

Palmotone®

Every year, it is estimated that more than 200,000 tons of toners are produced globally. About 75% of this quantity is made up of petroleum-derived resin. With the large amount of printing worldwide, the disposal of waste toners from used cartridges and deinking of recycled papers poses a serious issue to environmental sustainability.

Jadi's contribution towards environmental sustainability

In view of this global issue, Jadi has been actively pursuing innovative ways to minimize the environmental impact of printing. This includes developing a new technology to use palm oil-based derivatives as raw materials for polymer latex and resin, primary constituents used in producing chemical and conventional toners. The bio-based derivative from palm oil will replace at least 25% of non-renewable petroleum-derived monomers which are normally used in preparing the polymer latex and resin.



In recognition of Jadi's research effort, the company has been awarded a new patent in the US by the US Patent & Trademark Office. The Patent № 7,968,647 B2 discloses technology of making Environmentally Friendly Natural Oil-based Toner Resin derived from bio-based sources which may include various vegetable oils such as palm oil.

Palmotone toner

With this breakthrough technology, Jadi has now developed the world's 1st bio-based Palmotone chemical toner, a new series of environmentally friendly chemical color toners that reduces the use of depletable petroleum resources and decreases unfavorable CO₂ emission through a carbon neutral process. Despite containing bio-based content, the Palmotone chemical toner is able to deliver equivalent or better performance and image quality than petroleum-based chemical toners when used in color applications.



Compared to standard chemical toners made from 100% fossil fuel-based monomers, Palmotone chemical toner contains at least 25% of derivatives from palm oil, which is friendlier to the environment. For every



kilogram of Palmotone chemical toner used, 12 - 15% of sustainable carbon dioxide (CO₂) is generated and recycled through the natural process of photosynthesis. This contributes to a significant reduction in net CO₂ emission arising from the incineration of waste toners made purely from non-renewable petroleum-based raw materials.

In addition to Palmotone chemical toner series, JADI will also be introducing its new range of Palmotone conventional toner for monochrome applications by end of 2012.

Advantages of using Palmotone chemical toner

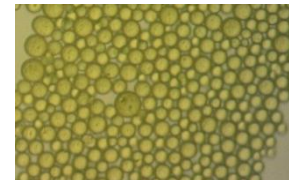
By using Palmotone chemical toner, you are investing in

- **Planet** - Reduces environmental footprint of your business, thus making your remanufacturing operations even greener.
- **People** - Invest in a green toner. Invest in creating a better place for the community;
- **Product Quality** - Achieve excellent print quality, comparable to petroleum-based toner, without compromising on the wellbeing of the environment;
- **Profile** - Enhances corporate image by offering recycled cartridges filled with eco-friendly toner;
- **Premier Toner** – Differentiate your business from others by offering the world's 1st bio-based chemical toner.

Print Performance of Palmotone chemical toner

Apart from contributing to the wellbeing of the environment, Palmotone chemical toner series allows remanufacturers to achieve

- Excellent print quality with crisp and sharp images through stringent control of particle size in the range of 5.0 – 8.0 micron;
- Enhanced toner adhesion and glossiness through better incorporation of waxes in the toner;
- Consistent and uniform image density as a result of narrow particle size distribution;
- Higher transfer efficiency and equivalent yield to OEM toner to reduce printing cost.



Palmotone Products

Chemical toner series

| Product Code | OEM Parts Number | Recommended For Use In | Std. Packaging |
|-------------------------------|------------------|---|----------------|
| JCPT-01 <i>Coming Soon</i> | CB540/1/2/3A | HP CLJ CP1215 / CP1217 / CP1514 / CP1515 / CP1518 / CM1312mfp | 20kg / carton |
| | CB530/1/2/3A | HP CLJ CP2020 / CP2025 / CM2320mfp | |

Note:

(1) Material Safety Data Sheets (MSDS) for our toners are available upon request.

(2) For more information about our toners and packaging, please contact us at info@jadi.com.my or +603-7804 0333.

Disclaimer: All brand names and trademarks are the properties of their respective owners and are referred to here for descriptive purposes only. JADI's products are not genuine OEM products and no sponsorship or affiliation is to be implied between JADI and the OEMs.

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