

Frequently Asked Questions & Answers

1. What type of raw materials can our system process?

For plastic-to-fuel conversion, our system is designed to process all types of plastics from No. 1 to No. 7. For tire-to-fuel conversion, our system processes all scrap tires.

2. What is the system capacity?

For plastic-to-fuel system, the capacity is 30 ton/day per unit (with one pyrolysis reactor).

For tire-to-fuel system, the capacity is 50 ton/day per unit (with one pyrolysis reactor).

The larger capacity can be achieved by adding more reactors to the system.

3. Can our system process plastics that are mixed with a certain percentage of oil?

Yes, our system can process plastics mixed with a certain percentage of oil, e.g. machine oil, petroleum, and other industrial oils. Our system can also process plastics mixed with vegetable oil, but some additives need to be added to the process.

4. What type of energy source(s) does our system use?

The system can use electricity, natural gas or coal. The energy consumption varies slightly depending on the raw materials. 40-50% of the energy used is from combustible gas generated during the converting process.

5. How long does it take to produce the oil (from feeding to final output)?

Approximately 40 minutes.

6. What is the operating temperature and pressure?

The operating temperature is approx. 800° Fahrenheit (427° Celsius); the pressure is ambient.

7. Can the layout of the plant be changed?

The layout can be changed to fit whatever shape your facility is, as long as it meets the required square footage area to make the best use of the existing facility to save the investment cost.



8. What are the requirements for the facility building in terms of footprint and ceiling height?

For a one-reactor system (plastic or tire), the size of the facility required is approximately 20,000 ft² (1858 m²). A two-reactor plastics system requires an area about 1.8 times bigger, approximately 36,000 ft². A two-reactor tires system requires a facility size of approx. 53,000 ft². The recommended ceiling height is 28 ft.

9. What are the Pre-Processing requirements?

Shredding, metal removal, and drying for waste plastic

Steel removal and shredding for waste tires

10. What types of plastics have highest oil yield?

PE (highest); PP (2nd highest); PS (3rd highest)

PET is not desirable for pyrolysis conversion because it does not produce oil. In addition, PET is one of the most recycled plastics, thus it is more profitable to recycle PET instead of pyrolysis conversion.

11. Can your system process PVC?

The oil produced from PVC is less than 5%, and during conversion process PVC produces hydrogen chloride which can corrode the equipment. Therefore, it is highly recommended to keep PVC content less than 5% in the feed stock.

12. Can you system process hospital plastic wastes?

Yes, hospital plastic waste is more desirable because of its cleanliness and higher oil yield.

13. Can your system process agricultural plastic films?

Yes, agricultural plastic films have higher oil yield.

14. What is the acceptable moisture content in the feed stock? What is the impurity ratio for other contamination?

After the plastic/tires are shredded into 2-inch diameters, the moisture level should be controlled to below 3%. A 5% moisture level is acceptable, but it will require more energy (and higher costs) to run the system.



Metal contamination should be controlled at 1.5% or below, but there are no other restrictions for other kinds of materials. However, it is important to remember the less impurities and the cleaner of feedstock, the better the quality of final oil products.

15. What is the required size for shredding the plastic/tires feed stock?

Plastic is shredded into approx. 2-inch pieces in order to properly be processed through the reactor. Scrap tires are shredded to approx. 1.2 inch pieces. No minim size requirement for both plastic and tires.

16. What is the system lifespan?

At least 10 years.

17. How long is the lead time for system deployment once project has been green-lighted?

About 10 months.

18. How do you process the combustible gas generated during the process?

The combustible gas is recycled back into the system as fuel and provides approximately 50% of the energy that is used to convert plastic/tires to fuel.