

# Recycle Reuse Recover

Presentation by  
**Primary Information Services**  
[www.primaryinfo.com](http://www.primaryinfo.com)  
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# Data Bases

Recycle  
Reuse  
Recover

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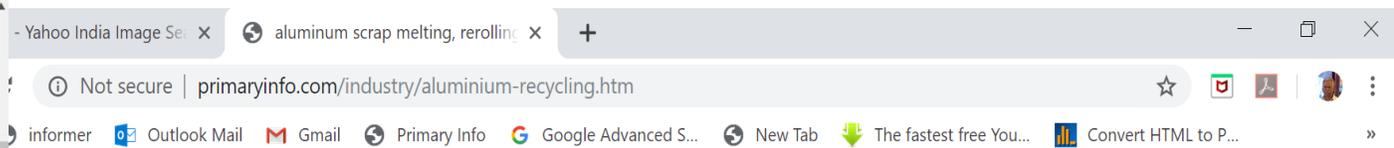
**Waste Recycling / Eco Projects**  
List of Projects on CD ROM

<a href="#">Aluminium Recycling</a>	<a href="#">eWaste recycling</a>	<a href="#">Recycling PetBottles</a>
<a href="#">Banana fiber &amp; products</a>	<a href="#">Gold Refining</a>	<a href="#">Recycling Business Plans</a>
<a href="#">Biofertilizers/Biopesticides</a>	<a href="#">Green Roof Farming</a>	<a href="#">Recycling LCD</a>
<a href="#">Biofuels CDM</a>	<a href="#">Hand made paper</a>	<a href="#">RHA - Rice Husk Ash</a>
<a href="#">Biogas</a>	<a href="#">Paper Stone</a>	<a href="#">Recycling Paper</a>
<a href="#">Chemicals CDM</a>	<a href="#">Lubricating Oil Recycling</a>	<a href="#">Recycling Oil Filters</a>
<a href="#">CD/DVD Recycling</a>	<a href="#">Medical Wastes</a>	<a href="#">Rubber Recycling</a>
<a href="#">Cold Storage</a>	<a href="#">Marketing Eco products</a>	<a href="#">Spent Activated Carbon</a>

<http://www.primaryinfo.com/recycling-waste.htm>

# Aluminium recycling

<http://www.primaryinfo.com/industry/aluminium-recycling.htm>



## Aluminum Recycling

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### Information @ a Glance

- More than a third of all the aluminium currently produced globally originates from old, traded and new scrap.
- Compared with the production of primary aluminium, recycling of aluminium products needs as little as 5% of the energy and emits only 5% of the greenhouse gas
- Aluminium can be recycled over and over and over again without loss of properties. The high value of aluminium scrap is a key incentive for recycling
- Refiners and remelters play integral

### Basics

- Aluminum Recycling
- Scrap Metal Recycling
- Aluminum scrap Cans

### Scrap Information

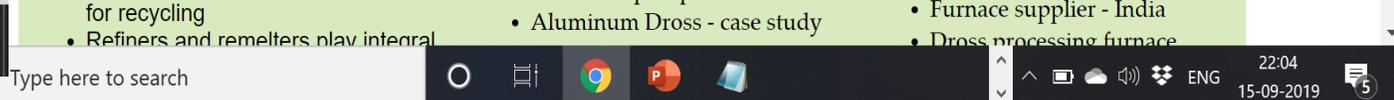
- Scrap Suppliers
- Aluminum Scrap recovery
- Scrap Recycling
- Recycling of Soda Can
- Metal Scrap Importers
- Aluminum Dross - case study

### Companies & products

- Utensil Trader
- Manufacturer - Uganda
- Suppliers - utensils, circles

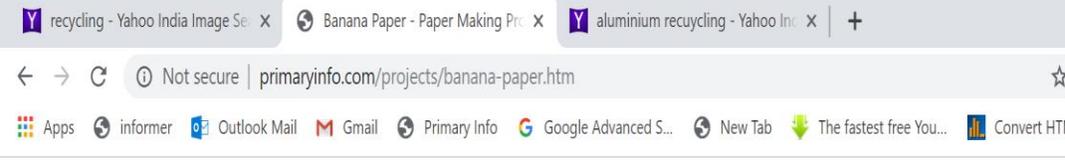
### Project Information

- Aluminum Scrap to Billets
- Project Machinery
- Recycling process
- Plant & Machinery
- Furnace supplier
- Furnace supplier - India
- Dross processing furnace



# Banana Fibre Products

<http://www.primaryinfo.com/projects/banana-paper.htm>



## Banana Paper

Paper Making Process, Technology, Company Profiles, Patent, Plant, Suppliers, Reports, Market  
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### Project @ a Glance

- Banana paper is used in two different senses: to refer to a paper made from the bark of the banana tree, mainly used for artistic purposes, or paper made from banana fiber, obtained from an industrialized process, from the stem and the

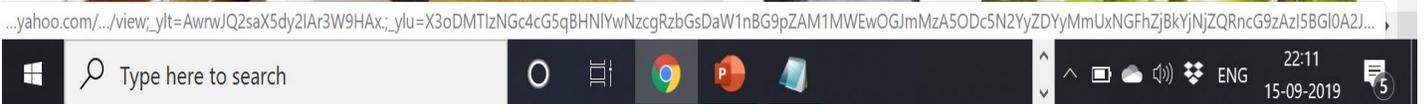
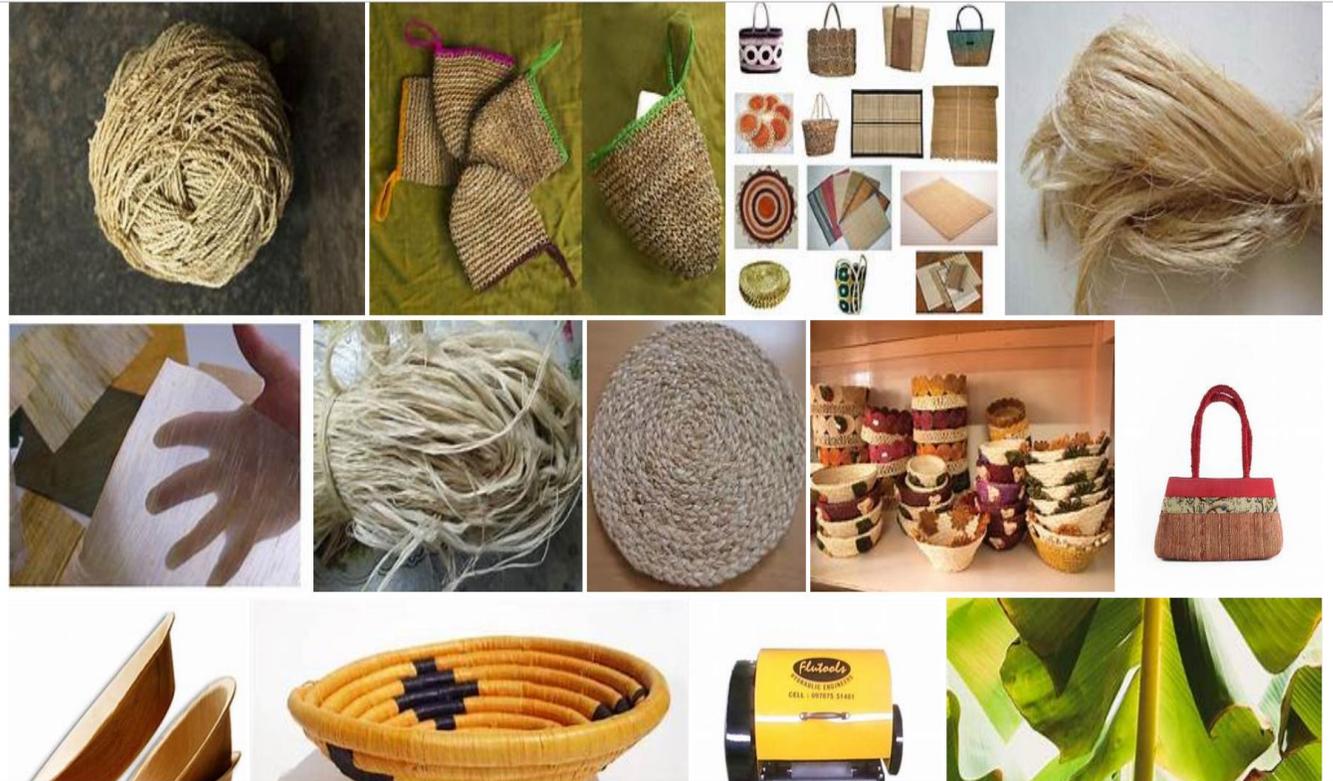
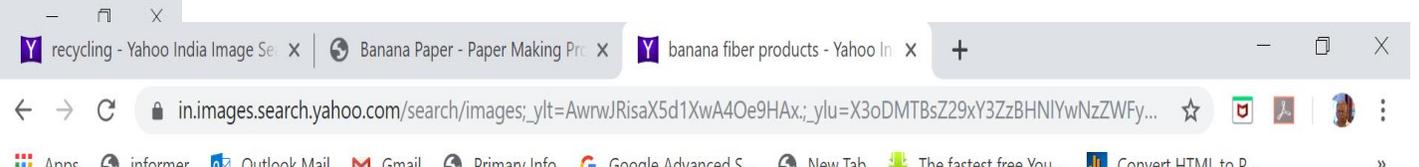
### General

- Banana paper
- Information on Banana Paper
- History of paper making
- Handmade Banana Paper

### Contents on the CD Rom

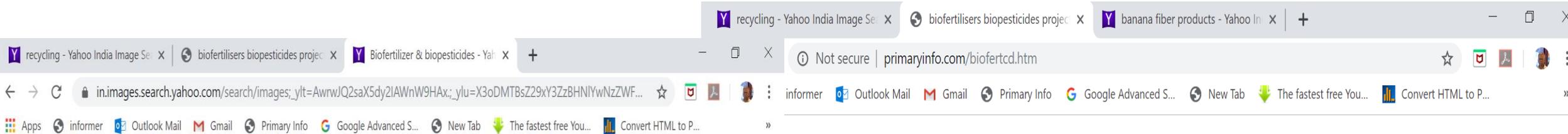
### Products and Applications

- Banana Fibre Products
- List of Banana Fibre Products
- Applications of Banana Paper
- Banana Bags supplier
- Banana Fiber Bag
- Bag from Banana stem



# Biofertilizer & biopesticides

<http://www.primaryinfo.com/biofertcd.htm>

A collage of images and text related to biofertilizers and biopesticides. It includes a person in a lab coat and mask, a laboratory setting with a large stainless steel tank, several bottles of biofertilizers, a bar chart titled 'Present and last Nine year Biofertilizer Production in India', a diagram of a plant showing nutrient uptake, a circular diagram of the composting process, a table of cabbage yield data, a diagram of a compost pile, a person in a lab coat, a bottle of '100% ORGANIC' biopesticide, and a globe with the text 'VIRAL BIOPESTICIDES'.

**INTRODUCTION**

In the last century, chemical fertilizers were used in agriculture. But slowly chemical fertilizers started displaying their ill-effects such as

- polluting water basins
- destroying micro-organisms and friendly insects
- making the crop more susceptible to the attack of diseases
- reducing the soil fertility and thus causing irreparable damage to the overall system.

**Present and last Nine year Biofertilizer Production in India**

Year	Production (kg)
1980	1000
1981	1500
1982	2000
1983	2500
1984	3000
1985	3500
1986	4000
1987	4500
1988	5000
1989	5500
1990	6000

**Raw materials**  
Organic matter (including carbon, chemical energy, protein, nitrogen)  
Minerals (including nitrogen and other nutrients)  
Water

**Finished compost**  
Organic matter (including carbon, chemical energy, nitrogen, protein, minerals, water)  
Microorganisms

**Compost**

**Microorganisms**

**Compost pile**

Treatment	Relative yield of cabbage (%)		Bray-1 P	Exchangeable K
	First crop	Second crop		
CK <sup>1</sup>	0	0	18	25
CP	100	100	34	31
Compost-N	261	123	131	87
Compost-P	108	75	45	49
Compost P+Urea	219	212	40	26

**INTRODUCTION**

➤ Biopesticide is a formulation made from naturally occurring substances that controls pests by non toxic mechanisms and in ecofriendly manner.

➤ Biopesticides may be derived from animals (e.g. nematodes), plants (Chrysanthemum, Azadirachtin) and micro-organisms (e.g. Bacillus thuringiensis, Trichoderma, nucleopolyhedrovirus), and include living organisms (natural enemies) etc.

➤ However, biopesticides are generally less toxic to the user and are non-target organisms, making them desirable and sustainable tools for pest control.

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## Biofertilizers & Biopesticides

[Home](#) . [Biochar](#) . [Seaweed Fertilizers](#) . [Potash](#) . [Agro Chemicals](#) .  
[Nitrogen From Organic Wastes](#) . [Humic Acid - green sources](#) .  
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Contents headlines on CD ROM

**Products & Uses**

Biofertilisers are considered to be an important alternative source of plant nutrition. They are biologically active products, including bacteria, algae or fungi, with the ability to provide plants with nutrients. Most biofertilisers belong to one of two categories: nitrogen fixing and phosphate solubilising. Nitrogen fixing biofertilisers fix atmospheric nitrogen into forms which are readily useable by plants. These include rhizobium, azatobacter, azospirillum, blue green algae (BGA) and azolla. While rhizobium requires symbiotic association with the root nodules of legumes to fix nitrogen, others can fix nitrogen independently. Phosphate solubilising micro-organisms (PSM) secrete organic acids which enhance the uptake of phosphorus by plants by dissolving rock phosphate and tricalcium phosphates. PSMs are particularly valuable as they are not crop specific and can benefit all crops.

# Biofuels

The image shows a screenshot of a web browser with multiple tabs. The active tab is titled 'primaryinfo.com/scope/biofuels-cdm.htm'. The browser's address bar shows the URL. The page content includes a search bar, a navigation menu, and a main section titled 'Biofuels - CDM'. Below this, there are two columns of content: 'Information @ a Glance' and 'Contents on the CD Rom'. The 'Information @ a Glance' section contains a bulleted list of biofuel types and processes. The 'Contents on the CD Rom' section is divided into 'Biofuels' and 'Project Development', each with a bulleted list of topics.

**Biofuels - CDM**  
Applications, Process, Company Profiles, Patent, Safety , Markets  
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**Information @ a Glance**

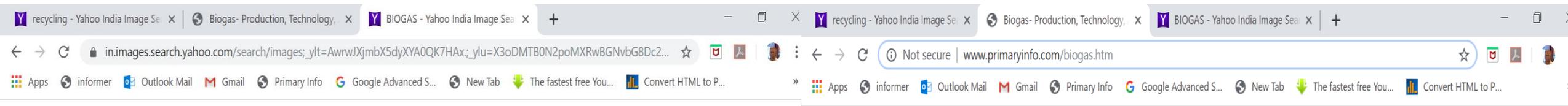
- Biodiesel (derived commercially from vegetable or other plant oils) and bioethanol (derived from fermentation of starch or sugar crops) dominate as the most technically feasible and commercialised alternative renewable fuel sources.
- Different industrial processes are being explored: enzymatic hydrolysis, thermochemical

**Contents on the CD Rom**

Biofuels	Project Development
<ul style="list-style-type: none"><li>• Biofuel Crops</li><li>• Algae Diesel</li><li>• Ethanol from Corn</li><li>• High Enthalpy Biofuels</li><li>• Ethanol Production Using Corn, Switchgrass, and Wood; Biodiesel Production Using Soybean and Sunflower</li></ul>	<ul style="list-style-type: none"><li>• Project Mechanism</li><li>• Bioinvestment</li><li>• Determining the Cost of Producing Ethanol from Corn Starch and Lignocellulosic Feedstocks</li><li>• Production Cost</li><li>• Project Profile - sample</li><li>• Project Documentation</li><li>• Saline wastewater and land resources</li></ul>

<http://www.primaryinfo.com/scope/biofuels-cdm.htm>

# BIOGAS



## Biogas

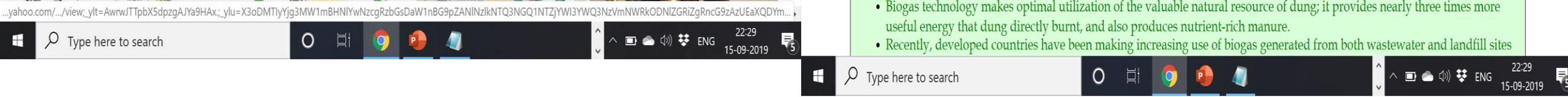
Production, Technology, Applications, Equipment Suppliers, Global Market Opportunities and Plant Details

**Primary Information Services**

[Home](#) · [Anaerobic Digestion](#) · [Land Fill Gas](#) · [CDM Eligibility](#) · [Ordering Information](#) · [Contact](#)

### Project Information Profile at a Glance

- Biogas production by anaerobic digestion is popular for treating biodegradable waste because valuable fuel can be produced while destroying disease-causing pathogens and reducing the volume of disposed waste.
- The main factors that influence biogas production are pH (level of acidity) of the feedstock and the temperature. It is well established that a biogas plant works optimally at pH level of 7 or just above (neutral solution) and a temperature of around 35o C.
- The methane in biogas combusts more cleanly than coal, and produces more energy with less emissions of carbon dioxide. The harvesting of biogas is an important role of waste management because methane is a greenhouse gas with a greater global warming potential than carbon dioxide.
- Biogas technology makes optimal utilization of the valuable natural resource of dung; it provides nearly three times more useful energy that dung directly burnt, and also produces nutrient-rich manure.
- Recently, developed countries have been making increasing use of biogas generated from both wastewater and landfill sites



<http://www.primaryinfo.com/biogas.htm>

# Chemical Industry

<http://www.primaryinfo.com/industry/chemical-cdm.htm>

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Chemical Industry- Role in Environment Building

Impact of 20% oil price drop in four months	Start of chemical value chain	Middle of chemical value chain	End of chemical value chain
Reduction in raw material spend, 10% lower	0-10	0-10	0-10
Speed of price change, months only	Top: 0-1	Mid: 0-4	Bot: 0-6
Product price increase, % over of 12 months through, 10% lower	0-10	0-10	0-10
Production price through, months only	Top to mid: 0-10	Mid to bot: 0-10	Bot to mid: 0-10

CUNG CAP THIET BI VA HOA CHAT HOI TUONG

TOWARDS GLOBAL SUSTAINABILITY  
RIO+20 VISION SHARED BY CHEMICAL INDUSTRY

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## Chemical Industry - CDM

Chemical Industry Reports, Clean Development Mechanism, Carbon credits, feasibility reports

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### Project @ a Glance

- The chemical sector is energy intensive due to:
  - Energy intensive processes e.g. steam cracking to produce ethylene, benzene, propylene etc.
  - Feedstock choice: gas and increasingly coal due to high oil prices. Use of acetylene in VCM production.
  - Refrigeration, heating, etc.
  - Not energy efficient
- The chemical industry has been

### The Chemical Industry

- The chemical industry helps to protect the climate
- Climate Change
- The Role of the Chemical Industry
- Chemical Industry Vision2020
- Foam Industry
- Haloalkane
- Hydro fluoro compounds (HFC)
- HFC Refrigerants

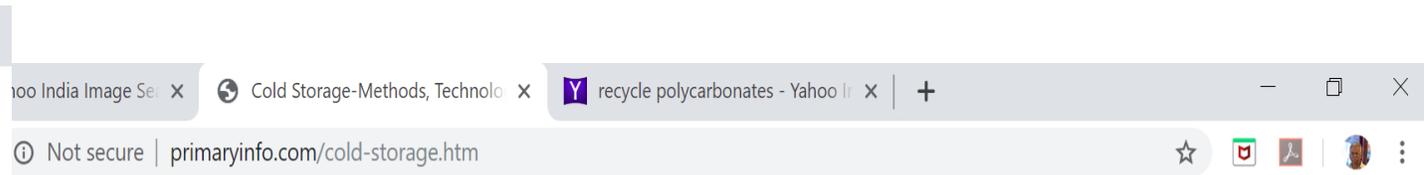
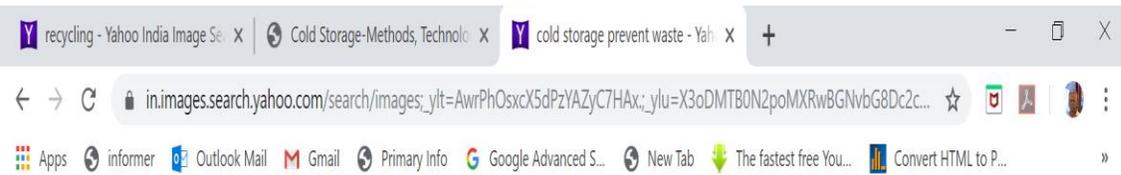
### Project Development

- Joint Implementation
- Hydrogen - carbon-free fuel
- N2O Decomposition and Elimination Project
- SNG Project
- Chemical Pulp
- Composting facility
- Gasification technology



# Cold Storage: Prevent waste

<http://www.primaryinfo.com/cold-storage.htm>



A collage of images showing cold storage equipment and food preservation tips. It includes a small blue and white cold storage unit, a refrigerator, and several containers of food. A prominent text overlay reads 'Stop wasting food with these simple storage tips'. To the right, there is a table with storage times for various products.

Meat Products	Average storage time at -18° (approx)	Fish Products	Average storage time at -18° (approx)	Other Products	Average storage time at -18° (approx)
Beef	12 months	Lean Fish	5 months	Bakery produce	10 months
Beef (minced)	6 months	Fatty Fish	6-9 months	Meat pies	10 months
Lamb	12 months	Flat Fish	10 months	Fruit juices	10 months
Pork	8 months	Shellfish	8 months	Fruit Pies	12 months
Veal	10 months			Dairy	6 months
Sausage (unflavored)	6 months			Some fruits and vegetables	10 months
Chicken	12 months				
Turkey	10 months				



## Cold Storage

Methods, Technology, Quality, Standards, Equipments Suppliers, Project, Consultants and Plant Details

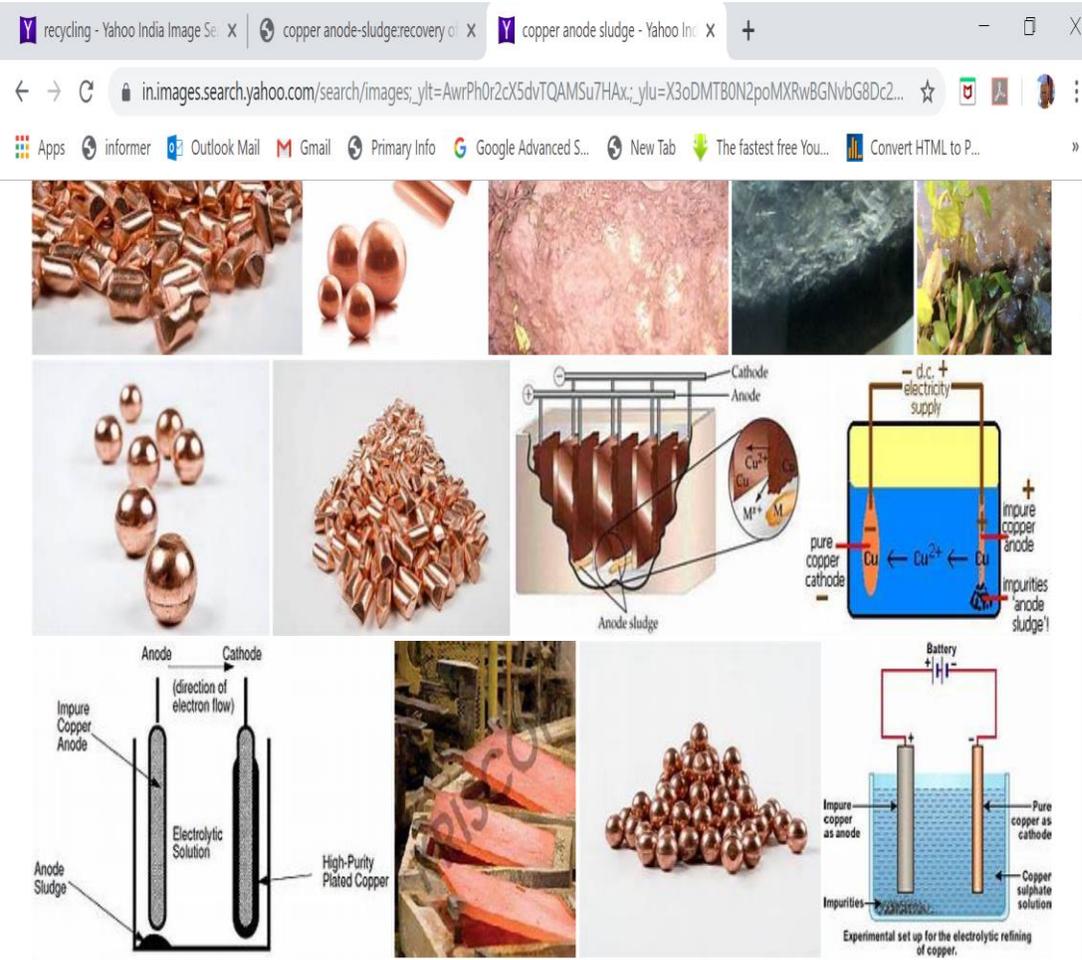
### Primary Information Services

[Home](#) · [Onion Storage](#) · [Storage of Fish](#) · [Warehouses](#) · [Storage of Chili](#) · [Pharmaceuticals Storage](#) · [Ordering Information](#) · [Contact](#)

Project At a Glance	Content Headlines on CD ROM	
<ul style="list-style-type: none"><li>Freezing is a quick, convenient, and popular way to preserve fruits and vegetables. Freezing is not usually as economical as canning, but it preserves more nutrients in the food if properly done.</li></ul>	<b>General</b> <ul style="list-style-type: none"><li>Community Cold Storage</li><li>Cold Storage Chart</li><li>Successful Cold Storage</li><li>Cold Storage Presentation</li></ul> <b>Cold Storage Methods</b>	<b>Investment</b> <ul style="list-style-type: none"><li>Cold Storage/Storages for Horticultural Produce - Capital Investment Subsidy</li><li>Warehouse Capacity Utilization</li><li>NCDC-Funding Pattern</li><li>Marayur Project Remains in</li></ul>

# Copper Anode Sludge

<http://www.primaryinfo.com/technology/copper-anode-sludge.htm>



primaryinfo.com/technology/copper-anode-sludge.htm

## Copper Anode Sludge

Processing , Applications, Company Profiles, Suppliers, Markets  
Primary Information Services

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### Project @ a Glance

- In Copper Plants, during electrolysis, pure copper is deposited on the cathode plates and impurities which are soluble and fall to the bottom of the cell as anode mud or sludge.
- Gold, like other precious metals (Ag, Pt, Pd), is extracted from the anode sludge created by the electro-

### Contents on the CD Rom

#### Background Information

- Copper
- Hydrometallurgy & Solution Mining
- Copper Extraction

#### Project Potential

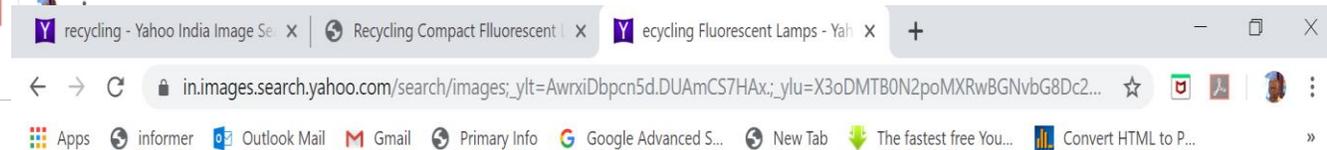
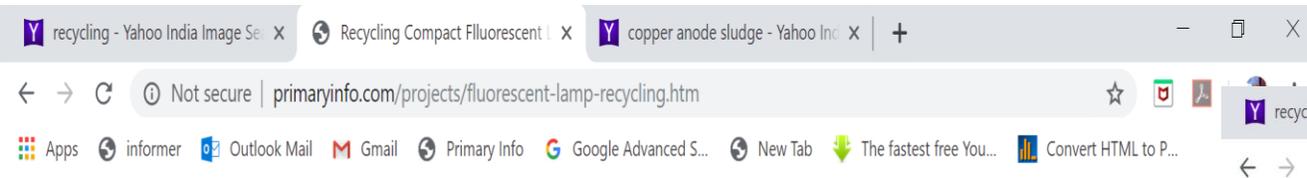
- Anode Sludge
- Extracting gold, silver and

#### Patents Information

- Method of Processing Anode Sludge
- Process for extracting gold from anode sludges
- Processing of Anode Sludge
- Sludge Dewatering System
- Hydrometallurgical process for recovery of silver from copper electrolysis anode sludge
- Hydrometallurgical process

# Recycling Fluorescent Lamps

<http://www.primaryinfo.com/projects/fluorescent-lamp-recycling.htm>



## Recycling Fluorescent Lamps

Applications, Process, Company Profiles, Patent, Safety , Markets

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[Ordering Information](#) . [Contact](#)

### Project @ a Glance

- Fluorescent lamps operate by energizing the mercury in the lamp, which then gives off ultraviolet radiation that causes phosphorus on the inside of the glass tube to glow. Fluorescent lamps require a ballast to regulate the current that the lamp receives.
- Materials in a CFL include glass, phosphorus, mercury, argon, plastic ballast casing and an electronic ballast circuit board
- In the absence of a good recycling program,

### Contents on the CD Rom

#### Basic Information

- About Fluorescent lamps
- Manufacturing of the Lamps

#### Project Information

- Project description
- Master Plan for Collection,

#### Global Scenario

- World of Compact Fluorescent Lamp Recycling
- Fluorescent Lamp Recycling
- CFL Recycling across Europe
- Recycling of Fluorescent Lamps in São Paulo, Brazil
- Spent fluorescent lamps in Thailand



# Bauxite Residue

<http://www.primaryinfo.com/technology/bauxite-residue.htm>

The screenshot shows a web browser window with several tabs. The active tab is 'primaryinfo.com/technology/bauxite-residue.htm'. The browser's address bar shows the URL. The page content is a preview of the Primary Information Services website, which includes a search bar, navigation links, and a table of contents.

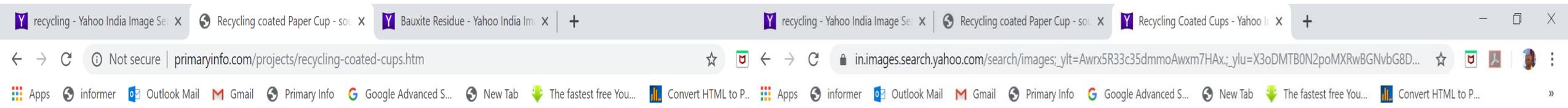
**Bauxite Residue**  
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Information @ a Glance	Contents on the CD Rom								
<ul style="list-style-type: none"><li>Bauxite residue, also referred to as 'red mud', is the by-product of the Bayer process – an industrial chemical process for refining aluminum-containing ores in alumina, the raw material used to produce aluminum metal.</li><li>The properties of bauxite residues are determined by the type of the bauxite and the Bayer process. The technology and operating procedures at specific refineries will affect the water content and pH value of the material being discharged.</li></ul>	<table border="1"><thead><tr><th>Basics</th><th>Applications</th></tr></thead><tbody><tr><td><ul style="list-style-type: none"><li>Background Details</li><li>About bauxite residue</li><li>Frequently asked questions</li><li>Understanding Red Mud</li><li>Radioactive elements</li><li>Factsheet</li><li>Regulatory Issues</li></ul></td><td><ul style="list-style-type: none"><li>Building Material</li><li>Cement</li><li>Road embankment construction</li><li>Removal Of Fluoride From Drinking Water</li><li>Neutralization and utilization</li></ul></td></tr><tr><td><b>Patents &amp; Technology Information</b></td><td><b>Developments in Companies</b></td></tr><tr><td><ul style="list-style-type: none"><li>Red Mud Processing</li></ul></td><td><ul style="list-style-type: none"><li>Technology Capabilities</li></ul></td></tr></tbody></table>	Basics	Applications	<ul style="list-style-type: none"><li>Background Details</li><li>About bauxite residue</li><li>Frequently asked questions</li><li>Understanding Red Mud</li><li>Radioactive elements</li><li>Factsheet</li><li>Regulatory Issues</li></ul>	<ul style="list-style-type: none"><li>Building Material</li><li>Cement</li><li>Road embankment construction</li><li>Removal Of Fluoride From Drinking Water</li><li>Neutralization and utilization</li></ul>	<b>Patents &amp; Technology Information</b>	<b>Developments in Companies</b>	<ul style="list-style-type: none"><li>Red Mud Processing</li></ul>	<ul style="list-style-type: none"><li>Technology Capabilities</li></ul>
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<b>Patents &amp; Technology Information</b>	<b>Developments in Companies</b>								
<ul style="list-style-type: none"><li>Red Mud Processing</li></ul>	<ul style="list-style-type: none"><li>Technology Capabilities</li></ul>								

# Recycling Coated Cups

<http://www.primaryinfo.com/projects/recycling-coated-cups.htm>



## Recycling Coated Cups

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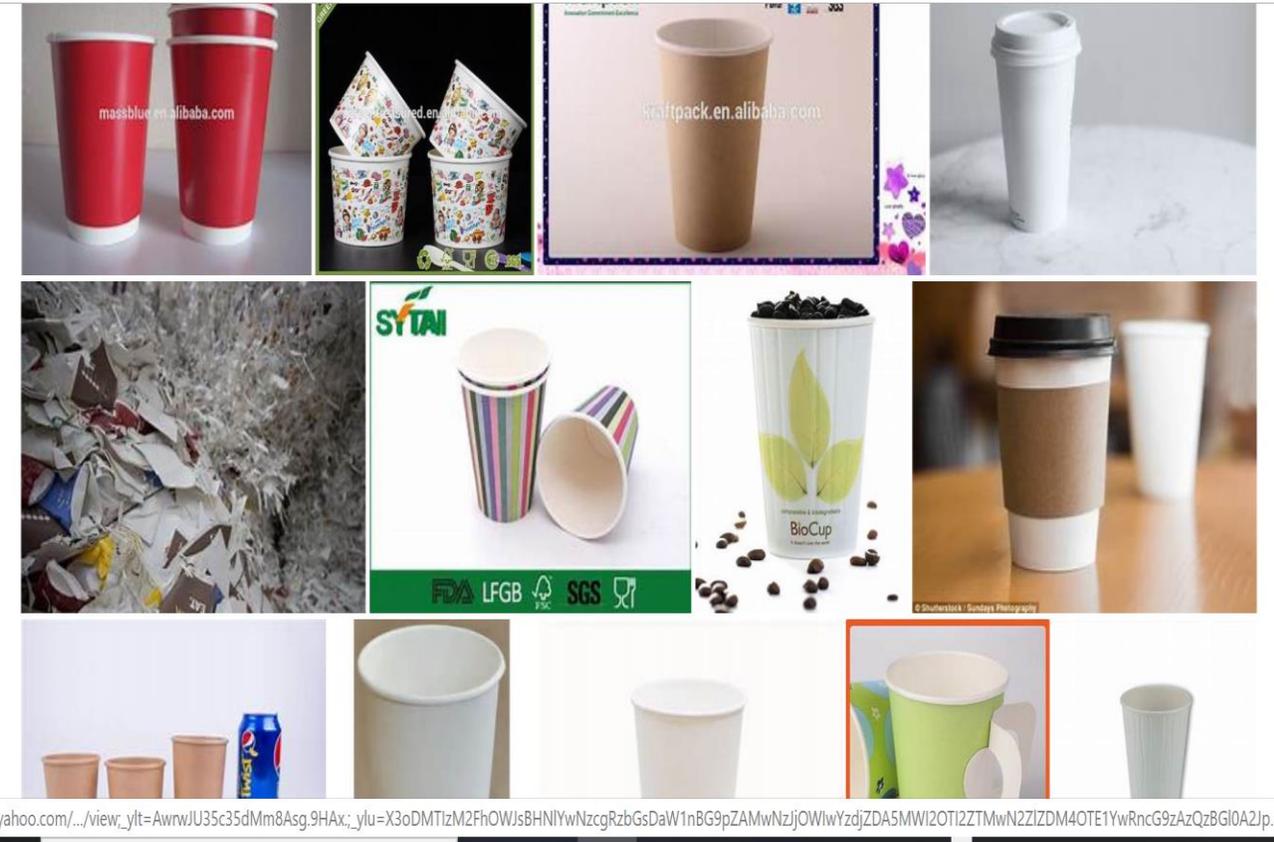
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### Information @ a Glance

- Recycling our Paper Cups Paper cups that are intended for liquids and hot drinks are typically constructed from a wet-strength high quality paper fibre. The cup is then internally lined with a very thin polyethylene (PE) coating. The PE coating found on most paper cups means additional methodologies are required for the recycling of a paper cup and it is not the same process as recovering standard paper waste.
- Paper cups can be complicated for people who want to recycle. The cups do contain paper, of course, but a thin coating of plastic or wax makes the recycling process much more difficult than sheet of office paper.
- The ability to separate the 5% polythene lining

### Contents on the CD Rom

- |  |   |
|--|---|
| <b>Basics</b> <ul style="list-style-type: none"><li>• Disposable Cups</li><li>• Plastic coated paper products</li><li>• Choosing to reuse</li></ul>                                  | <b>Companies &amp; products</b> <ul style="list-style-type: none"><li>• Paper Cups, Recycling Now In Progress</li><li>• Foam Cup recycling</li><li>• Barrier Coating</li><li>• Keep Cup</li></ul> |
| <b>Scrap Processing Information</b> <ul style="list-style-type: none"><li>• Processing used cups</li><li>• Waste reduction &amp; recycling</li><li>• Advantage - Foam cups</li></ul> | <b>Outlook for Recycling</b> <ul style="list-style-type: none"><li>• Reduce, Reuse, Recycle</li><li>• Disposable Coffee Cup Waste Reduction Study</li><li>• PLA for Paper Coating</li></ul>       |



# Recycling Paint Sludge

<http://www.primaryinfo.com/scope/recycling-paint-sludge.htm>

## Recycling Paint Sludge

Technology, Manufacturing Process, Company Profiles, Consultants

[Home](#), [Recycling Waste](#), [Ordering Information](#), [Contact](#)

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### Information @ a Glance

- The most serious problem in the Industry that has Painting process is the generation of waste known as paint sludge
- India generates 65,000 Tonnes of Industrial Paint sludge per year . Out of which, 40, 000 Tonnes are from organized sector,

### Basic Information

- Sludge
- Paint Booth
- Spray Booth Design
- Paint & enamel sludge removal systems

### Technology

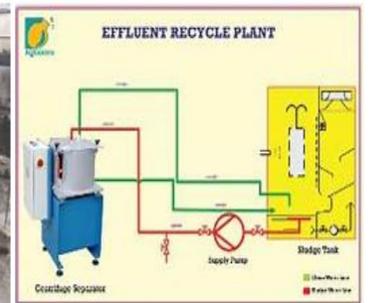
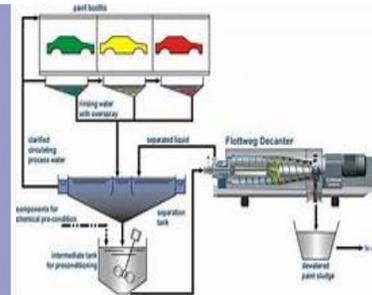
### Contents on the CD Rom

### Environment Protection

- Paint
- Paint disposal problems
- Paint Sludge Site

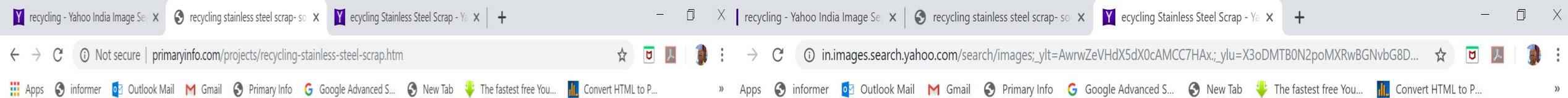
### Consultant

### RECYCLING OF PAINT SLUDGE



# Recycling Stainless Steel Scrap

<http://www.primaryinfo.com/projects/recycling-stainless-steel-scrap.htm>



## Recycling Stainless Steel Scrap

Primary Information Services

[Home](#) . [Recycling Wastes](#) . [Ordering Information](#) . [Contact](#)

Search PrimaryInfo

### Information @ a Glance

### Contents on the CD Rom

- Stainless steel, which contains iron, chromium, and often nickel, molybdenum, and other elements, is an alloy with applications ranging from household cutlery to reactor tanks for the chemical industry
- Stainless steels are highly recyclable and typically contain 60% recycled material. In addition, the structural shells of passenger rail cars of today's fast trains are often constructed of austenitic stainless steel for

#### Basics

- Scrap metal recycling
- Stainless Steel Scrap
- Scrap Management, Sorting and Classification of Steel
- End of waste Criteria for Iron and Steel Scrap
- Products made of recycled material

#### Companies & products

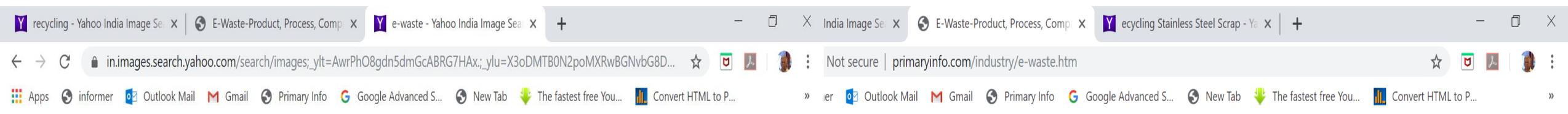
- Trader & supplier of Scrap
- Scrap - msds
- Company profile
- Scrap supplier - Spain
- Scrap Supplier - India
- Supplier - Netherlands
- Logistic Company - Handling Scrap

#### Project Information



# E -Waste

<http://www.primaryinfo.com/industry/e-waste.htm>



## E -Waste

Product, Process, Company Profiles, Patent, Project, Market, Management, Report, Consultants Services

[Home](#) [Cell Phone Recycling](#) [Ordering Information](#) [Contact](#)

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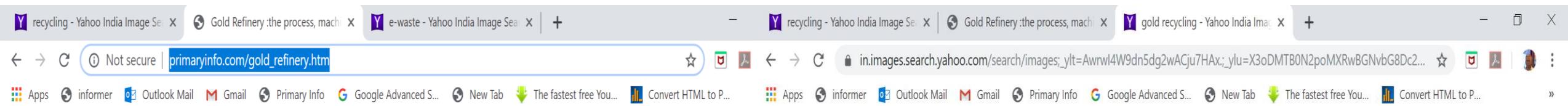
### Information @ a Glance

### Contents on the CD Rom

<ul style="list-style-type: none"><li>• Electronic waste includes computers, entertainment electronics, mobile phones and other items that have been discarded by their original users. While there is no generally accepted definition of electronic</li></ul>	<h4>General</h4> <ul style="list-style-type: none"><li>• E-Waste</li><li>• Electronic Waste</li><li>• Electronic Product Management</li><li>• Solid Waste Fact Sheet</li></ul>	<h4>Technology</h4> <ul style="list-style-type: none"><li>• CRT Recycling system</li><li>• CRT Monitor Processing</li><li>• CRT Recycling system &amp; Equipments</li><li>• CRT Recycling Machine</li></ul>
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# Recycle Reuse Recover

[http://www.primaryinfo.com/gold\\_refinery.htm](http://www.primaryinfo.com/gold_refinery.htm)



## Gold Refinery

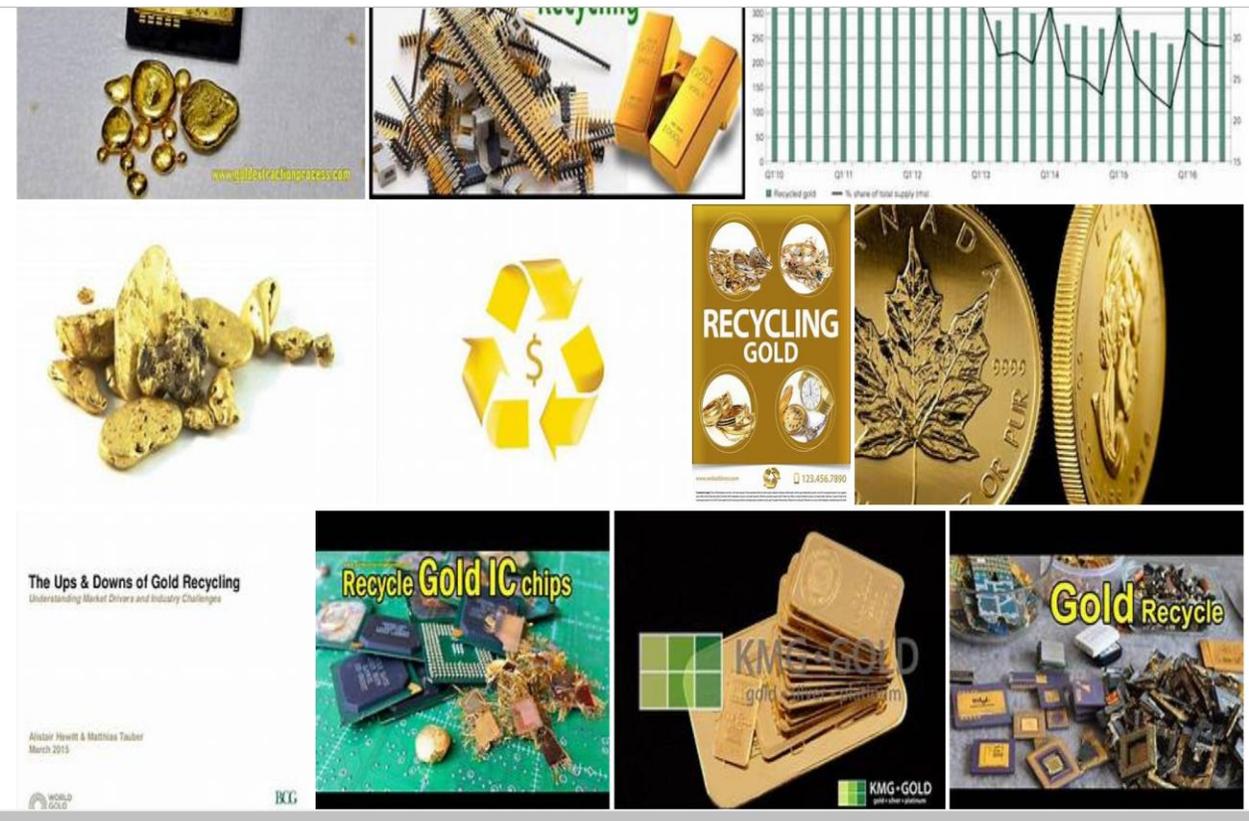
Technology, Market, Refining Process, Company Profiles, Policy and Procedures, Reports, Equipment

### Primary Information Services

[Home](#) . [Gold](#) . [Gold Powder](#) . [Gold Dore Processing](#) . [Gold Dore Refining](#) . [Gold Dore Trade](#) . [Gold Price Forecasting](#) . [Colored Gold](#) . [Gold Plating](#) . [Jewelry Shop](#) . [Gold Potassium Cyanide](#) . [Gold recovery from eWaste](#) . [Hallmarking](#) . [Investment Casting of Gold](#) . [Cyanide Recycling](#) . [Gold Chain Manufacture](#) . [Ordering Information](#) . [Contact](#)

Project at a Glance	Contents on the CD Rom	
<ul style="list-style-type: none"><li>Gold is recovered from industrial, dental, porcelain or jewellery scrap. For</li></ul>	<b>General Introduction</b> <ul style="list-style-type: none"><li>More About Gold</li></ul>	<b>Investment Cost</b> <ul style="list-style-type: none"><li>Newmont investment</li></ul>



# Green Roof Technology

<http://www.primaryinfo.com/projects/green-roof.htm>

## Green Roof Technology

Primary Information Services

[Home](#) · [Ordering Information](#) · [Contact](#)

Contents on CD ROM

 Search PrimaryInfo

### Information Profile @ a glance

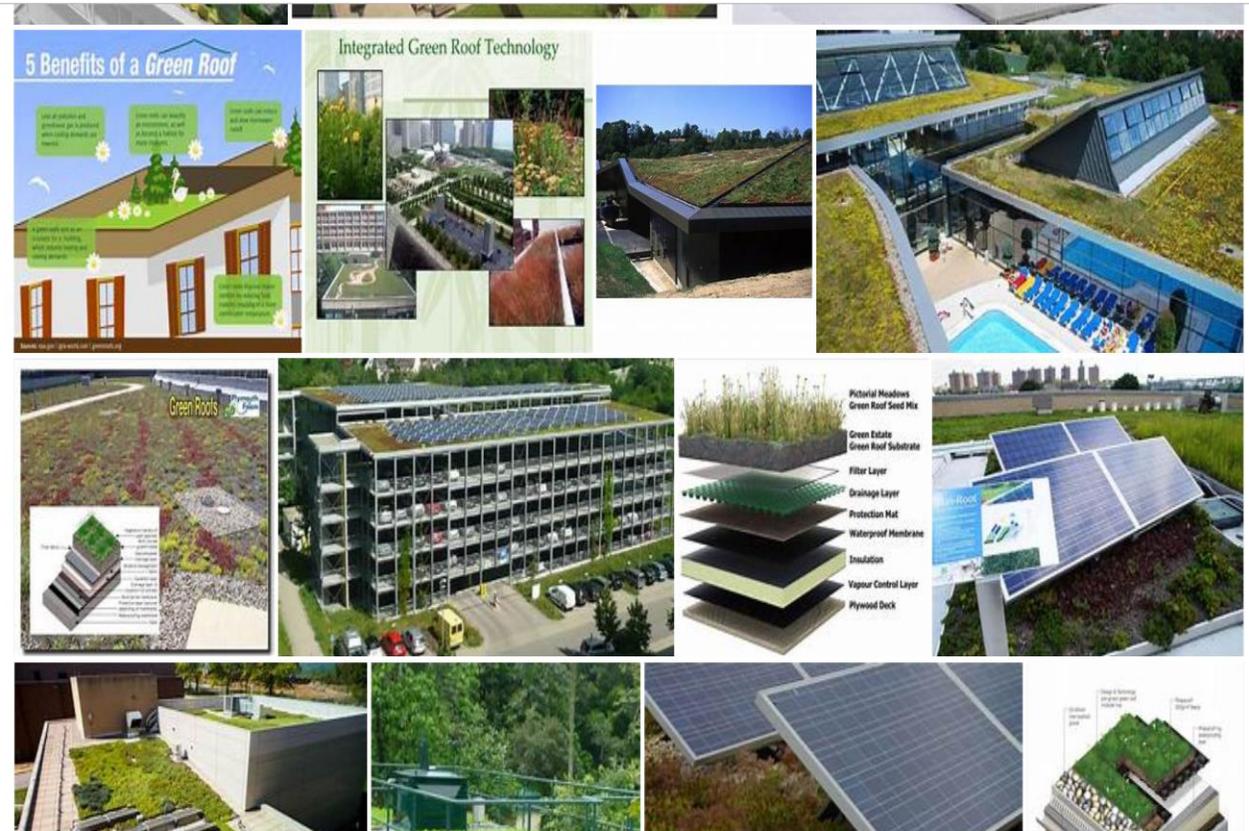
- Green Roof is an engineered roofing system that includes vegetation planted in a growing medium above an underlying waterproof membrane material
- Although each green roof is unique, all green roof systems contains the same basic elements of a vegetative layer, a

### Green Roof

- Basics
- Benefits
- Ballasted Roofs
- Vegetated Roofs
- Green roofs & Vertical Gardens
- Green Roofs?

### Technology

- Technology offer
- Performance of a Green Roof System
- Developing the Green Rating System on Residential Development
- Performance of green roof systems
- Certifying Organization



# Handmade Paper

<http://www.primaryinfo.com/industry/handmade-paper.htm>



## Handmade Paper

Project, Suppliers, Consultants, Company Profiles, Reports, Market

Primary Information Services

[Home](#), [Paper Industry](#), [Recycling Paper](#), [Ordering Information](#), [Contact](#)

Search PrimaryInfo

### Project @ a Glance

- Handmade paper is an ancient art and is thought to have come to India from the Northwestern parts.
- Handmade paper is a layer of entwined fibres and held together by the natural bonding properties of cellulose fibres lifted by hand, sheet by sheet on moulds in suspension of fibres in water with or without sizing.
- The basic raw material being cotton rags / hosiery cuttings / re-cycled hand

### General

- Types of Handmade Paper
- India Handmade Paper
- Environmental Friendly Handmade Paper

### Process

- Trend in Using Fungal Enzymes, Lignin- and Pectin-degrading Enzymes, in

### Contents on the CD Rom

### Project

- Sustainable Livelihoods for Women Entrepreneurs based on Handmade Paper Technology and Handcrafted Paper Products
- Strengthening the Handmade Paper Industry in India
- Hand made paper-Mestha based
- Construction of Handmade Paper Production Building





# Recycling Used Lubrication Oils

[http://www.primaryinfo.com/luboil\\_recycling.htm](http://www.primaryinfo.com/luboil_recycling.htm)

recycling - Yahoo India Image Se x Recycling Lubrication Oils trade t x paper stone - Yahoo India Image x +

Not secure primaryinfo.com/luboil\_recycling.htm

Apps informer Outlook Mail Gmail Primary Info Google Advanced S... New Tab The fastest free You... Converter

## Recycling Used Lubrication Oils

Primary Information Services

[Home](#) . [Conversion of used lubrication oil to Diesel](#) .

[Ordering Information](#) . [Contact](#)

Search PrimaryInfo Content Headlines on CD ROM

<p><b>About the Technology of Recycling Lubricating Oils</b></p> <ul style="list-style-type: none"> <li>• Used Oil</li> <li>• Re-refining lubricating Oil</li> <li>• What Happens to Your Recycled Used Oil</li> <li>• Petroleum Statistics</li> </ul>
<p><b>Recycling Program</b></p> <ul style="list-style-type: none"> <li>• On-site system for reclaiming engine oil</li> <li>• Used Oil Recycling Program</li> <li>• Managing Used Oil</li> <li>• Waste Oil Market</li> </ul>
<p><b>Technology &amp; Equipments Suppliers</b></p>

recycling - Yahoo India Image Se x Recycling Lubrication Oils trade t x Recycling Used Lubrication Oils - x +

in.images.search.yahoo.com/search/images;\_ylt=AwrPhSowe35dKh4AMTm7HAX;\_ylu=X3oDMTB0N2poMXRwBGNvbG8Dc...

Apps informer Outlook Mail Gmail Primary Info Google Advanced S... New Tab The fastest free You... Convert HTML to P...

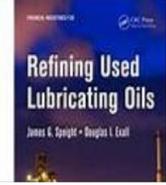
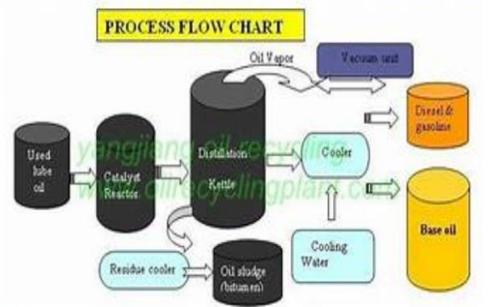


**LUBE OIL-INTRODUCTION**

**DEFINITION:**  
Lubricating oil are viscous liquids used for lubricating moving parts of engines and machines. Eg. Engine oils, gear oils, hydraulic oils, turbine oils, grease etc.

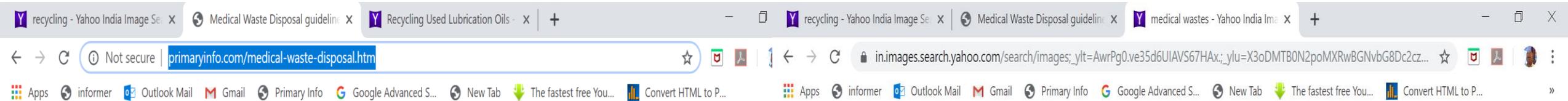
**FUNCTIONS:**

- Used to reduce friction between moving surfaces.
- Remove heat from working parts in Machinery.
- Remove wear debris created by moving surfaces.
- Provide a protective layering on metal surfaces to avoid corrosion.
- Removing contaminants from the engine.



# Medical Waste Disposal

<http://www.primaryinfo.com/medical-waste-disposal.htm>



## Medical Waste Disposal

Guidelines, Technology, Market, Reports, Rules and Regulations, Service providers

Primary Information Services

[Home](#) . [Ordering Information](#) . [Contact](#)

Search PrimaryInfo

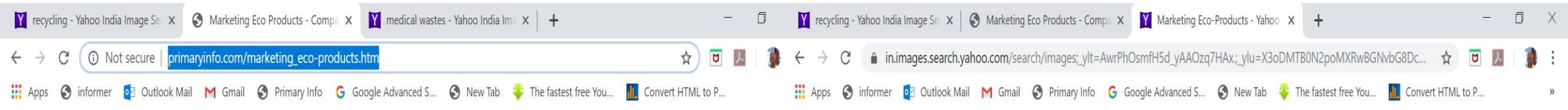
### Information Profile at a Glance

- Medical Waste” is defined as all waste generated in direct patient care or in diagnostic or research areas that is non-infectious but aesthetically repugnant if found in the environment.
- Human blood and blood products are classified and managed as medical waste because of the possible presence of infectious agents that cause blood-borne disease. Wastes in this category include bulk blood and blood products as well as smaller quantities of blood samples drawn for testing or research.
- The pollutants from medical waste incinerators either exist in the waste feed material or are formed in the combustion process. There are organic emissions other than dioxins and furans that are generated by medical waste incineration, but their emission rates are usually not regulated.
- Increased State regulations for the incineration of medical wastes are requiring new and existing medical waste incinerators to meet strict pollutant emission limitations. In most cases, air pollution control equipment is required to meet new regulations.
- Plasma pyrolysis provides solutions for complete pyrolysis of typical hospital waste such as cellulose polymer dressings, polyvinyl chloride, blood bags, polyurethane and silicon rubber gloves, neoprene and other diene polymers of



# Marketing Eco-Products

[http://www.primaryinfo.com/marketing\\_eco-products.htm](http://www.primaryinfo.com/marketing_eco-products.htm)



## Marketing Eco-Products

Company

Profiles, International Fair and Eco Products Institute, Suppliers & Distributors, Reports, Market Primary Information Services  
[Home](#) [Recycle Disposables](#) [Ordering Information](#) [Contact](#)

### Project @ a Glance

- The prefix "eco," meaning habitat or environment, comes from "ecology," the branch of science concerned with the interrelationships between organisms and their environments. 'Eco' covers all kinds of environmental innovations from energy and water savers and chemical free cleaning, to recycled glass and good quality products that use and promote better ecological solutions and materials.
- Eco-innovation is a term used to describe

### General

- Eco Products and Eco Symbol
- Sample of Eco products
- Eco Products and Technologies
- Eco-innovation

### Company Profiles

- Crompton Greaves

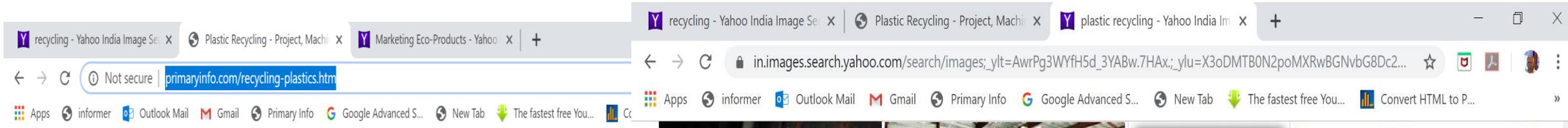
### Contents on the CD Rom

#### Market and Report

- Expanding Eco Products
- Eco-Products in Demand, but Labels Can be Murky
- Development and provision of environmentally friendly products and services
- Japan's Eco Market Takes Root
- Market Share Survey of Eco Mark

# Plastic Recycling

<http://www.primaryinfo.com/recycling-plastics.htm>



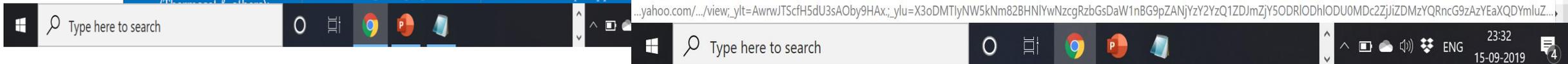
## Plastic Recycling

Scrap to Granule, Project, Machinery and Materials Used, Project, Market, Company Profiles, Suppliers

Primary Information Services

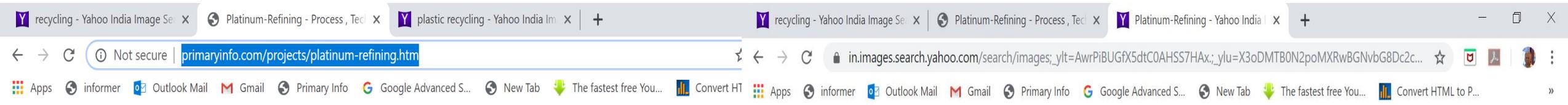
[Home](#) . [Plastic Industry](#) . [Ordering Information](#) . [Contact](#)

<b>Project at a Glance</b>	<b>Contents on the CD ROM</b>	
<ul style="list-style-type: none"><li>Recyclable Plastics (Thermoplastics) are PET, HDPE, LDPE, PP, PVC, PS, etc</li><li>Non-Recyclable Plastics (Thermoset &amp; others)</li></ul>	<b>Introduction</b> <ul style="list-style-type: none"><li>About plastic recycling</li><li>Fact Sheet</li><li>Plastic packaging Resins</li></ul>	<b>Scrap Suppliers</b> <ul style="list-style-type: none"><li>Plastic scrap suppliers Chennai</li><li>Plastic Scrap Suppliers</li></ul>



# Platinum-Refining

<http://www.primaryinfo.com/projects/platinum-refining.htm>



## Platinum-Refining

Process , Technology, Patent, Consultants, Company Profiles, Reports, Market, Projects  
Primary Information Services  
[Home](#), [Platinum](#), [Ordering Information](#), [Contact](#)

### Information @ a Glance

Contents on the CD Rom

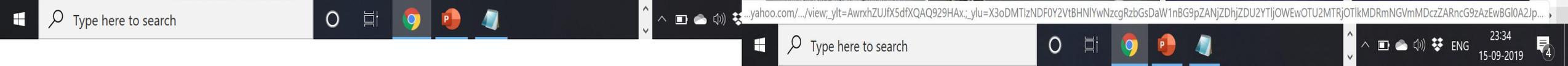
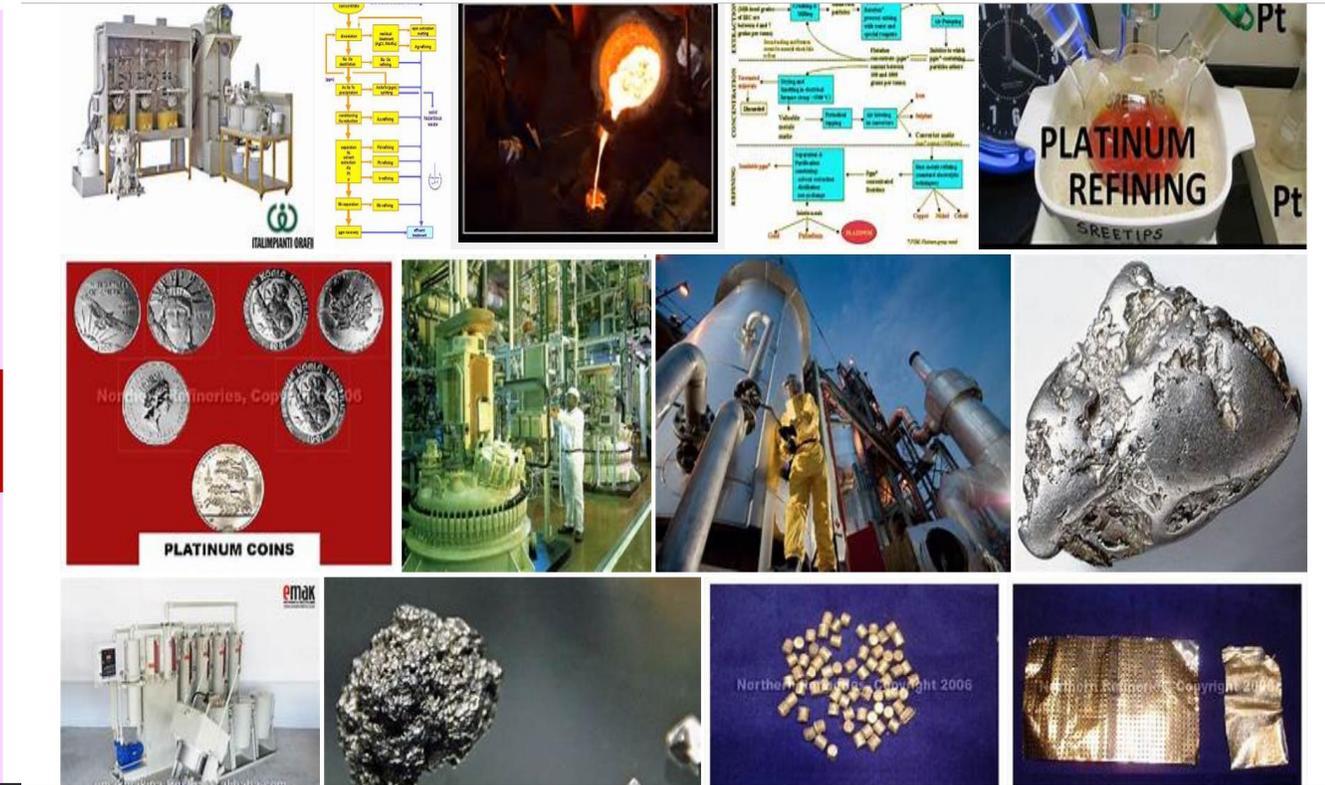
• Platinum Refineries is a full service refiner, assayer, smelter and broker of all precious metals. Industrial Platinum, Medical Platinum, Jewelry Platinum, Rhodium, Palladium. Gold and

#### General Information

- Platinum - Characteristics
- Commodity Profile - Platinum Group Metals
- More about Platinum
- Platinum
- Platinum Refineries

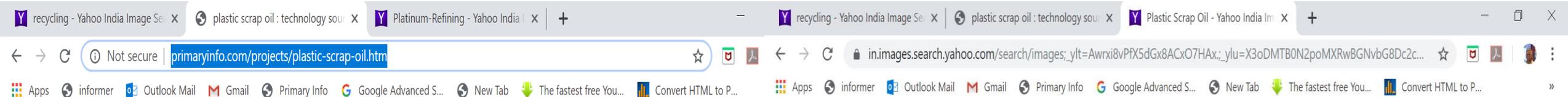
#### Plant

- Plant from Netherlands
- Plant from Italy
- Plant from South Africa
- Plant from Germany
- Plant from Canada
- South African Company



# Plastic Scrap Oil

<http://www.primaryinfo.com/projects/plastic-scrap-oil.htm>



## Plastic Scrap Oil

Processing used tires, Technology sources, Research Institutions, Project Information

Primary Information Services

[Home](#) · [Tyre scrap Oil](#) · [Plastic recycling](#) · [Rubber recycling](#) · [Ordering Information](#) · [Contact](#)

Search PrimaryInfo

### Information @ a Glance

- Pyrolysis involves heating and decomposing mixed plastics in the absence of oxygen.
- Three recycling procedures are pyrolysis, fluidized bed recycling and free fall recycling
- Pyrolysis processes can be classified according to the type of reactor used. Fluidized bed reactors are widely accepted and utilized because they have excellent heat and mass transfer characteristics and maintain a highly uniform temperature across the fluid bed
- Pyrolysis method can convert polyolefins and

### Contents on the CD Rom

#### General

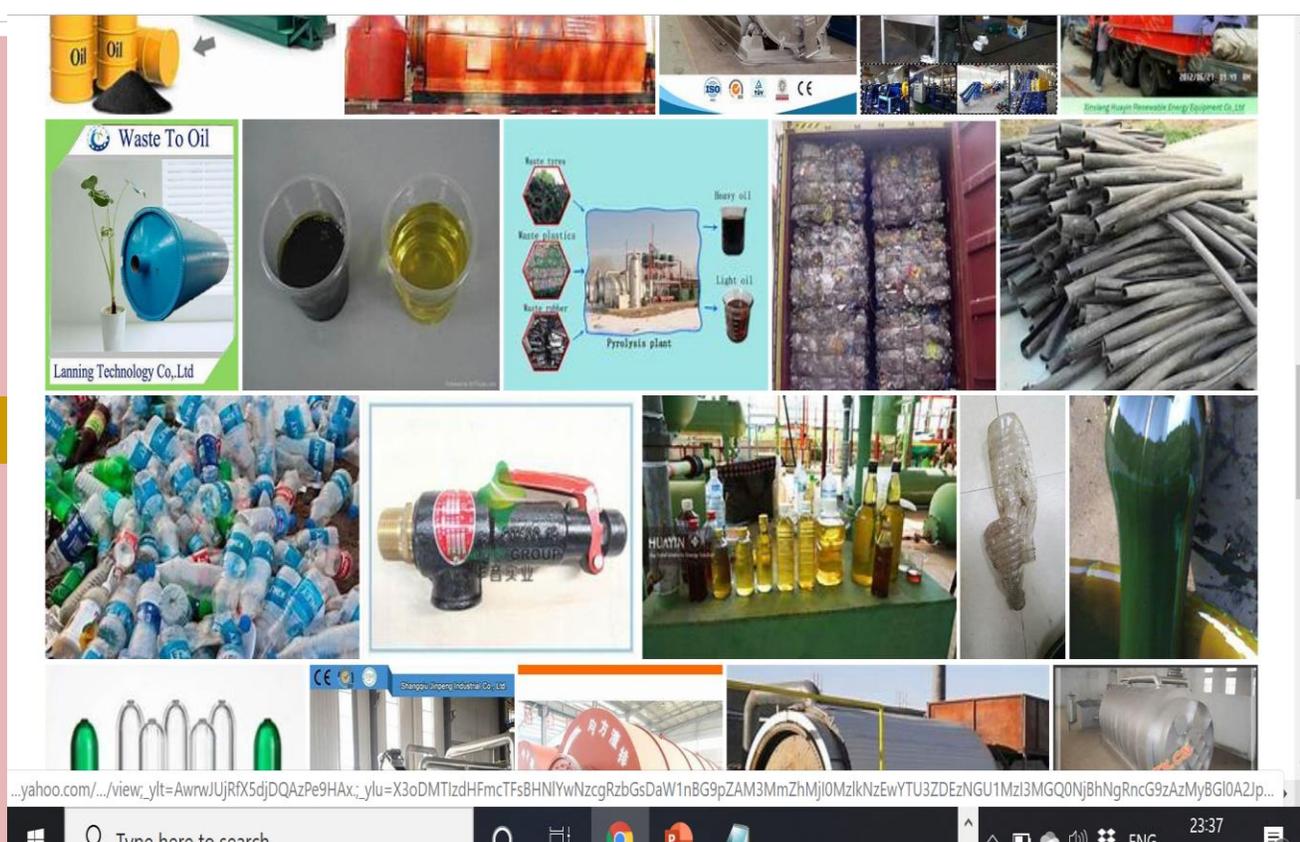
- Plastic Recycling
- Value from the Waste
- Turning mixed plastic wastes into a useable liquid fuel

#### Process

- Three recycling processes: pyrolysis, fluidized bed recycling

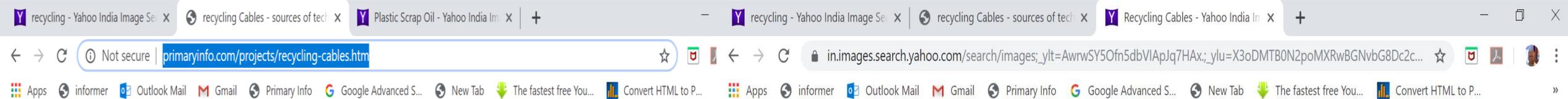
#### Technology & Sources

- Pyrolysis of Plastic Waste
- Waste plastics to diesel fuel
- Scrap Tire & Plastic Processing Advanced Pyrolysis Technologies
- Technology Brief
- Technology Company
- Company from China
- Company in the USA



# Recycling Cables

<http://www.primaryinfo.com/projects/recycling-cables.htm>



## Recycling Cables

Primary Information Services

[Home](#) . [Recycling Wastes](#) . [Ordering Information](#) . [Contact](#)

### Information @ a Glance

- Brominated flame retardants on printed circuit boards, plastic casings, cables and PVC cable insulation that releases highly toxic dioxins and furans when burned to retrieve copper from the wires
- An important copper recycling material is cable scrap
- Mechanical dismantling of the cables is common practice through cutting, granulating and use of various metal separation techniques to separate the plastics and fluff from the metal
- After cable material travels through shredders and granulators, a variety of equipment – gravity or air density

### Basics

- e-Waste in India

### Equipments Suppliers

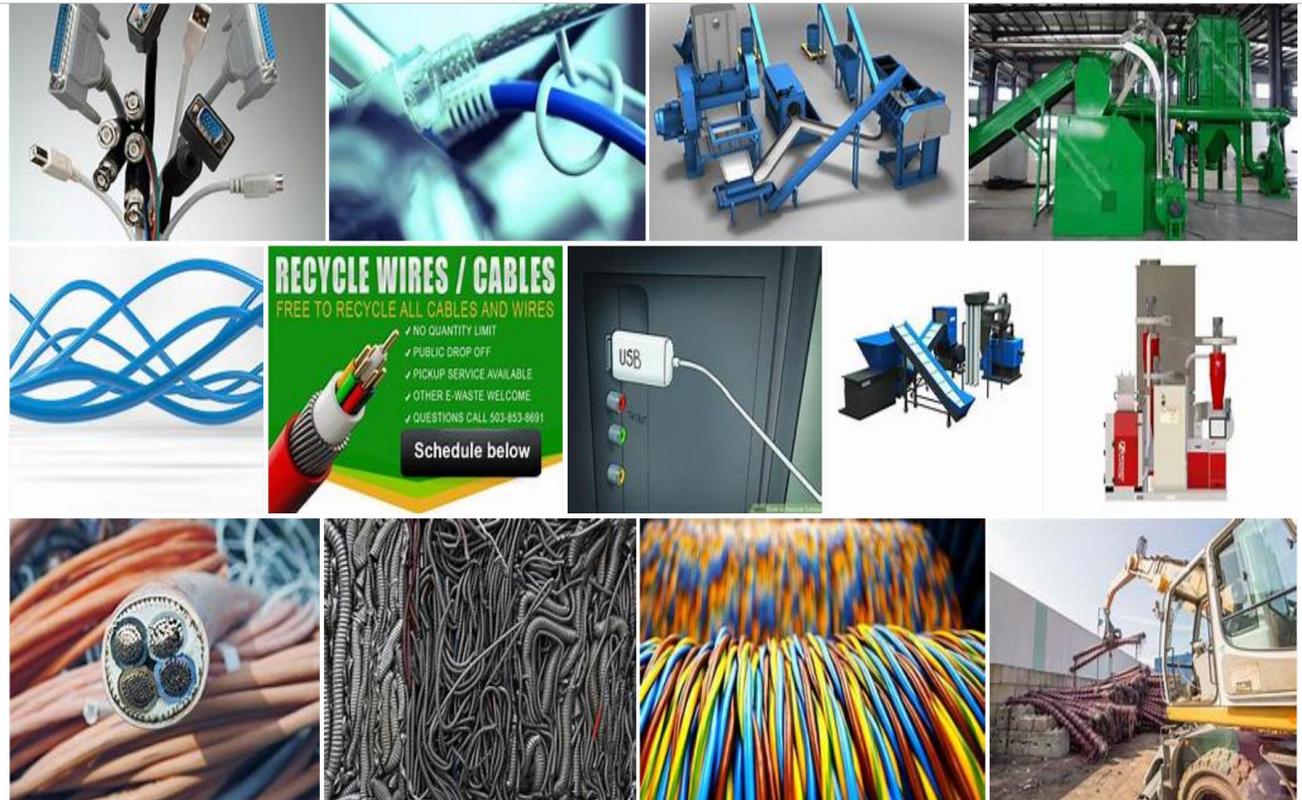
- Cable recycling plants and machinery
- Small Plant for cable recycling
- Waste Cable recycling plant
- Rough Chopper
- Separator
- Separators
- Recovery of fine copper

### Companies & products

- Company Information
- Range of products
- List of recyclers

### Project Information

- Cable recycling
- Cable scrap suppliers
- Consultancy services
- The U.S. Copper-base Scrap Industry and Its By-products
- The recycling of PVC waste



### RECYCLE WIRES / CABLES

FREE TO RECYCLE ALL CABLES AND WIRES

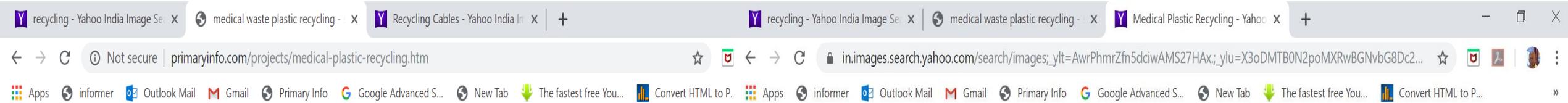
- ✓ NO QUANTITY LIMIT
- ✓ PUBLIC DROP OFF
- ✓ PICKUP SERVICE AVAILABLE
- ✓ OTHER E-WASTE WELCOME
- ✓ QUESTIONS CALL 503-853-8691

**Schedule below**



# Medical Plastic Recycling

<http://www.primaryinfo.com/projects/medical-plastic-recycling.htm>



## Medical Plastic Recycling

Primary Information Services

[Home](#) · [Recycling Wastes](#) · [Ordering Information](#) · [Contact](#)

### Information @ a Glance

- Generating between 20 percent and 33 percent of total waste in a hospital, the Operation Room is one of the largest contributors of general and regulated medical waste. Operation Rooms have increased their use of single-use medical products due to concerns over infection prevention, sterility, and ease of use
- Many of the clean disposable plastics in the Operation Room were recyclable, including polypropylene blue wrap, plastic casing, hard plastic from

### Basics

- Medical Plastics Recycling Program
- Sterilization of Plastics
- Sterilization and Disinfection
- Syringe disposal

### Technology Information

- Medical Plastic Recycling in the Operation Room
- Common sterilization techniques
- Performance Polymers
- Shredder technology
- Plasma Pyrolysis Plant

### Project Information

- Medical Plastic Recycling
- Analyses of the recycling potential of medical plastic wastes
- Plastic Waste Disposal through Plasma Pyrolysis Technology
- Autoclaves - sterilization equipments suppliers

### Equipments Suppliers

- Shredder

### Healthcare Plastics Value Chain Map

PRODUCT DESIGN → MANUFACTURING → PRODUCT USE → DISPOSAL & RECYCLING

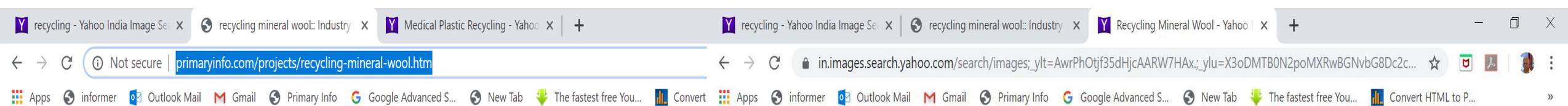
### Dos and Don'ts of Recycling

- Do rinse bottles and containers before recycling.
- Don't put contaminated cardboard or wet paper in your recycling bins. (E.g. Pizza Boxes, Used Napkins)
- Do leave on the labels and lids.
- Don't put plastic bags in your recycling bins. (Many retail stores have designated recycling bins)
- Do break down and flatten your cardboard boxes.
- Don't put out boxes larger than 30x3 feet. (Bring to Leon County Solid Waste Facility)

For more information, visit: [www.LeonCountyFL.gov/Recycling](http://www.LeonCountyFL.gov/Recycling)

# Recycling Mineral Wool

<http://www.primaryinfo.com/projects/recycling-mineral-wool.htm>



## Recycling Mineral Wool

Technology, Manufacturing Process, Company Profiles, Consultants  
**Primary Information Services**  
[Home](#) . [GlassWool](#) . [Ordering Information](#) . [Contact](#)

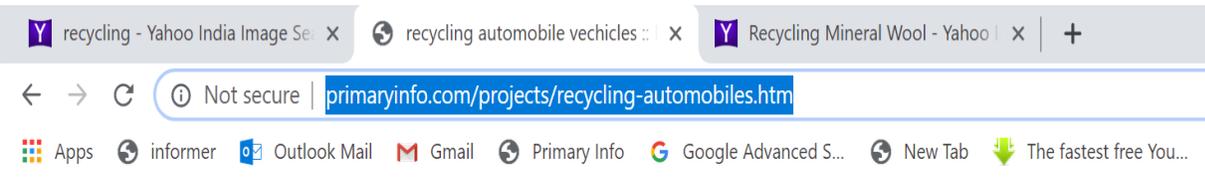
Information @ a Glance	Contents on the CD Rom
------------------------	------------------------

<ul style="list-style-type: none"><li>Synthetic mineral wool is the most common fiber type in construction engineering and has two main groups: stone and glass wool</li><li>Glass wool is made from sand or recycled glass</li></ul>	<b>Basic Information</b> <ul style="list-style-type: none"><li>About Mineral Wool</li><li>Mineral wool manufacturing</li><li>Waste Handling of Mineral Wool Insulation</li></ul>	<b>Environment Protection</b> <ul style="list-style-type: none"><li>Environmental Product Declaration</li><li>Recycling hazardous waste</li><li>Inhalable glass wool fibers</li></ul>
---	--	---



# Recycling Automobile Vehicles

<http://www.primaryinfo.com/projects/recycling-automobiles.htm>



## Recycling Automobile Vehicles

Primary Information Services

[Home](#) . [Recycling Wastes](#) . [Ordering Information](#) . [Contact](#)

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### Project, Trade Technology Information - Contents on CD ROM

#### Information profile @ a Glance

- Automotive recycling processes involve processes that are collection, transportation de-pollution, dismantling, shredding, melting, and disposal.
- In India there are no regulations and directives like in Europe regarding End-of-Life Management of Vehicles which can cause designers to think about the effective

#### Basic Information

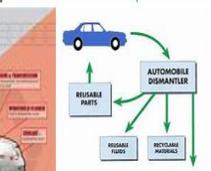
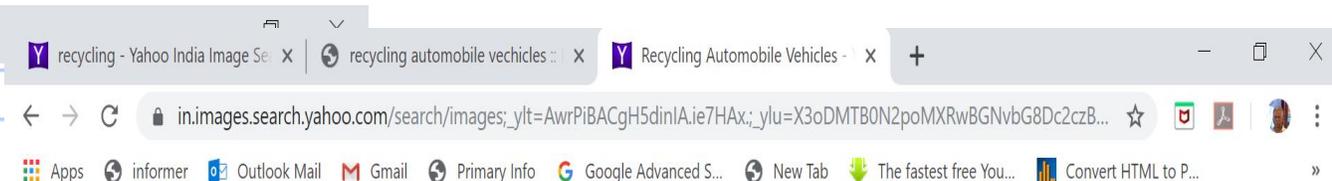
- Recycling of End-of-life Vehicles
- Recycling Automobiles' Carpet Scrap
- Automobile Recycling Alternatives

#### Companies

- Automobile Recyclers - USA
- Initiative of

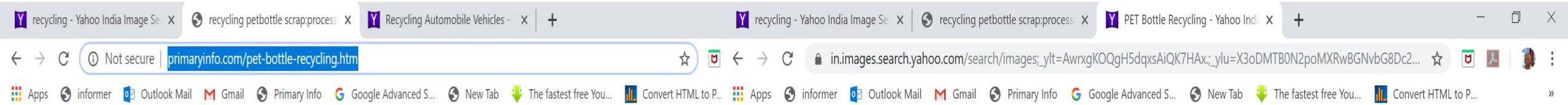
#### Regulatory Issues

- EPR Recycling
- Recycling Management
- UK - Government Guidelines
- Get Cash for Clunkers
- Scotland Regulation
- Developments in Germany
- Developments in Asia



# PET Bottle Recycling

<http://www.primaryinfo.com/pet-bottle-recycling.htm>



## PET Bottle Recycling

Recycling, Environmental Aspects, Case Studies, Projects & Market

[Home](#) . [Pet bottle](#) . [Ordering information](#) . [Contact](#)

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Primary Information Services. [Terms of Our Services](#)

### Information @ a glance

- About 20,000 plastic bottles are needed to obtain a tonne of plastic.
- Recycling PET bottles saves 84% of the energy it takes to make new PET bottles from raw materials.
- Contamination is a

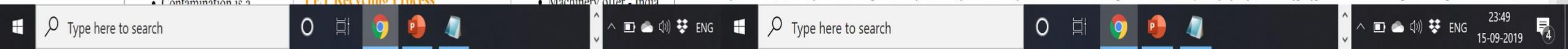
### About

- PET
- Flow Chart
- Plastic Recycling
- FAQ
- PET Recycling - explained
- Mumbai experience
- Recycling Rate
- Scarp specifications
- PET Packaging Recycling Process

### PET Recycling Process

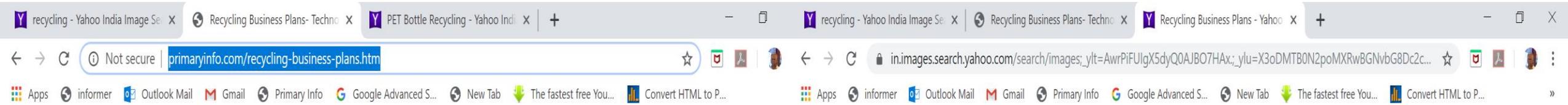
### Indian Industry & Companies

- Profitability Analysis for Alkaline Depolymerization of pet scrap
- PET Usage in India
- MNC in India
- Indian Company Report 2010
- Machinery offer - India



# Recycling Business Plans

<http://www.primaryinfo.com/recycling-business-plans.htm>



## Recycling Business Plans

Technology, Storage, Collection, Guidelines, Plans, Company, Consultancy, Report, Market  
Primary Information Services

[Home](#) . [Recycle Disposables](#) . [Recycling LCD](#) . [Recycling Glass Containers](#) . [Recycling of Plastics](#) .  
[Recycling Used Lubrication Oils](#) . [Recycling Polycarbonate - CD Discs](#) . [Rubber Recycling](#) . [Recycling Wastes](#) .  
[Ordering Information](#) . [Contact](#)

Search PrimaryInfo

### Project at a Glance

- A recycling business is defined as the recovery, reuse and remanufacture of materials from waste products/materials.
- Companies can be involved in collecting, processing, manufacturing, reusing or composting these recovered materials.

### Technology

- Business Plan Recycling Project.
- Recycling and reuse business categories.
- Business Recycling Program.
- Integrated Resource Recovery.
- Financial benchmarks for recycling business.

### Contents on the CD ROM

### Recycling Businesses

- Recycling Plastics.
- PET Recycling.
- Electronic Recycling Programs.
- Tyre Recycling.
- Modular Carpet Recycling.
- Mobile phone collection and recycling

**Financials**

Item	Amount
Start-up Costs	1,500,000
Operating Costs	1,000,000
Revenue	2,500,000
Profit	1,000,000

**Marketing Plan**

To target our customers, we examined the market trends. Mid-Atlantic Recycling's products target buyers of organic fertilizers and soil enhancers. This market has grown significantly in recent years and we expect to capture a quarter of this multi-billion-dollar market.

**Mission Statement and Objectives**

**Mission**  
Devas Recycling's mission is threefold. Our first responsibility is to ensure the financial well being of the business. Second, it is to provide municipalities with an economical, alternative for the disposal of human waste sludge. Third, it is to provide a top quality, recycled material to the consumer so that they may benefit from compost's many good properties and organic elements. In addition, we hope to build in the consumer a positive feeling about the feasibility of using recycled human sludge as a fertilizer.

**Objectives**  
• Flush sales for the first twelve months of operations and growing each year thereafter.  
• Establish the recycling facility to include six composting units in Year 1.  
• Open additional facilities in Year 2 and Year 3 to serve other areas of Ukrainian region.

**Market Information**

There are customers at both ends of our supply chain that will benefit from...

**Take2**  
Residential Electronics Recycling

Accepted Electronics: Computers, Monitors, Printers, Scanners, Copiers, Fax Machines, Modems, Tablets & Books, Microcameras, Other small appliances.

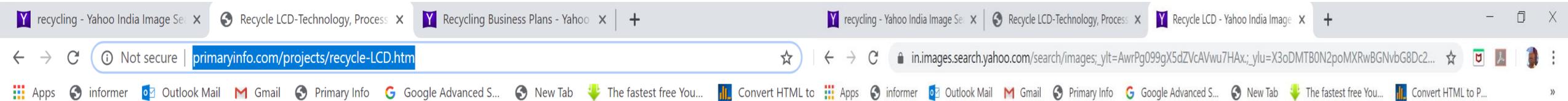
**BUSINESS PLAN - GREEN INDIA - BY PLASTIC RECYCLING PLANT**

AFTERSCHOOL - DEVELOPING CHANGE MAKERS  
CENTRE FOR SOCIAL ENTREPRENEURSHIP  
PGP&E PROGRAMME -  
World Most Comprehensive programme in social entrepreneurship & spatial entrepreneurship  
OPEN FOR ALL FREE FOR ALL



# Recycle LCD

<http://www.primaryinfo.com/projects/recycle-LCD.htm>



## Recycle LCD

Technology, Process, Patent, Machinery, Company Profile, Consultancy, Study, Report, Market  
Primary Information Services  
[Home](#). [eWaste recycling](#) . [Ordering Information](#). [Contact](#)

Project at a Glance	Contents on the CD ROM	
<ul style="list-style-type: none"><li>Waste materials of LCD can be recycled in the production process for reuse in upcoming products.</li><li>Process makes it possible to separate rare materials so they can be reused as secondary raw material.</li><li>Complete separation of the materials is achieved with the output of recycled waste streams. These include the LCD</li></ul>	<b>Technology</b> <ul style="list-style-type: none"><li>Recycling Liquid Crystal Displays (LCD).</li><li>LCD Recycling.</li><li>Recycling Indium form LCD Waste.</li><li>Challenges of LCD Recycling.</li><li>LCD Recycling Technology.</li><li>Developing Technology to recover indium from waste lcd</li></ul>	<b>Consultancy</b> <ul style="list-style-type: none"><li>Consultancy from USA.</li><li>Consultancy1 from UK.</li><li>Consultancy2 from UK.</li></ul> <b>Study</b> <ul style="list-style-type: none"><li>Recycling thin film transistor LCD waste glass produced as glass-ceramics.</li></ul>

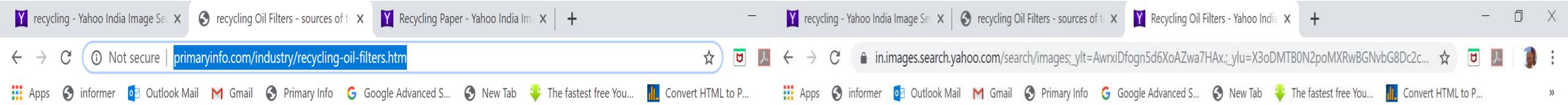






# Recycling Oil Filters

<http://www.primaryinfo.com/industry/recycling-oil-filters.htm>



## Recycling Oil Filters

Primary Information Services

[Home](#) . [Recycling Wastes](#) . [Ordering Information](#) . [Contact](#)

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### Information @ a Glance

- The purpose of an oil filter is to remove impurities from the oil used to lubricate an internal-combustion engine
- A hot-drained oil filter still contains up to 0.2 gallons of oil that has been absorbed into the filter element
- One gallon of oil can contaminate one million gallons of drinking water
- There are two types of oil filters: terne-plated and non-terne-plated.
- EPA regulation changed and now only considered terne-plated filters as hazardous. These filters remain on the hazardous list because the amount of lead they contain exceeds RCRA standards
- Co-generation plant cleanly converts the

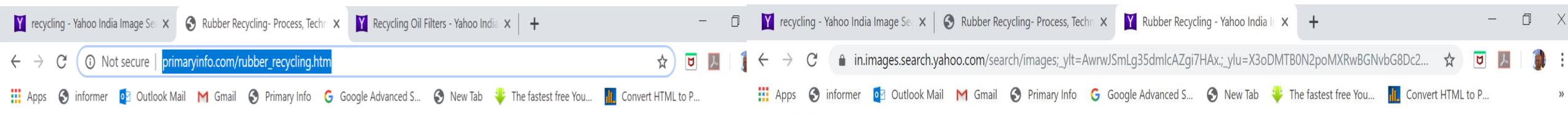
### Contents on the CD Rom

<b>Basics</b> <ul style="list-style-type: none"><li>• Used Oil Filter Recycling</li></ul>	<b>Companies &amp; products</b> <ul style="list-style-type: none"><li>• Success story</li><li>• Product Information</li><li>• Oil Filter Manufactures</li><li>• Newsletter</li></ul>
<b>Scrap Processing Information</b> <ul style="list-style-type: none"><li>• Process details</li><li>• Scrap recycle is beneficial</li><li>• Managing Used Oil Filters</li><li>• Sonochemical Process for treating used oil</li></ul>	<b>Project Information</b> <ul style="list-style-type: none"><li>• Process description</li><li>• Project Guide</li><li>• Recycling Used Automotive Oil Filters in a Blast Furnace</li><li>• Industry Experience</li></ul>
<b>Technology Information</b>	



# Rubber Recycling

[http://www.primaryinfo.com/rubber\\_recycling.htm](http://www.primaryinfo.com/rubber_recycling.htm)



## Rubber Recycling

Process,

Technology, Product, Applications, Patent, Consultants, Company Profiles, Reports, Market

Primary Information Services

[Home](#) [Synthetic Rubber](#) [Tyre Oil](#) [Ordering](#)

[Information](#) [Contact](#)

Search PrimaryInfo

### Project @ a Glance

### Contents on the CD Rom

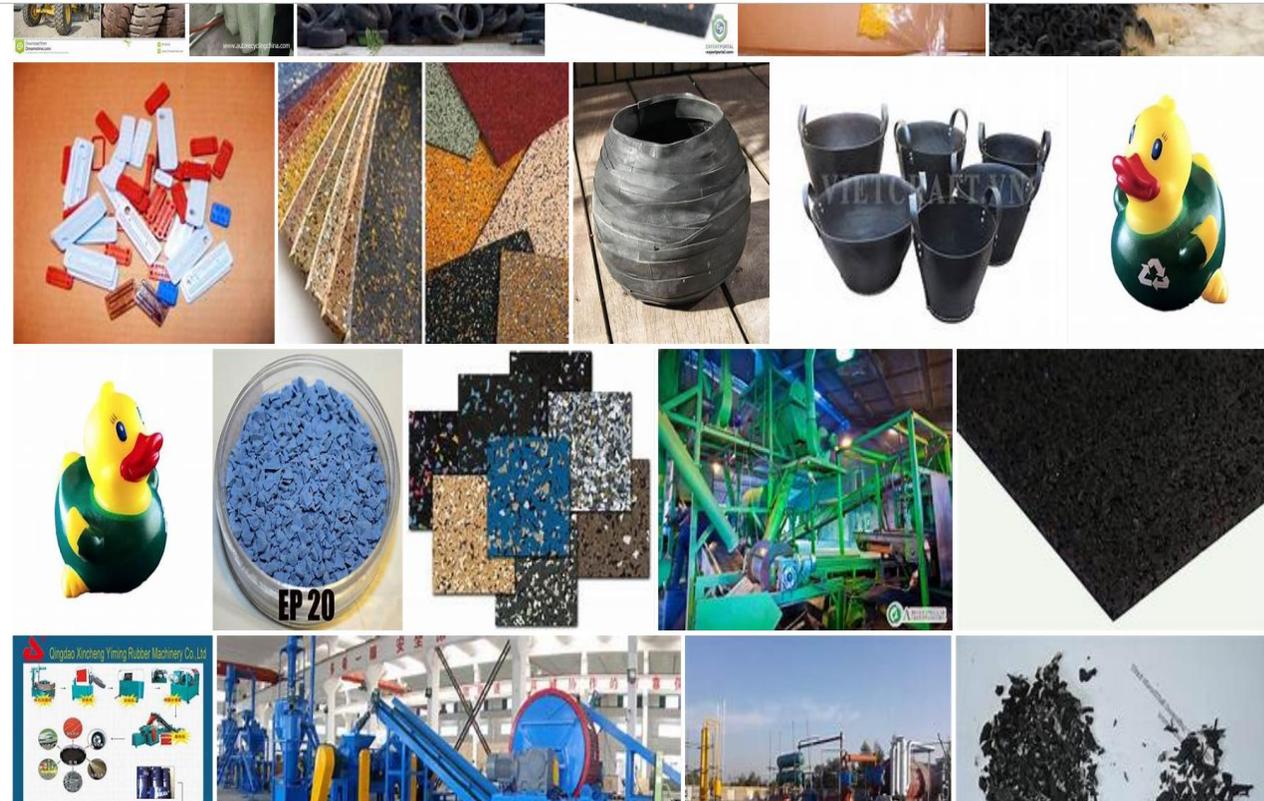
- Rubber recovery can be a difficult process. There are many reasons, however why rubber should be reclaimed or recovered; Recovered rubber can cost half that of natural or synthetic rubber. Recovered rubber has some properties that are better than those of virgin rubber.
- It is an excellent way to dispose of

### General

- A history of rubber recycling
- Recycling of Rubber
- Recycled Rubber Business
- Brief History & Introduction of Rubber

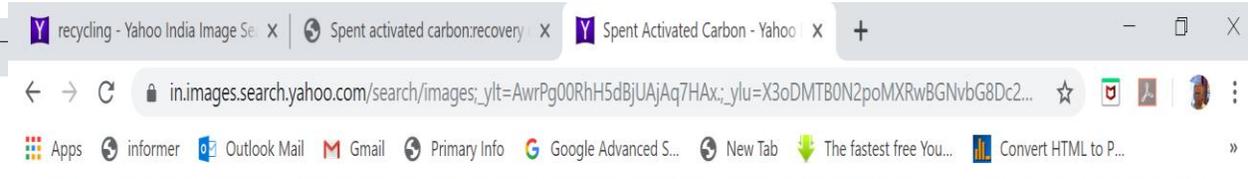
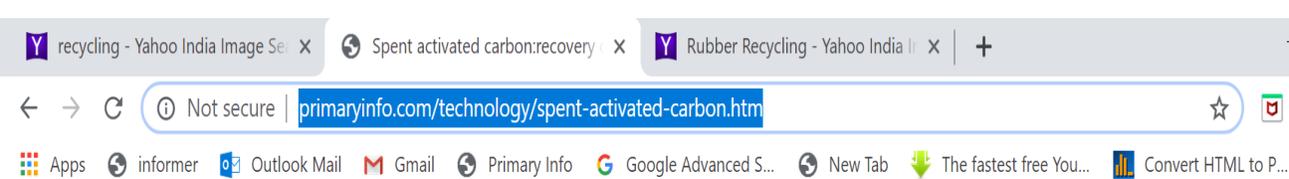
### Equipments Suppliers

- Armex Inc
- Environmental Protection Equipment Co., Ltd.
- Charles Lawrence
- Tire Recycling equipment suppliers List
- IBM France



# Spent Activated Carbon

<http://www.primaryinfo.com/technology/spent-activated-carbon.htm>



## Spent Activated Carbon

Processing , Applications, Company Profiles, Suppliers, Markets

Primary Information Services

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Search PrimaryInfo

### Project @ a Glance

- Activated carbon can be recycled, reactivated, or regenerated from spent activated carbon
- Most used process: Spent carbon is reactivated in multiple hearth furnaces or rotary kilns. The spent carbon is heated to temperatures above 1,700°F utilizing steam as a selective oxidant. Adsorbed organics are

### Contents on the CD Rom

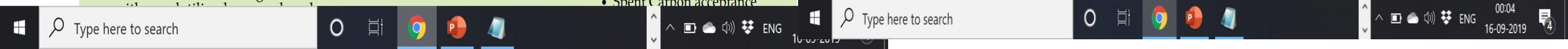
#### Background Information

- Reactivated Carbon - FAQ
- Carbon Absorbers
- Vapor phased absorbers
- Activated Carbon & Oil refineries
- Activated Carbon Profile

#### Technology Information

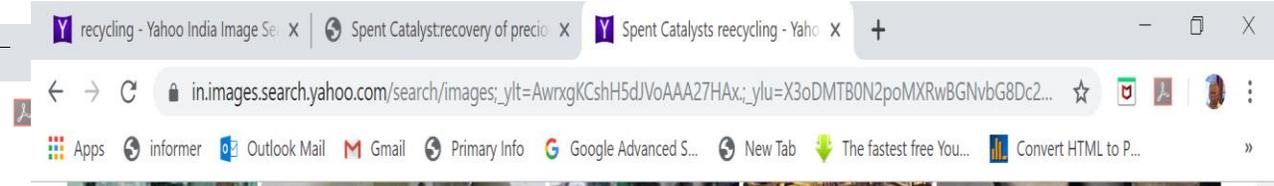
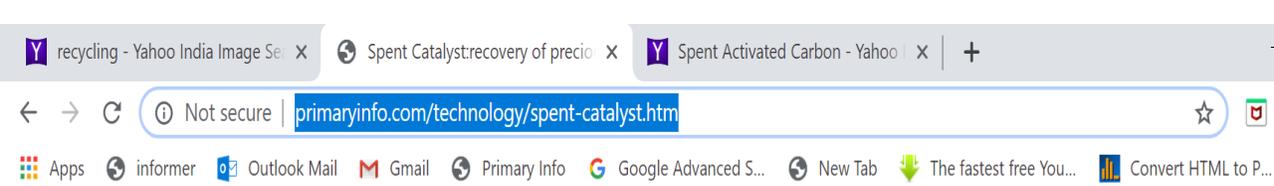
#### Company & products/services

- Thermal activation service
- Service provider
- Equipment manufacturer
- Supplier - spent carbon
- Activation program
- Spent activated carbon profile sheet
- Spent Media Identification
- Spent Carbon acceptance



# Spent Catalysts

<http://www.primaryinfo.com/technology/spent-catalyst.htm>



## Spent Catalysts

Processing , Applications, Company Profiles, Suppliers, Markets

Primary Information Services

[Home](#) . [Chemicals](#) . [Recycling](#) . [Ordering Information](#) . [Contact](#)

Search PrimaryInfo

### Project @ a Glance

- Catalysts Business Line serves the life sciences, fine chemicals, industrial chemicals and polymers markets.
- Catalysts from the petrochemical industry, which are deactivated or cannot be used anymore, are one of the major processing activities
- The spent catalyst does not only contain the precious metals, but

### Contents on the CD Rom

#### Background Information

- Fluid catalytic cracking
- Spent Catalyst
- Process Fundamentals
- Catalyst recycling
- Industry Profile -USA

#### Technology Information

- Selective Catalytic

#### Company reports

- Hydro processing catalysts
- Chemical Catalysts
- Oil Refining
- Spent Catalyst & Regenerated Catalyst Standpipes
- FT process design, catalysis and operations
- Catalytic Services provider
- Processing of spent catalyst and

**Spent Catalyst Recovery and Disposal for Petroleum Refineries**

- Catalytic cracking- Zeolites regenerated in process
- Hydrotreating - Ni, Mo, W, Co-recovery
- Acid and caustic metals separation and precipitation. (Hydrometallurgical)
- High temperature fusion (Pyrometallurgical)
- Naphtha reforming - Pt or Re on silica or silica alumina support (Recycled for precious metal-chlorinated precipitate)
- Steam reforming - Ni oxide catalyst on alumina support (Nickel recovery Alumina + NaOH)

**Catalyst User**

- Outright Sale
- Recycling/Recovery
- Outright Sale
- Return to Catalyst Supplier/User

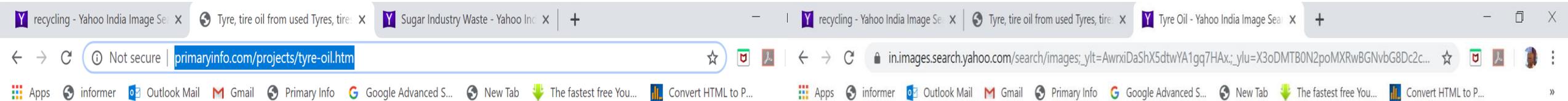
**Spent Catalysts**

- Ethane Oil Industry
- Hydrogenation
- Pharmaceutical Industry
- Petrochemical Industry
- Chemical Industry
- Refineries
- Catalyst Manufacture
- Non-ferrous metal bearing concentrates
- Metals waste
- Hydrometallurgy
- Ni, Co, Cu, Ni, W, Mo
- Ni, Co, Cu, Ni chemicals



# Tyre Oil

<http://www.primaryinfo.com/projects/tyre-oil.htm>



## Tyre Oil

Processing used tires, Technology sources, Research Institutions, Project Information

### Primary Information Services

[Home](#) [Rubber Recycling](#) [Ordering Information](#) [Contact](#)  
[Sample data download](#)

 Search PrimaryInfo

### Information @ a Glance

- Pyrolysis is the thermal degradation of materials containing carbon. The process is carried out usually at temperatures in the range of 400 C to 600 C in an atmosphere in which oxygen is very limited or excluded to preclude combustion. The products of pyrolysis include gas, liquids and solid char
- Three commercially important pyrolysis by-products from vehicle tires are liquid oil, solid char, and exhaust gas.
- A typical passenger car tire contains 24-28 percent of carbon black, 40-48 percent of natural rubber (NR) and 36-

### General

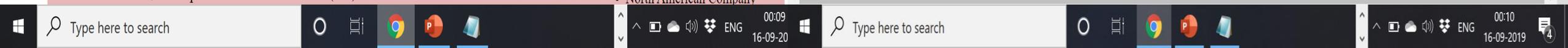
- Scrap Tyres - FAQ
- Greenhouse gas emission factors
- Tires to Diesel
- Compositional Analysis

### Process

### Contents on the CD Rom

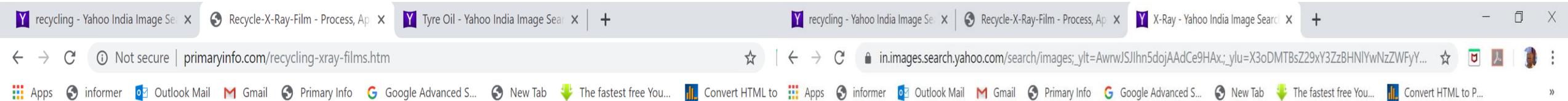
### Company profiles & Consultants

- Renewable Energy Company
- Tyre Recycling Consultants
- Technology Company in the US
- Technology Company - Malaysia
- North American Company



# Recycle-X-Ray-Film

<http://www.primaryinfo.com/recycling-xray-films.htm>



## Recycle-X-Ray-Film

Process, Applications, Technology, Patent, Consultants, Company Profiles, Buyers, Report

Primary Information Services

Home. [Waste Recycling Projects](#) .Ordering Information. Contact

### Project at a Glance

- X-ray films have two essential components –
  - Base- Polyester (polyethylene terephthalate resin) 0.2mm thick.
  - Emulsion- Silver halide crystals suspended in gelatin. (0.007-0.02mm).
- Radiology recycles all x-ray

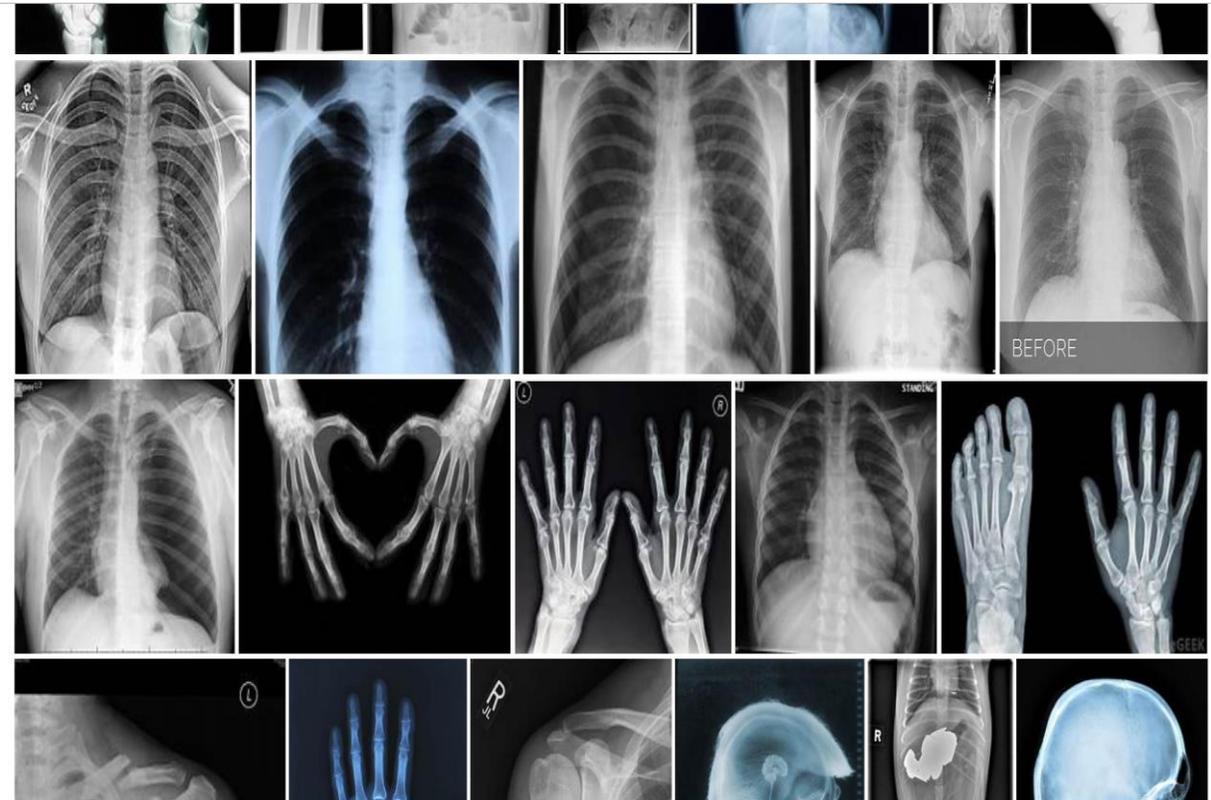
### Contents on the CD ROM

#### General Information

- Understanding plastic films - Its Uses, Benefits and Waste Management Options
- X-Ray Film Recycling And Its Benefits

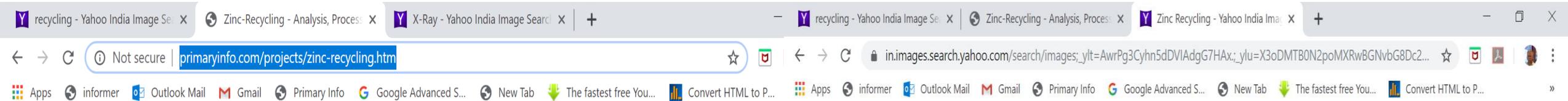
#### Consultants

- Consultants from Canada
- Consultants from Georgia
- Greymart Consultant
- Consultants from Minnesota
- Consultants from Tennessee



# Zinc Recycling

<http://www.primaryinfo.com/projects/zinc-recycling.htm>



## Zinc Recycling

Analysis, Process, Patent, Market, Company, Plant, Risk, Suppliers, Report

Primary Information Services  
Home. [Zinc](#). [Ordering Information](#). [Contact](#)

Search PrimaryInfo

### Project at a Glance

- Zinc is the 27th most common element in the earth's crust. More importantly, zinc is fully recyclable. Zinc can be recycled indefinitely - without loss of its physical or chemical properties.
- Zinc is recycled at all stages of production and

### Contents on the CD ROM

#### General Information

- Zinc Recycling
- Secondary Zinc
- Zinc Recycling Facts
- Zinc Fertilizer recycling facts
- Zinc FAQ

#### Consultancy & Supplier

- Consultancy from USA
- Consultancy from USA
- Suppliers for Zinc recycling
- Supplier from India
- Zinc recycling Supplier
- Zinc recycling plant supplier

#### Company

**AZR AMERICAN ZINC RECYCLING**  
Delivering a Sustainable Future

Recycle: Find a Report at [www.ca2recycle.ca](http://www.ca2recycle.ca)

Report: Report at [www.zincsavestives.com](http://www.zincsavestives.com)

Spread the Word: Use the hashtag #ZincSavesLives

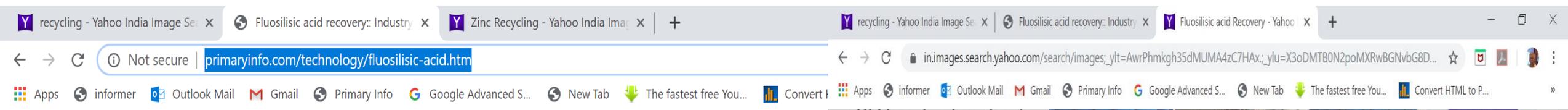
**Zinc Recycling**  
Economic, energy efficient and environmentally friendly

Recycling Lead and Zinc in the United States



# Fluosilicic acid Recovery

<http://www.primaryinfo.com/technology/fluosilicic-acid.htm>



## Fluosilicic acid Recovery

Technology, Manufacturing Process, Company Profiles, Consultants

[Home](#) . [Recycling Waste](#) . [Ordering Information](#) . [Contact](#)

  
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### Information @ a Glance

- Fluosilicic acid (HrSiFu) is mainly produced as a by-product from the wet process of Phosphoric Acid production from fluorapatite
- Fluosilicic acid is the feedstock for virtually all organic and inorganic fluorine-bearing chemicals.

### Contents on the CD Rom

#### Basic Information

- Process selection for phosphoric acid
- Fluorine recovery in the fertilizer industry

#### Applications

- The possibility of caustic

#### Environment Protection

- Use of Hydrofluosilicic Acid in Drinking Water Systems of the United States
- The Fluosilic production in USA

**Fluosilicic Acid**  
[floo-oh-si-lis-ik, floo-]

**Formic acid analysis method standardized using HPLC**  
Karthikeyan

PPM	RT	Area
100	4.27	16700
250	4.251	24754.8
500	4.24	49272.4
750	4.238	73871.6
1070.3	4.244	104148.2
1300	4.244	125061.9

**Formic acid standard recovery**

**Using Auto Sulfuric Acid Recovery Equipment for Anodizing Bath Management**

**Fluosilicic acid recovery**

# Poultry Litter Management

<http://www.primaryinfo.com/technology/poultry-litter.htm>

## Poultry Litter Management

Primary Information Services

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### Project, Trade Technology Information - Contents on CD ROM

#### Information profile @ a Glance

- The poultry industry is an important component of Agricultural sector
- There is environmental issues and challenges confronting the poultry industry
- Poultry litter and manure, spilt feed and decaying birds are all potential sources of nutrients such as nitrogen and phosphorus
- Nutrient enrichment can cause algal blooms leading to the death of fish and other aquatic fauna, odour

#### About Poultry Farm

- Poultry Bedding
- Poultry housing systems

#### Farm Bedding

- Hardwood Sawdust as Poultry Bedding
- Wood shavings as animal bedding in stables

#### Environment Issues

- Environmental Code of Practice for Poultry Farms

#### Litter Management

- Litter Analysis
- Litter Reconditioning
- Recycling Newspapers for Poultry Litter Bedding



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# Way of Life

## Setting a New Standard in Recycling

**R**  
**A**  
**V**  
**E**  
**N**

RESPONSIVENESS

ACCOUNTABILITY

VALUE

EXPERTISE

NEVER GIVE UP! THERE IS ALWAYS A SOLUTION.



**ZERO**  
**WASTE**



Primary Information Services

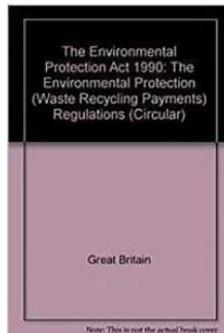
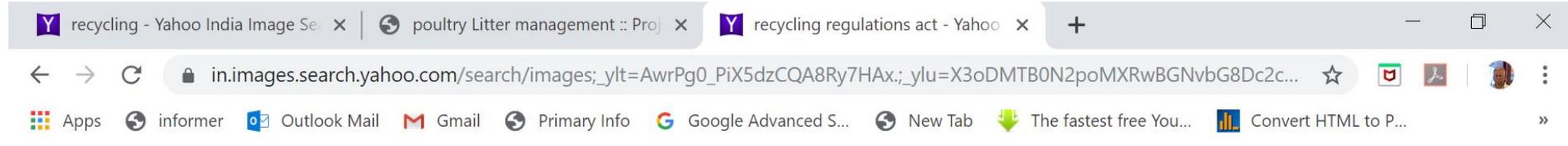
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<mailto:primaryinfo@gmail.com>



# Recycling Regulations

## Rules Enforcement



### Wisconsin's Recycling Law

Wisconsin Act 335

- Landfill/incineration bans
- Grants to "Responsible Units"
- Grants tied to "Effective Recycling Programs"
- Product regulations
  - Newsprint



### Electronic Waste Recycling Act

#### DTSC Final Regulations Workshop

Presented by Charles Corcoran and Valetti Lang  
Department of Toxic Substances Control  
August 23, 2005

### ISRI: Recycling Industry Operating Standard (RIOS)

- Eligibility
  - Scrap recycling companies
- Requirements
  - Integrated management system for quality, environmental, and health and safety
  - Follow plan-do-check-act method
- Process
  - Sign up as RIOS member
  - Obtain RIOS certification



### Waste Management Laws in the Philippines

- Republic Act 8749 (Philippine Clean Air Act of 1999)
  - Prohibits incineration of waste that emits toxic fumes
- Republic Act 9003 (Ecological Solid Waste Management Act of 2000)
  - Defines and sets parameters of solid waste management
    - Segregation at source
    - Separate collection of waste materials
    - Strict implementation of materials recovery system including recycling
    - Prohibiting open burning
  - Penalty is not less than 300php but not more than 1,000php or community service of not more than 15 days

### GSA Sustainability & Regulations

**Laws**

- National Environmental Policy Act, 1969
- Clean Air Act, 1970 amended 1990
- Energy Policy and Conservation Act, 1975
- Resource Conservation & Recovery Act, 1976, amended 1984
- National Energy Conservation Policy Act, 1978
- Energy Policy Act, 1992, 2005
- Energy Independence and Security Act, 2007

**Executive Orders**

- 13191 Growing the Government through Waste Prevention, Recycling & Federal Acquisition
- 13123 Greening the Government through Efficient Energy Management
- 13194 Developing & Promoting Eco-Products and Bio-Energy
- 13148 Greening the Government through Leadership in Environmental Management
- 13327 Federal Fleet Property Asset Management
- 13423 Strengthening Federal Environmental, Energy, and Transportation Management
- 13214 Federal Leadership in Environmental, Energy, and Economic Performance



### Why a "Universal Recycling" Bill?

- Munis provide recycling access to most residents
- Focus for diversion has been on municipalities
- Many/most private customers opt out of "optional" recycling
- More disposed tons, recovery potential from commercial sector:
  - Total MSW: 5.8 million tons disposed 2009<sup>1</sup>
  - Municipalities: 2.3 million tons disposed 2009<sup>2,3</sup>
  - Remainder = commercial: 3.5 million tons

<sup>1</sup>MassDEP SWMP 2010-2020, Table 1  
<sup>2</sup>MassDEP Municipal Solid Waste and Recycling Survey 2009  
<sup>3</sup>US Census Bureau Massachusetts Quick Facts

### avritek

#### Laws, Regulations, & Liabilities

- FACTA: Fair and Accurate Credit Transactions Act
  - "any person who maintains or otherwise possesses consumer information for a business purpose" must properly destroy discarded information.
  - "must properly dispose of such information by taking reasonable measures to protect against unauthorized access to or use of the information in connection with its disposal."
- Civil Liability, Class Action, Federal Enforcement, State Enforcement
- Others: HIPAA, HITECH, PCI DSS, Sarbanes-Oxley, Graham-Leach-Bliley, etc.

### German Waste Management Act (KrWG)

#### Key Regulations

OPTIMIZING WASTE MANAGEMENT	CLARIFYING RESPONSIBILITIES	PROMOTING THE ENFORCEMENT	AMBIUS WAGES
Objective: minimize waste generation &...	Definition of responsibilities along...	Introduction of 5-level waste hierarchy going...	Target: reuse or recycle 65% of all municipal waste by 2020/21



### Policies and Legislation

- Environmental Protection Act
- Duty of Care
- Hazardous Waste Regulations

### CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

#### APPROVED PARTICIPANT COLLECTOR

#### E-WASTE RECYCLING PAYMENT PROGRAM

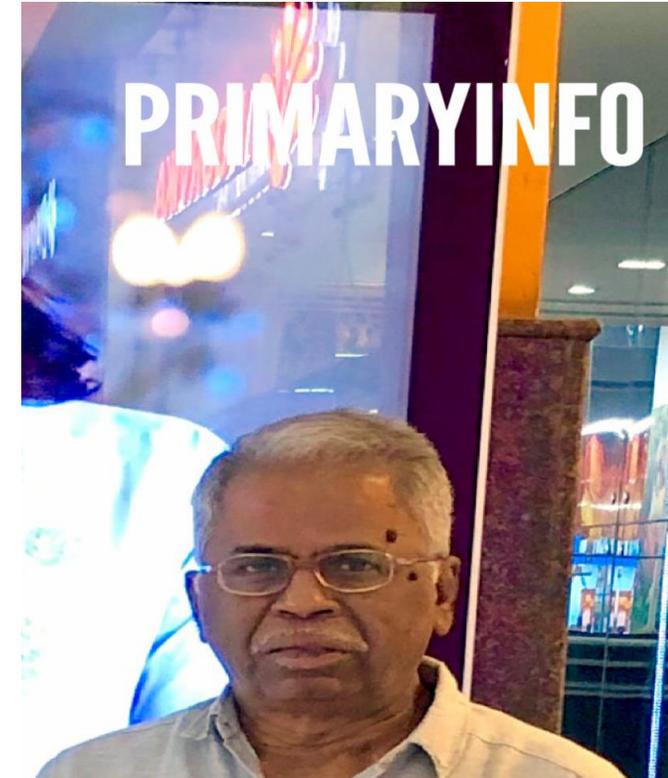
### California Health Laws Related to Recycled Water

June 2011 Edition

Section	Description
15000	Regulation on Section 15000 and 15001
15002	Legislative findings
15004	Authority to reuse and recycled water for residential
15006	Legislative findings
15008	Recycled water for irrigation, cooling towers, and air conditioning
15009	Legislative findings
15010	Recycled water for forest and urban landscaping
15012	Direct reuse
15013	Legislative findings
15014	Recycled water for industrial use
15015	Legislative findings
15016	Recycled water for agricultural use
15017	Legislative findings



# QUESTIONS?



Primary Information Services

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