

# Plastic Recycled

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**ABSTRACT:** We specifically want to reuse the plastic available in garbage, also available in almost every household item such as milk packet, plastic utensils and cold-drink bottles, all into an environmentally friendly material like construction of a bicycle from the non-recyclable plastic. The bicycle will not be affected by water and will not catch fire easily. Basically, we will be melting the plastic material to make cycle parts and use rubber for wheels. The cycle can be attached with some sensors and tracking devices to make it more advanced according to the technology. The technology can include sensors such as fingerprint sensor for locking and unlocking the bicycle and so that nobody can steal it, we can add display screen at handle of the cycle so as the person riding on it can actually make it usable. Certain important equipment like fire extinguishing bucket and gears can also be used. As plastic doesn't rust so it will not be affected by water.

**Keywords:** Bicycle, padlock, bolted and unbolted.

**Abbreviations:**

Al: Aluminate solution

## I. INTRODUCTION:

We will require only two materials: the plastic and other the burner. The plastic materials such as broken mugs, buckets, milk packets, and other materials will be burnt using the burner. Once the material is melted then we shall weld it in the shape of parts of a circle like a bicycle handle, paddle and the look of tyre covered with the rubber so as to make it movable. We will make the tyres in proper circular shape so that we can move cycle in any direction whether left, right, or forward and backward. As we know that as the melted material will cool down the product of plastics becomes hard like a metal ball. Another way to make it so that hoping for such a day when plastic is reduced to an extinction point, we can make the plastic material with less cost as by taking two materials such as Al solution. All we require is performance 65D & 80D. Casting resins which is not as costly as we think. Then we need to mix the components in an equal mixture like 2:2. Then we need a silicone mold which is preheated. The mixture will

be put in this as a liquid. Let it cool down for some time then we will get the mold ready for the cycle parts. Then all we need is to arrange the cycle parts then bolt it and make the arrangement of parts to get a proper cycle. Then we can make it increase or decrease its size according to the size of the user like making a bicycle for users of 5inch or 5.2 and so on in order that it can be made available at low price. To make it locate locations we can add a tracker underneath the seat of the cycle where a person needs to sit and paddle. To make it not catch fire we can use a sprinkler pipe attached with the little pocket of fire extinguisher which activates automatically when required. Then for the security purpose we can add sensors such as fingerprint or face lock device so that until the sensor doesn't match the fingerprint it doesn't open the lock attached at the tyre node of the bicycle. If we use face unlock app then the wire attached to the tyre will open if pre-registered face matches with the user using it at that instance. To make it more advanced we can add the Google maps at the handle side of the cycle using a small screen or almost 5 to 6 cms on which maps will work as required will be just to add location where u want to go. If we consider about rubber of tyres than we can make rubbers by the plastic and it is not hidden that rubbers are highly flexible and adaptable to any kind of roads and its variation too and provide the softest ride than the any of the other material.

There are different types of tyres for different vehicles which have the different materials respectively and that is why while making it we are going to make sure that it will not to get exposed to the oil products otherwise that will change the state of the tyre rubber. While making the AI based lock system for the bicycle we will going to ensure that it shouldn't be into eating the battery like we know that for any of the GPS device to work perfectly, it needs to ensure that it doesn't consume a lot of battery because any of AI based device runs on the battery and it is very necessary for the device should get into the sleep mode when the bicycle is locked and at the same time for the antitheft purpose the device should be able to wake up itself if senses any vibration and

our device should be able to generate alert message or call to the owner of the bicycle whose data is registered same as bank does when we draw money from the ATM then they send the quick alert message about the location too and we are going to design this feature such that the thief should be able to hear this alert message or call which the lock machine is sending to the owner. The brakes can also be made with certain abilities like the owner of the bicycle can himself make the brakes adjustable to him so as the owner can lose or tighten himself.

The side view mirror can be also be made from the well finished cost-effective glass so that no comprise regarding safety of person in terms that backside what is coming and happening shall be visible from front only. The stand can also be made strong to lift the whole apparatus of cycle so that it can lift its own weights when parked somewhere.

## II. RESULT:

The bicycle thus produced is greatly affordable and cost effective. The paper also shows how much we can reuse the non-recyclable waste. The following pictures shows various construction parts of the cycle:

1. The following image shows how we can add fingerprint sensor for locking and unlocking the cycle to protect it from being robbed. Secondly it also shows how we can add a display screen on the front which can act as a tracking device to acquire location of specified person using it. The display can also be used to be accessible for using google maps and get and reach different locations. As we know we had to protect it from fire so a small bucket od a wire just like sprinkler can also be fitted in order to actually make it automatically usable in case of fire so the device will also not catch fire as the bucket will consist of fire extinguishing gas.



2. This image shows the complete structure of cycle that how it will completely look on being manufactured with plastic seats covered by cushion like seat on which the person when sit can feel comfortable. Then we can use plastic bottle to create wheel like shape for the tyres and then cover it with the rubber. Then all the technological instrument will be added in front side of cycle. The cycle is suitable for all type of ages and height as when available.



## III. CONCLUSION:

The bicycle thus made is environmentally friendly in two ways, that is it will reduce plastic waste into useful ones and secondly pollution caused due to plastic will be reduced to minimum. This will also be a transition and a great move to our Prime Minister's directions of pollution free India.

## IV. DISCUSSION:

The point to discuss is that through this paper we came to know that we actually can easily reduce the non-recyclable waste to a very useful and productive way like we did by thinking of a bicycle there can be many other perspectives also. Similarly, iron can be recast again and again so that we can reuse it in many ways.

## REFERENCES:

- [1]. [www.wikipedia.org](http://www.wikipedia.org)
- [2]. Making a bicycle from cardboard research paper.
- [3]. [www.google.com](http://www.google.com)