	India	No
IND-406	Briston	G. Yellow	26,000	India	India	No
IND-407	Hen's Paints	G. Yellow	29,000	India	India	No
IND-408	Vasco	G. Yellow	47,000	India	India	No
IND-409	Hen's Paints	White	3,700	India	India	No
IND-410	Universal	G.Yellow	41,000	India	India	No
IND-411	Universal	White	710	India	India	No
IND-412	Delux	White	580	India	India	No
IND-413	Karam	Black Japan	560	India	India	Lead Free Paint
IND-414	Maruti Delux	G. Yellow	14,200	India	India	No
IND-415	Maruti Delux	White	71	India	India	No
IND-416	Asons Premium	G. Yellow	1,26,000	India	India	No
IND-417	Lakshmi	G. Yellow	29,000	India	India	No

Sample Number	Brand Name	Color of Paint	Parts Per Million Lead (dry weight)	Brand Head-quarters ¹ Country	Country Where Manufactured	Is there information on can about lead content of paint?
IND-418	Lakshmi	White	2,500	India	India	No
IND-419	Kiran	G. Yellow	1,15,000	India	India	No
IND-420	Kiran	White	3,400	India	India	No
IND-421	Ascolit	White	320	India	India	No
IND-422	Ascolit	G. Yellow	1,02,000	India	India	No
IND-423	Champion	G. Yellow	1,06,000	India	India	No
IND-424	National	G. Yellow	23,000	India	India	No
IND-425	National	White	4,100	India	India	No
IND-426	Homecare Premium	Ultra White	12	India	India	No added mercury and no added lead
IND-427	Homecare Premium	Golden Brown	60	India	India	No added mercury and no added lead
IND-428	Vespa	White	1,700	India	India	No
IND-429	Vespa	Golden Yellow	10,800	India	India	No
IND-430	Lakshay	Golden Yellow	29,000	India	India	No
IND-431	Lakshay	White	2,500	India	India	No
IND-432	Glow (Xtra)	Ultra White	2,400	India	India	No
IND-433	Glow (Xtra)	Brown	2,000	India	India	No
IND-434	Snowlac	Bus Green	13,900	India	India	No
IND-435	Snowlac	P. O. Red	72	India	India	No
IND-436	Deluxe	White	1,650	India	India	No
IND-437	Deluxe	Golden Yellow	65,000	India	India	No
IND-438	Glaxo	Golden Yellow	28,000	India	India	No
IND-439	Glaxo	Super White	2,500	India	India	No
IND-440	Super Shine	White	2,500	India	India	No
IND-441	Marino	White	29,000	India	India	No
IND-442	Glaxci	G. Yellow	12,200	India	India	No
IND-443	Glaxci	White	4,000	India	India	No
IND-444	Deepali	White	52,000	India	India	No
IND-445	Decco	G. Yellow	240	India	India	No
IND-446	Bittu Gold	White	950	India	India	No
IND-447	British Paint	Ultra White	25	India	India	No added lead mercury arsenic and chromium

Sample Number	Brand Name	Color of Paint	Parts Per Million Lead (dry weight)	Brand Head-quarters ¹ Country	Country Where Manufactured	Is there information on can about lead content of paint?
IND-448	British Paint	Smoke Grey	73	India	India	No added lead mercury arsenic and chromium
IND-449	Glamour	Golden Yellow	1,60,000	India	India	No
IND-450	Dumux	Golden Brown	29,000	India	India	No
IND-451	Bittu Gold	G. Yellow	48,000	India	India	No
IND-452	Galleria Premium	Smoke Grey	2,500	India	India	No
IND-453	Jet Plus Premium	Yellow	42,000	India	India	No
IND-454	Walson	Ox Blue	3,900	India	India	No
IND-455	Sunlac	Brilliant White	6,400	India	India	No
IND-456	Sunlac	Golden Yellow	43,000	India	India	No
IND-457	Deepali	Brown	7,500	India	India	No
IND-458	BPL Gold	White	3,300	India	India	No
IND-459	BPL Gold	Blue	760	India	India	No
IND-460	Galaxy	White	17,400	India	India	No
IND-461	Asian Paint Premium	Blz White	32	India	India	No added lead, mercury Arsenic and Chromium
IND-462	Asian Paint Premium	G. Yellow	29	India	India	No added lead, mercury Arsenic and Chromium
IND-463	Shalimar	Golden Yellow	18	India	India	No added chromium, no added lead, no added mercury
IND-464	Shalimar	Dazz White	13	India	India	No
IND-465	Berger Luxol	Golden Yellow	<9	India	India	No added lead, mercury and Chromium
IND-466	Berger Luxol	Snow White	17	India	India	No added lead, mercury and Chromium
IND-467	Nerolac	Brill White	<8	India	India	No added lead, mercury Arsenic and Chromium
IND-468	Nerolac	Golden Yellow	15	India	India	No added lead, mercury Arsenic and Chromium

Sample Number	Brand Name	Color of Paint	Parts Per Million Lead (dry weight)	Brand Head- quarters' Country	Country Where Manufactured	Is there information on can about lead content of paint?
IND-469	ICI Dulux	Blazing White	<8	India	India	No added mercury, no added Lead no added Chromium
IND-470	ICI Dulux	Golden Yellow	<8	India	India	No added mercury, no added Lead no added Chromium
IND-471	Brolac	Golden Yellow	14,300	India	India	No
IND-472	Brolac	SPK. White	96	India	India	No
IND-473	Unik	Yellow	34,000	India	India	No
IND-474	Spartan Velox	Royal Ivory	7,400	India	India	No
IND-475	Western	White	6,400	N/A	N/A	No
IND-476	Hindlux	Pale Cream	15,600	India	India	No
IND-477	Hindlux	Spl White	6,900	India	India	No
IND-478	Premier	Super White	250	India	India	No
IND-479	Premier	Golden Yellow	71,000	India	India	No
IND-480	Max	Spl White	10,600	India	India	No
IND-481	Max	G. Yellow	27,000	India	India	No
IND-482	Western	G. Yellow	11,500	India	India	No
IND-483	Painter's Choice	G. Yellow	6,900	India	India	No
IND-484	Painter's Choice	Spl White	2,800	India	India	No
IND-485	Jecolite	G. Yellow	20,000	India	India	No
IND-486	Jecolite	White	195	India	India	No
IND-487	Deb	Sup White	4,500	India	India	No
IND-488	Rose	S. White	2,000	India	India	No
IND-489	Unilax	G. Yellow	10,300	India	India	No
IND-490	Sunshine	G. Yellow	18,000	India	India	No
IND-491	Sunshine	White	3,300	India	India	No
IND-492	Oscar Plus	Yellow	27,000	India	India	No
IND-493	Oscar Plus	White	1,410	India	India	No
IND-494	Shivam	Pale Cream	2,600	India	India	No
IND-495	Shivam	Sup white	2,700	India	India	No
IND-496	Kingcolac	G. Yellow	19,600	India	India	No
IND-497	Kingcolac	White	2,100	India	India	No

Sample Number	Brand Name	Color of Paint	Parts Per Million Lead (dry weight)	Brand Headquarters ¹ Country	Country Where Manufactured	Is there information on can about lead content of paint?
IND-498	Eurosyn	G. Yellow	29,000	India	India	No
IND-499	Eurosyn	White	15,600	India	India	No
IND-500	Prolite	Exp White	2,500	India	India	No
IND-501	Double Power	BRL White	1,300	India	India	No
IND-502	Double Power	G. Yellow	22,000	India	India	No
IND-503	Glory	White	1,660	India	India	No
IND-504	Peacolac	White	93	India	India	No
IND-505	Peacolac	Yellow	12,600	India	India	No
IND-506	Eagle	Pale Cream	10,600	India	India	No
IND-507	Eagle	White	2,200	India	India	No
IND-508	Ujala	white	2,600	India	India	No
IND-509	Ujala	yellow	33,000	India	India	No
IND-510	Goutam	Spl White	1,290	India	India	No
IND-511	Goutam	Golde Yellow	43,000	India	India	No
IND-512	Daffodil	Golde Yellow	20,000	India	India	No
IND-513	Daffodil	White	3,300	India	India	No
IND-514	Deb	Pale Cream	5,700	India	India	No
IND-515	Lion	Golden Yellow	95,000	India	India	No
IND-516	Lion	Super White	2,200	India	India	No
IND-517	Rolac	Golden Yellow	19,800	India	India	No
IND-518	Rolac	white	44	India	India	No
IND-519	Star	White	5,700	India	India	No
IND-520	Star	Golden Yellow	2,200	India	India	No
IND-521	Glory	Pale cream	5,300	India	India	No
IND-522	Triton	White	2,100	India	India	No
IND-523	Kohinoor	Brl White	2,100	India	India	No
IND-524	Kohinoor	Yellow	41,000	India	India	No
IND-525	Vibrant	White	5,000	India	India	No
IND-526	Vibrant	Golden Yellow	53,000	India	India	No
IND-527	Sunrise	White	4,400	India	India	No
IND-528	Sunrise	Gol. Yellow	63,000	India	India	No
IND-529	Autolite	White	350	India	India	No
IND-530	Autolite	Yellow	78,000	India	India	No

Sample Number	Brand Name	Color of Paint	Parts Per Million Lead (dry weight)	Brand Head-quarters ¹ Country	Country Where Manufactured	Is there information on can about lead content of paint?
IND-531	Sunbrite	White	3,600	India	India	No
IND-532	Sunbrite	Golden Yellow	48,000	India	India	No
IND-533	Jay	White	4,300	India	India	No
IND-534	Milan	White	3,600	India	India	No
IND-535	Milan	Golden Yellow	38,000	India	India	No
IND-536	Swastik	Ul. White	2,300	India	India	No
IND-537	Swastik	G. Yellow	47,000	India	India	No
IND-538	Maruti	Royal White	3,300	India	India	No
IND-539	Maruti	G. Yellow	16,500	India	India	No
IND-540	Sonata	White	8,000	India	India	No
IND-541	Sonata	Golden Yellow	64,000	India	India	No
IND-542	Tirupati	B R White	1,990	India	India	No
IND-543	Tirupati	Yellow	47,000	India	India	No
IND-544	Prime Coat	White	138	India	India	No
IND-545	Prime Coat	Gol. Yellow	60,000	India	India	No
IND-546	Gemini	Sup White	4,400	India	India	No
IND-547	Gemini	Gol. Yellow	54,000	India	India	No
IND-548	Real Utsav	Br. White	6,400	India	India	No
IND-549	Real Utsav	G. Yellow	86,000	India	India	No
IND-550	Star Lite	White	1,190	India	India	No
IND-551	Star Lite	Golden Yellow	67,000	India	India	No
IND-552	Asha Lite	Br. White	45	India	India	No
IND-553	Asha Lite	Golden Yellow	75,000	India	India	No
IND-554	New Wilson	White	2,100	India	India	No
IND-555	New Wilson	G. Yellow	20,000	India	India	No
IND-556	Armour	White	800	India	India	No
IND-557	Armour	G. Yellow	15,000	India	India	No
IND-558	Durable	BR White	1,270	India	India	No
IND-559	Durable	G. Yellow	17,600	India	India	No
IND-560	Platinum	White	770	India	India	No
IND-561	Platinum	G. Yellow	65,000	India	India	No
IND-562	Subh	White	6,900	India	India	No
IND-563	Subh	G. Yellow	25,000	India	India	No
IND-564	Flora	White	550	India	India	No
IND-565	Flora	Go. Yellow	36,000	India	India	No

Sample Number	Brand Name	Color of Paint	Parts Per Million Lead (dry weight)	Brand Head-quarters ¹ Country	Country Where Manufactured	Is there information on can about lead content of paint?
IND-566	Ajanta	White	1,750	India	India	No
IND-567	Ajanta	Gol. Yellow	49,000	India	India	No
IND-568	Goodluck	White	710	India	India	No
IND-569	Goodluck	G. Yellow	12,700	India	India	No
IND-570	Amul	White	12	India	India	No
IND-571	Amul	G. Yellow	11,000	India	India	No
IND-572	Mox	White	4,400	India	India	No
IND-573	Mox	G. Yellow	38,000	India	India	No
IND-574	Mox	G. Yellow	67,000	India	India	No
IND-575	Gayatri	White	2,700	India	India	No
IND-576	Gayatri	G. Yellow	71,000	India	India	No
IND-577	Asia Coat	White	6,300	India	India	No
IND-578	Asia Coat	Yellow	58,000	India	India	No
IND-579	Flora	White	147	India	India	No
IND-580	Flora	G. Yellow	34,000	India	India	No
IND-581	Decolite	White	8,600	India	India	No
IND-582	Decolite	G. Yellow	85,000	India	India	No
IND-583	Cona	Br. White	112	India	India	No
IND-584	Cona	Yellow	55,000	India	India	No
IND-585	Rayol Gold	White	70	India	India	No
IND-586	Royal Gold	Mint Green	5,500	India	India	No
IND-587	Magicoat	White	980	India	India	No
IND-588	Magicoat	Mint Green	8,800	India	India	No
IND-589	Jaycolite	White	4,600	India	India	No
IND-590	Jaycolite	White	33,000	India	India	No
IND-591	Kalpana	white	53	India	India	No
IND-592	Kalpana	yellow	47	India	India	No
IND-593	Nine 9 pemium	G. Brown	167	India	India	No
IND-594	Nine 9 pemium	D. Green	54,000	India	India	No
IND-595	Hero Synthtic	phiroza	8,000	India	India	No
IND-596	Hero Synthtic	Smoke Grey	4,500	India	India	No
IND-597	Jycolite	Mint Green	13,600	India	India	No

Sample Number	Brand Name	Color of Paint	Parts Per Million Lead (dry weight)	Brand Head-quarters ¹ Country	Country Where Manufactured	Is there information on can about lead content of paint?
IND-598	JPC S	White	2,500	India	India	No
IND-599	Wonderman	Mint Green	76,000	India	India	No
IND-600	Wonderman	White	3,800	India	India	No
IND-601	Maxicoat	white	3,600	India	India	No
IND-602	Sri Balaji	White	5,800	India	India	No
IND-603	Decotite	White	7,200	India	India	No
IND-604	Krishna	white	1,320	India	India	No
IND-605	Krishna	Yellow	71,000	India	India	No
IND-606	GP	white	105	India	India	No
IND-607	GP	yellow	93,000	India	India	No
IND-608	Vitty	White	29,000	India	India	No
IND-609	Vitty	Yellow	34	India	India	No
IND-610	Decor	Yellow	49,000	India	India	No
IND-611	Deluxe	yellow	79,000	India	India	No
IND-612	3apples	white	3,900	India	India	No
IND-613	3apples	yellow	44,000	India	India	No
IND-614	MB	white	2,800	India	India	No
IND-615	MB	yellow	85,000	India	India	No
IND-616	Rassi	G. Yellow	41,000	India	India	No
IND-617	Fine Touch	G. Yellow	34,000	India	India	No
IND-618	Gem paints	White	6,000	India	India	No
IND-619	Shenlack	Golden Yellow	69,000	India	India	No
IND-620	Inside	White	1,490	India	India	No
IND-621	Kiran	White	5,700	India	India	No
IND-622	Kiran	G. Yellow	1,34,000	India	India	No
IND-623	Gem	G. Yellow	80,000	India	India	No
IND-624	Aqua	White	77	India	India	No
IND-625	Ultralite	Yellow	1,09,000	India	India	No
IND-626	Dimond	White	3,700	India	India	No
IND-627	Ultralite	White	3,900	India	India	No
IND-628	Libra	White	42	India	India	No
IND-629	Emerald	White	34	India	India	No
IND-630	Emerald	G. Yellow	23,000	India	India	No
IND-631	Palrecha	BR White	3,200	India	India	No
IND-632	Palrecha	G. Yellow	23,000	India	India	No

Sample Number	Brand Name	Color of Paint	Parts Per Million Lead (dry weight)	Brand Head-quarters ¹ Country	Country Where Manufactured	Is there information on can about lead content of paint?
IND-633	Harmony	White	200	India	India	No
IND-634	Harmony	Yellow	66,000	India	India	No
IND-635	Phinex	Yellow	4,000	India	India	No
IND-636	Jai Coat	Yellow	79,000	India	India	No
IND-637	Shreeji	Yellow	25,000	India	India	No
IND-638	Vaastava	Yellow	47,000	India	India	No
IND-639	Unnati	Yellow	86,000	India	India	No
IND-640	Kushal	White	2,900	India	India	No
IND-641	Kushal	Yellow	89,000	India	India	No
IND-642	Sony coat	Yellow	31,000	India	India	No
IND-643	Royal	White	1,310	India	India	No
IND-644	Sun coat	Yellow	58,000	India	India	No
IND-645	Premier	White	9,800	India	India	No
IND-646	Premier	Yellow	67,000	India	India	No
IND-647	Durocoat	White	4,700	India	India	No
IND-648	Toplite	Yellow	69,000	India	India	No
IND-649	Balaji	Yellow	86,000	India	India	No

¹Information on *Country of Brand Headquarters* and *Country Where Manufactured* is provided, but in some cases, the information could not be verified.

III APPENDIX

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead	Number of Samples between 90 and 600 ppm Lead	Number of Samples between 600 and 10000 ppm Lead	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
1	York	R. D. Paints and Colours (India), C-25 A Kalkaji New Delhi	1 (golden yellow)				1	24,000	24,000
2	Dutch Stag	Dyeton Paints Co, 34/2, Johripur, Delhi-94	2				2	57,000	98,000
3	Novinil	Dyeton Paints Co, 34/2, Johripur, Delhi-94	1 (black Japan)		1			3,300	3,300
4	Jacko	Pkd & Mktd by - Jackson Paints, P-81B Gali No 5, Bihari Colony Ext, Delhi-32	1 (pale yellow)		1			4,700	4,700
5	Briston	VASCO Paints & Chemicals, L-9, DSIDC, Sec-5, Bawana,	2			1		450	26,000
6	Hen's Paints	VASCO Paints & Chemicals, L-9, DSIDC, Sec-5, Bawana, Marketed by-Shri Raim Paints and, Chemicals New Delhi	2		1			3,700	29,000
7	Vasco	VASCO Paints & Chemicals, L-9, DSIDC, Sec-5, Bawana,	1 (golden yellow)				1	47,000	47,000
8	Universal	Universal Paint Works, 83/1 Jawahar Nagar Loni Road Delhi-110094	2		1			710	41,000
9	Delux	S. M. Paints, Ph. No. 4977/3 Gali No.15, / Samalpur Delhi-42,	1 (white)				1	580	580

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead	Number of Samples between 90 and 600 ppm Lead	Number of Samples between 600 and 10000 ppm Lead	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
10	Karam	S. M. Paints, Kh. No. 4917/3 Gali No.15, / Samalpur Delhi-42	1 (black japan)	1				560	560
11	Maruti DeLuxe	Sai Resins & Paints Industries H. No. 2-24-114/A, IDA, Uppal, Hyderabad	2	1			1	71	14,200
12	Asons Premium	Yusufi Paints & packaging Industries, 532, Khot Compound, Sarda Circle, Nashik-422001	1 (golden yellow)				1	1,26,000	1,26,000
13	Lakshmi	S. Y. Gangadhar & Co. 3-717/3 Amberpet, Hyderabad-5000013	2		1		1	2,500	2,9000
14	Kiran	S. Y. Gangadhar & Co. 3-717/3 Amberpet, Hyderabad-5000013	2		1		1	3,400	1,15000
15	Ascolit	Yusufi Paints & packaging Industries, 532, Khot Compound, Sarda Circle, Nashik-422001	2	1			1	320	1,02,000
16	Champion	Blossom Paint Products, 91-A, Sector E, Industrial Area, Indore-452003	1 (golden yellow)				1	1,06,000	1,06,000
17	National	National Paints and Chemicals Industries 9 C A Road Nagpur-440008	2		1		1	4,100	23,000
18	Homecare Premium	Glossy Color & Paints Private Ltd. 50A &B, Shivaji Marg, New Delhi-110015, www.glossypaints.com	2	2				12	60
19	Vespa	S. M Paint Industries, Kharkhoda Road, Feroz Pur Bengar Dist. Sonipat (Haryana),	2		1		1	1,700	10,800
20	Lakshay	Taiwar Paint Works, C-226, sector-2, dsidc Bawana Indl. Area, New Delhi	2		1		1	2,500	29,000
21	Glow (Xtra)	Bombay Painto-Chem (India) Krishnapura-126102	2		2			2,000	2,400

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead	Number of Samples between 90 and 600 ppm Lead	Number of Samples between 600 and 10000 ppm Lead	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
22	Snowflac	S. B. Traders, A-116A Chanakya Palace, New Delhi-110059,	2	1			1	72	13,900
23	Deluxe	PKd By-Gupta Piant Industries, New Delhi -110053	2		1		1	1,650	65,000
24	Glaxo	Rajdhani Paint Industries Nagloi-New Delhi-41	2		1		1	2,500	28,000
25	Super Shine	Universal Paint Works, 8/3/1, Jawahar Nagar, Loni Road, Delhi-94	1 (white)		1			2,500	2,500
26	Marino	Universal Paint Works, 8/3/1, Jawahar Nagar, Loni Road, Delhi-94	1 (white)			1	1	29,000	29,000
27	Glaxci	Glaxci Paints Pvt Ltd, Village Daheasara, Dist., Siniapat Haryana	2		1		1	4,000	12,200
28	Deepali	Universal Paint Works, 8/3/1, Jawahar Nagar, Loni Road, Delhi-11009	2		1		1	7,500	52,000
29	Decco	Universal Paint Works, 8/3/1, Jawahar Nagar, Loni Road, Delhi-94	1 (golden yellow)			1		240	240
30	Bittu Gold	Universal Paint Works, 8/3/1, Jawahar Nagar, Loni Road, Delhi-94	2		1		1	950	48,000
31	British Paint	*A Division of Berger Paints India Limited, 129 Park Street Kolkata-700017, #A-38, Industrial Area Sikandarabad, Dist-Bulandshahr, Uttar Pradesh-203205	2	2				25	73
32	Glamour	Bhawna Paints India, Ranhola, Delhi-110041	1 (golden yellow)				1	1,60,000	1,60,000
33	Dumux	Gwalior Paints, Haryana, India	1 (golden brown)				1	29,000	29,000
34	Galleria Premium	S. M Paint Industries, Kharkhoda Road, Feroz Pur Bengar Dist. Sonipat (Haryana)	1 (smoke grey)				1	2,500	2,500

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead	Number of Samples between 90 and 600 ppm Lead	Number of Samples between 600 and 10000 ppm Lead	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
35	Jet Plus Premium	M/S Primco Industries, 57/1/16, Site-4, Shahibabad, Indl, Area, Ghb (UP)	1 (yellow)				1	42,000	42,000
36	Watson	Upica Paints Pvt Ltd, 6-11, Industrial Estate, Site No-1, Gaziabad (UP)	1 (ox blue)		1			3,900	3,900
37	Sunlac	Sunshine Paints, Survey No. 290/1, Goodluck Market No. 02, Chandola, Narol Road, Ahemedabad-380028 (Guj) India	2		1		1	6,400	4,3000
38	BPL Gold	Aeromax Paint (india), 22/19, Haryana	2		2			760	3,300
39	Galaxy	Bombay Paints and Chemicals, S. P. Road, Delhi-41	1 (white)				1	17,400	17,400
40	Asian Paint Premium	Mnf at-Punjab Paint Colour & Varnish Works Pvt. Ltd. 123/529 Fazal Ganj, Kanpur-208012 for Asian Paints Ltd. Mumbai	2	2				29	32
41	Shalimar		2	2				13	18
42	Berger Luxol	Sidco Industrial Growth Centre Sambha, Dist-Jammu, Jammu and Kashmir-184421, Reg off-Berger Paints India Limited, Berger House, 129 Park Street, Kolkata-700017	2	2				<9	17
43	Nerolac	Mnf at-Punjab Paint Colour & Varnish Works Pvt. Ltd. 123/529 Fazal Ganj, Kanpur-208012, Marketed by-Kansai Nerolac Paint Ltd. Japan, G. K. Marg, Lower Parel, Mumbai	2	2				<8	15
44	ICI Dulux	Plot No A-42, Phase VIII B, Focal Point, SAS Nagar, Mohali Dist. 160059, Punjab, Reg off-Akzo Nobel India Ltd. Ceetanjali	2	2				<8	<8

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead	Number of Samples between 90 and 600 ppm Lead	Number of Samples between 600 and 10000 ppm Lead	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
45	Brolac	Jenson & Nicholson (India) Ltd. Regd. Office : 7B, Middleton Street, Kolkata-700071	2	1			1	96	14,300
46	Unik	R. S. Industry, Bhaproda, Distt Jhajjar, Marketed by-S. M. Paints(Kh. No. 4917/3 Gali No.15, /Samaiapur Delhi-42	1 (yellow)				1	34,000	34,000
47	Spartan Velox	Hansa Paints and Chemicals, Jatola Village, Dist-Faridabad Haryana-121101	1 (royal ivory)		1			7,400	7,400
48	Western	Western Color Kolkata	2		1		1	6,400	11,500
49	Hindlux	Hindustan Paints & Polymers 620 D. H. Road, Kolkata 700034	2		1		1	6,900	15,600
50	Premier	Manf and Pkd by - Premier Paints & Chemicals, 165, B. L. Saha Road, Kolkata-700053	2	1			1	250	71,000
51	Max	Durga Color & Chemicals Pvt. Ltd., 19 Synagouge Street, Kolkata-700001	2			2		10,600	27,000
52	Painter's Choice	Hindustan Paints & Polymers 620 D. H. Road, Kolkata 700034	2		2			2,800	6,900
53	Jecolite	J. D. Paints & Chemicals Industries, Kolkata, West Bengal	2	1			1	195	20,000
54	Deb	Deb Paints, 330, M. G. Road, Kolkata-700082	2		2			4,500	5,700
55	Rose	Cosco Paints, Kolkata	1 (s. white)		1			2,000	2,000
56	Unilax	Unilax Paints Pvt. Ltd., Lenin Sarani, Kolkata-700013	1 (golden yellow)			1		10,300	10,300
57	Sunshine	Surya Paints & Chemicals, 38, Bip Road, Chatterjee Lane, Sibapur, Howrah-2	2		1		1	3,300	18,000
58	Oscar Plus	Sreelac Paints & Chemicals, Kolkata	2		1		1	1,410	27,000

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead	Number of Samples between 90 and 600 ppm Lead	Number of Samples between 600 and 10000 ppm Lead	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
59	Shivam	Gupta Paints and Chemicals, Kolkatta-700039	2		2			2,600	2,700
60	Kingcolac	Kanan Paint Works, 54/2 N. R. Mukherjee Road, Howrah-2	2		1		1	2,100	19,600
61	Eurosyn	Eureka Paints, 4, Prafulla Chaki Road, Kolkatta-700035	2			2		15,600	29,000
62	Prolite	Prolite Paints and Chemicals, Plot No A-2, Behal Ind. Estate, 620, D. H. Road, Kolkatta-700034	1 (exp. White)		1			2,500	2,500
63	Double Power	Bisco Dyes and Chemicals Pvt. Ltd, 241, Lake Road, Kolkatta	2		1		1	1,300	2,2000
64	Glory	SLP Industries, Chandmari Road, P O Danesh Shekh Lane Howrah-9	2		2			1,660	5,300
65	Peacolac	Supply Syndicate, 371, Currie Road, Howrah-4	2	1			1	93	12,600
66	Eagle	Marktd by-Agni Chemicals	2		1		1	2,200	10,600
67	Ujala	Gulab Paints, Kolkatta	2		1		1	2,600	33,000
68	Goutam	National Paints and Chemicals, 186, B. L. Saha Road, Kolkatta-700041	2		1		1	1,290	43,000
69	Daffodil	Supreme Paints and Chemicals, Kolkatta	2		1		1	3,300	20,000
70	Lion	Swan Paint and Varnish Works, 153, Manicktolla Main Road, Kolkatta 54	2		1		1	2,200	95,000
71	Rolac	Joy Sales, Kolkatta	2	1			1	44	19,800
72	Star	Delta Paints, Calcutta	2		2			2,200	5,700
73	Triton	Triton Paints, 137, MIR Road, Howrah-711203	1 (white)		1			2,100	2,100
74	Kohinoor	Kohinoor Paints, Shapar (V), Rajkot	2		1		1	2,100	41,000

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead	Number of Samples between 90 and 600 ppm Lead	Number of Samples between 600 and 10000 ppm Lead	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
75	Vibrant	Marshal Paints, Plot No. 13A/B S No 24/A, Shapar, Rajkot	2	0	1	1	1	5,000	53,000
76	Sunrise	Rado Paint Rajkot, K/173/B GIDC, V. U. Nagar - 388121	2	0	1	1	1	4,400	63,000
77	Autolite	Hakimi Paints, Madhapar Industrial Area, Rajkot-360006	2	1	0	1	1	350	78,000
78	Sunbrite	Rainbow Paints Rajkot	2	0	1	1	1	3,600	48,000
79	Jay	Nice Coates, Vittha; Udyog Nagar, Baroda - 388121	1 (white)	0	1	0	0	4,300	4,300
80	Milan	Pacific Paints Industries, Factory-Plot No. 19/14, Phase IV, GIDC Estate, V.U. Nagar, Dist- Anand - 388121	2	0	1	1	1	3,600	38,000
81	Swastik	Swastik Paints Industries Unique Paint, Rakhial, Ahmedabad-23	2	0	1	1	1	2,300	47,000
82	Maruti	Maruti Paints Pvt.Ltd. 734-1 Near Santes (NG), Rakanpur, Gujarat	2	0	1	1	1	3,300	16,500
83	Sonata	Uma Paints, 33 Vishnu Industrial Estate, Bapunagar, Ahmedabad-380015	2	0	1	1	1	8,000	64,000
84	Tirupati	Tirupati Paints 444/5/A GIDC V. U. Nagar, Dist Anand-388121	2	0	1	1	1	1,990	47,000
85	Prime Coat	Uma Paints, 33 Vishnu Industrial Estate, Bapunagar, Ahmedabad-380016	2	1	0	1	1	138	60,000
86	Gemini	Jagdamba Paints Industries, C-49, Shreenath Nagar, Aamraiwad, Ahmedabad	2	0	1	1	1	4,400	54,000
87	Real Utsav	Pacific Paints Industries, Factory-Plot No. 19/14, Phase IV, GIDC Estate, V.U. Nagar, Dist- Anand - 388121	2	0	1	1	1	6,400	86,000

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead1	Number of Samples between 90 and 600 ppm Lead1	Number of Samples between 600 and 10000 ppm Lead2	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
88	Star Lite	J.K. Colours Company, Ch/14, GIDC Phase-I, Vatva, Ahmedabad-382445	2		1		1	1,190	67,000
89	Asha Lite	Gayatri Paints, Fatepura Road, Ulhasand, Gujarat	2	1			1	45	75,000
90	New Wilson	Gaytri Colours Idustries, 106, Anant Ind Estate, B/H Food Market, Naroda Road, Ahmedabad-25 Ahmedabad	2		1		1	2,100	20,000
91	Armour	Paras Paints Jamnagar	2		1		1	800	15,000
92	Durable	Pacific Paints Industries, Factory-Plot No. 19/14, Phase IV, GIDC Estate, V.U. Nagar, Dist- Anand - 388121	2		1		1	1,270	17,600
93	Platinum	Kaushalya Colour Company, Near Anupam Cinema, Khokra, Ahmedabad-382405	2		1		1	770	65,000
94	Subh	Sudarshan Paints, 158, Sudama Idustriala Estate, Narol, Ahmedabad	2		1		1	6,900	25,000
95	Flora	Kaushalya Colour Company, Near Anupam Cinema, Khokra, Ahmedabad-382406	2	1			1	550	36,000
96	Ajanta	J.K. Colour Company, Ch/14, GIDC Vatva, Ahmedabad-382445	2		1		1	1,750	49,000
97	Goodluck	Goodluck Oil and Paint Company, Khanderao Road, Baroda-390001	2		1		1	710	12,700
98	Amul	Amul Paint Industries, 88, Tirupati Estate, Bapunagar, Ahmedabad-24	2	1			1	12	11,000
99	Mox	Royal Paints, Rajkot	3		1		2	4,400	67,000
100	Gayatri	Gaytri Colours Idustries, 106, Anant Ind Estate, B/H Food Market, Naroda Road, Ahmedabad-25 Ahmedabad	2		1		1	2,700	71,000

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead	Number of Samples between 90 and 600 ppm Lead	Number of Samples between 600 and 10000 ppm Lead	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
101	Asia Coat	Ambica Industries, 9/24/B, Krishna Nagar, N. S. Road, Champapet, Hyderabad-500060-AP	2		1	1	1	6,300	58,000
102	Flora	Ambica Industries, 9/24/B, Krishna Nagar, N. S. Road, Champapet, Hyderabad-500060-AP	2	1			1	147	34,000
103	Decolite	Asian Trading Co, Vijaywada - 820012	3		2		1	7,200	85,000
104	Cona	Cona Paints, Rotal Tari Lane, Vijaywada-520001	2	1			1	112	55,000
105	Rayol Gold	Gaja Laxmi Paints, D. No. 25-136/h, 3rd, Cross, Kabel Road, R. R. Nagar, Vijaywada-12	2	1			1	70	5,500
106	Magicoat	Gaja Laxmi Paints, D. No. 25-136/h, 3rd, Cross, Kabel Road, R. R. Nagar, Vijaywada-12	2		2			980	8,800
107	Jaycolite	Bisco Dyes and Chemicals Pvt. Ltd, 241, Lake Road, Kolkatta	3		1		2	4,600	33,000
108	Kalpana	Naveena Paints, Vijaywada-520008	2	2				47	53
109	Nine 9 premium	Navya Krishna Paints, D. No-2/h2, Ambapuram, -520012, Vijaywada	2	1			1	167	54,000
110	Herio Synthetic	K.L Tanneeru Paints, R. S. No. 408/6, 4th Cross, Kabela Road, R. R. Nagar, Vijaywada	2		2			4,500	8,000
111	JPCS	Jyothi Paints abd Cehmicals, Plot No-8/7, Nacharam, Hyderabad	1 (white)		1			2,500	2,500
112	Wondenman	Nariman Coats, Plot No. H-14, Uppal, Hyderabad-600039, R. R. District	2		1		1	3,800	76,000

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead	Number of Samples between 90 and 600 ppm Lead	Number of Samples between 600 and 10000 ppm Lead	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
113	Maxicoat	Vijaya Paints, D. No. 25-28, 4th cross, Kabela Road, R. R. Nagar, Vijaywada-12	1 (white)			1		3,600	3,600
114	Sri Balaji	Vijaya Paints, D. No. 25-28, 4th cross, Kabela Road, R. R. Nagar, Vijaywada-13	1 (white)			1		5,800	5,800
115	Krishna	Naveena Paints, 5th Road, Auto Nagar, Vijaywada-520007	2			1	1	1,320	71,000
116	GP	Gaja Laxmi Paints, D-98/19A, K. L. Road, Kabel Nagar, Vijaywada	2	1			1	105	93,000
117	Vitty	Gaja Laxmi Paints, D-98/19A, K. L. Road, Kabel Nagar, Vijaywada	2	1			1	34	29,000
118	Decor	No information	1 (yellow)				1	49,000	49,000
119	Deluxe	Asian Trading Co. Bhavaipuram Vijaywada	1 (yellow)				1	79,000	79,000
120	3apples	Sridhar paints company(p)ltd, Hydrabad	2			1	1	3,900	4,4000
121	MB	MB paints and chemicals, 4-8-847, Gowaliguda, Hydrabad	2			1	1	2,800	85,000
122	Rassi	K.L Tanneeru Paints, RSN-408/6, 4th Cross, Kabel Road, R. R. Nagar, Vijaywada-12	1 (golden yellow)				1	41,000	41,000
123	Fine Touch	Vijaya Paints, Vijaywada	1 (golden yellow)				1	34,000	34,000
124	Shenlack	Sheenlac Paints Co. No. D-51, IDA Jeedeie Metla, Hydrabad-500055	1 (golden yellow)				1	69,000	69,000
125	Inside	Karshni Color Industries Pvt. Ltd., 307 Bungalow No-279, Sector 28, Vashi, Navi Mumbai-400705	1 (white)				1	1,490	1,490
126	Kiran	Kamal Paints, 102, Azeez Salt Industries Town, Nayandahalli, Mysore Road, Bangalore-560039, kpb@vsnl.net	2			1	1	5,700	1,34,000

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead	Number of Samples between 90 and 600 ppm Lead	Number of Samples between 600 and 10000 ppm Lead	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
127	Gem	Gem Paints Ltd. 4/7/18, 11th cross, 4th Phase, Peenya Industrial Area, Bangalore-560058	2	1	1	1	1	6,000	80,000
128	Aqua	Eagle Bussiness Service Pvt Ltd., No. 96/2, Budigere Cross, off old Madras Road. . .	1 (white)	1				77	77
129	Ultralite	Kamal Paints, 102, Azeez Salt Industries Town, Nayandahalli, Mysore Road, Bangalore-560039, kpb@vsnl.net	2		1	1	1	3,900	1,09,000
130	Dimond	Diamond Paints, Idegamaidan Road, Near Sweepage Water Booster, Cowli Bazar, Bellory-583102	1 (white)		1			3,700	3,700
131	Libra	Ganesh Paint, 116/Sri Bhairaveshwar Ind. Estate, Andhrhalli Main Road, Peenya., 2nd Stage, Bangalore-560091, CC-28364341	1 (white)	1				42	42
132	Emerald	Surfa Coats, (Bangalore Ltd), Surfa Sadan, 639, 46 H "A" Cross, Illrd Block, Rajaji Nagar, Bangalore-560010, CC-22959282	2	1		1	1	34	23,000
133	Palrecha	Palrecha Paints and Co. 30/31 Karicbahalli, Peenya, 3rd Stage, Thlgar Palya Main Road, CC-9845372657,	2		1	1	1	3,200	23,000
134	Harmony	S/No-67/1, Chilkka Gollarahatti Magadi Road, Bangalore-560091, CC-9243019680, alfa.coats@gmail.com	2	1		1	1	200	66,000
135	Phinex	No information, due to spill out	1 (yellow)		1			4,000	4,000
136	Jai Coat	A Naginda and Co	1 (yellow)			1	1	79,000	79,000
137	Shreeji	Sakshi synthetic Resins	1 (yellow)			1	1	25,000	25,000

SN	Brand	Manufacturer Details	Total Number of Samples	Number of Samples < 90 ppm Lead ¹	Number of Samples between 90 and 600 ppm Lead ²	Number of Samples between 600 and 10000 ppm Lead ²	Number of Samples Above 10000 ppm Lead	Minimum ppm	Maximum ppm
138	Vaastava	Decora paints and chemicals	1 (yellow)				1	47,000	47,000
139	Unnati	No information, due to spill out	1 (yellow)				1	86,000	86,000
140	Kushal	Kushal Paints and chemicals	2		1		1	2,900	89,000
141	Sony coat	No information visible , due to spill out	1 (yellow)				1	31,000	31,000
142	Royal	No information visible	1 (white)		1			1,310	1,310
143	Sun coat	No information visible	1 (yellow)				1	58,000	58,000
144	Premier	No information visible	2		1		1	9,800	67,000
145	Durocoat	No information visible	1 (white)		1			4,700	4,700
146	Toplite	No information visible	1 (yellow)				1	69,000	69,000
147	Balaji	No information visible	1 (yellow)				1	86,000	86,000

IV

APPENDIX

Lead Concentration (ppm) by Color of New Enamel Decorative Paints Purchased in India

Color	Number of Samples	Average lead concentration ppm	Number of Samples Below 90 ppm Lead	Number of Samples Above 90 ppm Lead	Number of Samples Above 600 ppm Lead	Number of Samples Above 10,000 ppm Lead	Minimum ppm	Maximum ppm
Yellow	109	45,500	7	102	101	97	<8	1,60,000
White	121	4,160	16	105	91	9	<8	52,000
Dark (Black, Brown, Grey)	10	4,970	2	8	5	1	60	29,000
Bright (Green, Red, Blue)	10	18,500	1	9	9	4	72	76,000



Toxics Link
for a toxics-free world

Toxics Link is an Indian environmental research and advocacy organization set up in 1996, engaged in disseminating information to help strengthen campaign against toxics pollution, provide cleaner alternatives and bring together groups and people affected by this problem. Toxics Link's Mission Statement is "Working together for environmental justice and freedom from toxics. We have taken upon ourselves to collect and share both information about the sources and the dangers of poisons in our environment and bodies, and information about clean and sustainable alternatives for India and the rest of the world"



IPEN is an international NGO network of health and environmental organizations from all regions of the world in which Toxics Link participates. IPEN is a leading global organization working to establish and implement safe chemicals policies and practices to protect human health and the environment. Its mission is a toxics-free future for all. IPEN helps build the capacity of its member organizations to implement on-the-ground activities, learn from each other's work, and work at the international level to set priorities and achieve new policies.



The European Union is made up of 28 Member States who have decided to gradually link together their know-how, resources and destinies. Together, during a period of enlargement of 50 years, they have built a zone of stability, democracy and sustainable development, while maintaining cultural diversity, tolerance and individual freedom. The European Union is committed to sharing its achievements and its values with countries and people beyond its borders.