

Child Mica Mining

We use products every day that are made from mica. Most of us are unaware that this mica may have been acquired through the worst forms of child labor. From its use as an insulator in our computers, phones, and other electronics to its use in cosmetics and paints on automobiles, mica is an important resource in the global economy.

As a result, it is imperative that mica be mined according to basic human rights standards instead of forced labor and exploitation of children. This report will inform you of the basic properties and uses of mica, where it is mined, the connection of child mica mining to modern slavery, and what we can do to put a stop to child labor.

DESCRIPTION

The term “mica” refers to a group of light and relatively soft silicate minerals that form in layered sheets of rock. These extremely thin sheets of mica are split apart to yield shiny flakes, powders, and papers that are used in a number of products. Mica has several unique properties that make it highly sought after by manufacturers. Firstly, mica does not react to water, oils, acids, or solvents—making it chemically inert. Mica is a strong, light, and flexible material, and is able to resist extreme temperatures.

Although the mica group includes 37 total types of minerals, the most commonly used forms are muscovite and phlogopite.

In an article for the University of Waterloo hydrogeologist Jason Cole writes, “When it comes to modern technology, sheet muscovite is an indispensable resource. It is used in almost every electronic device sold today as an insulator. Its high resistance to the

passage of electricity and heat are so great that no substitute, artificial or natural, has proved to be economically suitable to replace it [...] Sheet mica is just as important to the electrical and electronic industries as copper wire and now ranks as one of the essential minerals of modern life.”¹ The unique insulative properties of mica are critical to our technologies but the metal is often mined inhumanely through forced child labor.

FORMS AND USES OF MICA

Due to its shimmer, mica is used in an extremely wide range of products and industries. After being mined, mica is processed into three main forms: paper, powder, and flakes.

Mica paper is commonly found in the electronics sector, where it is used for electrical insulation of cables, capacitors, and commutators as well as toasters and hairdryers.

¹ Jason Cole, “Micas,” University of Waterloo, Earth Sciences Museum, February 28, 2013, <https://uwaterloo.ca/earth-sciences-museum/resources/detailed-rocks-and-minerals-articles/micas>.

Mica powder is often used in the automotive sector as a component of bitumen foils, rubber tires, clutches, and brake pads. The powder is also used in fiber cement and plasterboard in the construction industry.

Mica flakes are the most commonly used form of mica and make up the largest number of products. The pearlescent flakes are used in paints and coatings, especially those used on automobiles. They are also used in the cosmetic industry to provide pigments for makeup, eyeshadow, lipstick, shampoos, and conditioners. Lastly, mica flakes are used as a filler material in various plastics and inks, including pens.

WHERE IS MICA MINED USING THE WORST FORMS OF CHILD LABOR?

The world's top mica producing regions are India, China, the U.S., Europe, and Madagascar. Of these main mica harvesting regions, the worst forms of child labor take place in India and Madagascar.

According to the Dutch nonprofit SOMO (Centre for Research on Multinational Corporations), three quarters of mica mining in India takes place in the states of Jharkhand and Bihar, and 90% of the mining is illegal (Figure 1). As of the publishing of their extensive 2016 report, *Beauty and a Beast*, it is estimated that about 20,000 children are engaged in mica mining in these regions.² As a result of mica mining's illegality, families who mine in these regions often do it on a small-scale either underground or in quarries.

In Madagascar children are forced to mine mica on a large scale as well. French NGO Terre des Hommes

estimates that out of 22,000 total mica laborers in the three main mining regions of Madagascar, at least 11,000 of them are minors between the ages of 5 and 17.³ Madagascar has become the third-largest exporter of mica in the world and currently exports more sheet mica than India.

Much of the mica mined in India and Madagascar is shipped overseas, mainly to China. In turn, Chinese companies use the mica to make parts, which are

FIGURE 1: TOP CHILD MINING STATES IN INDIA



Source: https://www.d-maps.com/carte.php?num_car=24869&lang=en

² *Beauty and a Beast: Child Labour in Mica Mines*, SOMO, May 1, 2016, <https://www.somo.nl/beauty-and-a-beast/>.

³ "Children Make up Half of All Workers in Malagasy Mica Mines, Terre Des Hommes Research Reveals," *Terre Des Hommes* (blog), January 6, 2020, <https://www.terredeshommes.org/children-make-up-half-of-all-workers-in-malagasy-mica-mining-sector-terre-des-hommes-research-reveals/>.

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then distributed to a number of companies including Panasonic, Fujikura, Fujitsu, and Von Roll USA to make motors and appliances.⁴ In the cosmetic industry, companies Merck (Germany) and Kuncai (China) purchase a massive amount of Indian child-mined mica, and in turn distribute it to cosmetic giant L'Oréal. As a result, brands such as Yves Saint Laurent, Lancôme, and Helena Rubenstein create products which likely use child-mined mica.⁵

CHILD LABOR AND MODERN SLAVERY

Child labor is slavery. Child labor is classified under the category of forced labor and puts children in a position under which they have no control, and no means of escape. Children mining mica are subject to terrible conditions including exposure to inhalation of chemicals and back-breaking labor over long hours. Poverty is the clear cause of child labor in mica mines. Poor workers who are forced to mine mica are unaware of the risks involved as well as their own rights; they often feel that their children have no choice but to mine to earn money for the family.

HEALTH ISSUES CAUSED BY MINING

As noted in their article about artisanal small-scale mining (ASM) worldwide, Ohio State researchers Schwartz, Lee, and Darrah write, “The mining and refining processes are labor intensive and associated with a variety of health problems due to accidents, overheating, overexertion, dust inhalation, exposure to toxic chemicals and gases, violence, and illicit and prescription drug and alcohol addiction.”⁶

The most serious health risk stemming from artisanal small-scale mining is inhalation of dust and mineral particles, which can cause scarring and lesions in the lungs, bronchia, and trachea. A common mineral that causes such problems after its inhalation is silica, which is made up of tiny quartz particles and causes a condition called silicosis. Workers suffering from silicosis, including children, are at a drastically higher risk of lung cancer, tuberculosis, pneumonia, and other deadly conditions.

As a result of daily ASM work with the absence of large machinery, long hours, and dreadful working conditions, many miners suffer from biomechanical problems. The top problems in this category are musculoskeletal disorders, overexertion, and trauma. These biomechanical problems are all the more devastating in child miners as they alter the body's natural growth process over a long period of time, leading to major problems in adulthood. Other problems that develop out of ASM workplaces include hearing loss and heatstroke.

⁴ “Child Labour in Madagascar’s Mica Sector,” SOMO, November 17, 2019, <https://www.somo.nl/child-labour-in-madagascars-mica-sector/>.

⁵ Nina Lendal, “Who Suffers for Beauty: The Child Labor behind Makeup’s Glitter,” Danwatch, February 2014, <https://old.danwatch.dk/wp-content/uploads/2015/03/Who-suffers-for-beauty.pdf>.

⁶ Franklin W. Schwartz, Sangsuk Lee, and Thomas H. Darrah, “A Review of the Scope of Artisanal and Small-Scale Mining Worldwide, Poverty, and the Associated Health Impacts,” *GeoHealth* 5, no. 1 (2021): <https://doi.org/10.1029/2020GH000325>.

THE SITUATION

In Jharkhand and Bihar states, children are involved mainly in the mining and cobbing (breaking non-mica minerals off of the rocks) processes, as opposed to cutting and splitting. In 2005, NGO Aid India estimated there were 18,000 child mica laborers in Jharkhand, the main factors being a lack of proper education and widespread poverty in the region. However, since 2005, the Indian government has built more schools and roads in rural areas and has also informed citizens of the welfare and development opportunities available for them.

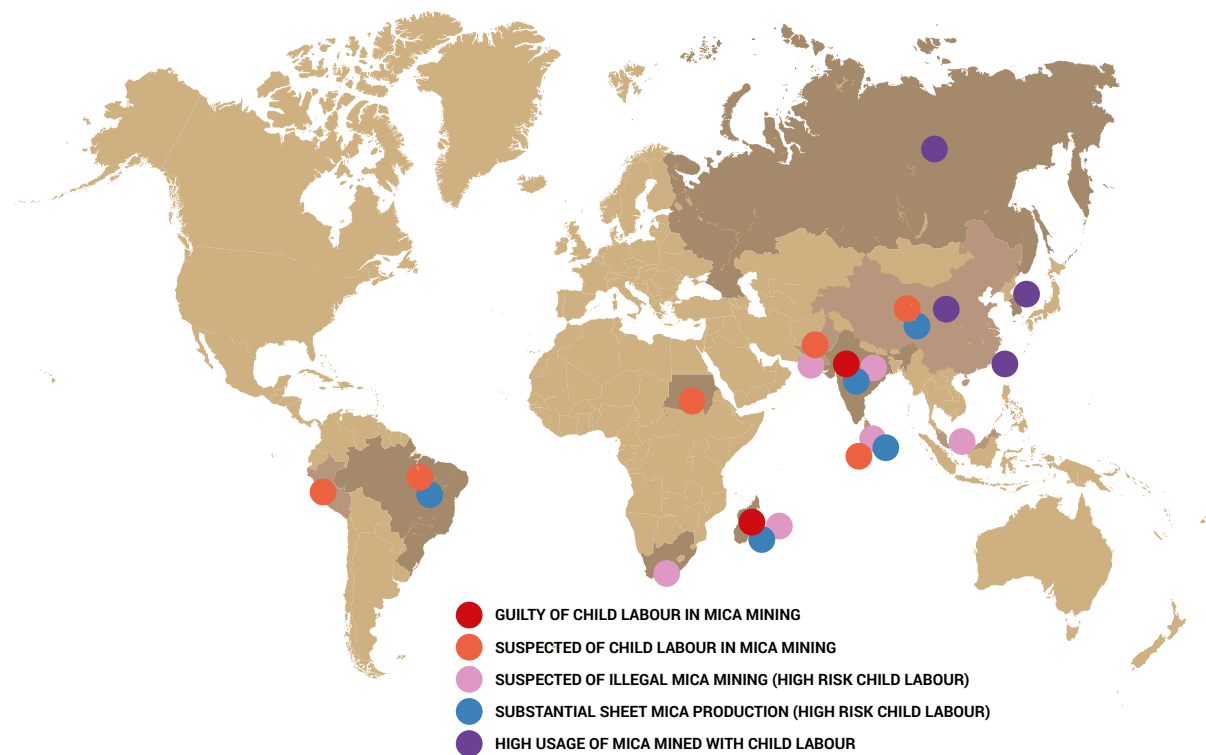
Andhra Pradesh is a region in which child mica mining still occurs, thus it is necessary for the Indian government and international NGOs to further investigate this area. It is also critical for the Indian

government to actively monitor the amount of child labor in Jharkhand and Bihar, and continue to invest in social programs that lift people out of poverty and provide educational opportunities for children.

Madagascar's government has not taken adequate measures to eliminate child labor, mainly due to a lack of financial and human resources. The main mica-related issues investigated by Madagascar's government include mine safety, mining within national parks, and low mica prices, but nothing related to child labor.

Figure 2, derived from SOMO's report on the global mica supply chain, denotes the status of various countries in the mica trade. Only India and Madagascar have been proven to use child labor, however, other countries such as Brazil, Peru, Sudan, Pakistan,

FIGURE 2: MICA PRODUCING COUNTRIES CLASSIFIED BY RISK



Source: https://www.somo.nl/wp-content/uploads/2018/03/NL180313_-GLOBAL-MICA-MINING-EXEC-SUMMARY.pdf



Source: <https://www.somo.nl/global-mica-mining/>

and China are suspected of it. In addition, the map shows which countries are suspected of illegal mica mining, produce large amounts of sheet mica, and have a high usage of mica mined with child labor.⁷

PAST MEASURES TO PREVENT CHILD LABOR

SOMO's India report recognizes the importance of the Indian government's building of schools and roads, as well as its promotion of government welfare programs in decreasing the number of child mica laborers in Jharkhand and Bihar. If children are provided a place to stay and earn their education, the likelihood that they will be forced into labor greatly decreases. In order to prevent child labor in Mada-

gascar, the country's government must take similar measures with the help of international organizations.

RECOMMENDATIONS FOR PREVENTING CHILD LABOR

Multinational corporations that profit from mica mined by children must take action to eliminate slavery from their supply chains. Former Thomson Reuters CEO Monique Villa writes in her one-page report "The Price of a Lipstick's Sparkle," "We need to know how workers enter the supply chain of a company. Have they paid a recruiter? Have they contracted a debt to get that job? Have they been promised a different job altogether? And once in the job, are they

⁷ "Global Mica Mining," SOMO, March 14, 2018, <https://www.somo.nl/global-mica-mining/>.

enduring unbearable working conditions? Are they even being paid?”⁸ Corporations must know the answers to these questions in order to ensure a humane supply chain; ignorance is no excuse for companies to profit from slavery.

Governments also have a responsibility to prevent child mica mining. The first step for governments to prevent child labor is to address it publicly. The best solutions for prevention are anti-poverty measures that stimulate economic growth as well as education in affected regions. Eliminating poverty—the root cause of child labor—gives families the financial security to keep their children in school and out of a dangerous worksite.

Citizens can take steps toward preventing child labor by being aware of the companies which profit from child labor in their supply chains. As previously mentioned, several major cosmetic companies create products which likely use mica mined by children. Consumers should buy products from companies that have no links to child labor in their supply chains. Several companies use synthetic mica as a substitute

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for real mica, which generally eliminates any chance of unethical mining in products. The My Green Closet blog has published a short article on ethical cosmetic companies, which can be found here.⁹

The Responsible Mica Initiative is an organization with over 70 member associations which aims to rid India of child mica labor by 2022. Although some member organizations are suspected of creating products with unethically mined mica (Kuncai, L'oréal), the collective is working towards solving the problems of supply chain mapping, dangerous working conditions, and poverty in affected regions.¹⁰

The citations included in this report serve as great resources and provide gateways to more extensive research on child mica mining.



Source: <https://www.somo.nl/beauty-and-a-beast/>

⁸ Monique Villa, “Price of a Lipstick’s Sparkle,” *The World Today* 72, no. 5 (2016): 10–10. <https://www.jstor.org/stable/pdf/45180843.pdf?refreqid=excelsior%3A4196ccc3d41df4c3dcccdfb86e6e95f>.

⁹ Verena Erin, “Makeup Brands Who Use Ethical Mica - Avoiding Child Labour in Beauty,” Blog, My Green Closet, December 19, 2020, <https://mygreencloset.com/ethical-mica-makeup/>.

¹⁰ “RMI,” Responsible Mica Initiative, <https://responsible-mica-initiative.com/>.