

E10 Gasoline Fact Sheet

This fact sheet is designed to increase consumers' awareness of E10 gasoline.

This fact sheet is an update to the one published November 2008.

What is E10 gasoline?

E10 gasoline is a mixture of 10% ethanol and 90% gasoline blendstock. Ethanol is an alcohol and is added as an octane enhancer to the gasoline. Ethanol is used in a similar manner that Lead and MTBE (methyl tertiary-butyl ether) were previously used.

What is the quality of E10? How is it maintained?

Petrojam makes E10 gasoline to meet the standards outlined in the Petroleum Quality Control Act. E10 gasoline produced at Petrojam is blended using ratio blending, which acts as an excellent control of the blend quality. The product is tested and certified by our Petroleum Laboratory and further spot checked by Petrojam personnel as it leaves the loading rack via tank truck.

The Ministry of Energy and the Jamaica Bureau of Standards also conduct inspections of service stations to ensure product quality. The level of inspections has increased in the past year and stations will receive certificates indicating they meet the requirement of the Petroleum Quality Control Act. It is advisable to only buy from certified stations.

Is E10 Available in Both 87 and 90? What are Octane levels available?

Petrojam will produce E10 gasoline in the 87 and 90 Octane grades, which were the octane grades previously made. It is important to note the recommended octane number of your motor vehicle and not to use a lesser grade than recommended. Using a lesser grade will cause engine knocking and eventually damage over time.

Research has shown that 87 and 90 octane gasolines are the two most acceptable levels for the Jamaican market.

Can I use E10 gasoline in my vehicle?

Yes you can.

Petrojam conducted several activities prior to the introduction of E10 gasoline to ensure that the fuel is suitable for use in the motor vehicle population in Jamaica. Activities included :

- A Pilot study
- Study of the Jamaican Motor vehicle population
- Consultations with international standards setting bodies
- Consultations with other countries using E10 and higher blend levels
- Obtaining endorsement of E10 gasoline from the Jamaica Bureau of Standards

- training of Gas Station Operators and marketing company in handling of E10 gasoline
 - Sensitization and training of tanker drivers in the handling of E10
- Acceptance by other marketing companies (other than Petrojam)
- E10 Gasoline (90 and 87) has been accepted and endorsed by Marketing Companies, the Jamaica Auto Dealers and Used Car Dealers Association

We note that there is reluctance on the part of some industry players to accept E10 gasoline mainly due to lack of knowledge of the product. During our study one of the major dealers in Jamaica noted reluctance to accept E10, however, they awaited the results of our pilot study (which was also being undertaken in other countries) and have subsequently endorsed E10 gasoline.

Lack of endorsement from a manufacturer's manual does not mean that the vehicle cannot use E10 gasoline. This perspective had arisen mainly because they have not done any test themselves (the manufacturer).

While there is concern about the impact of alcohol blended gasoline on some motor vehicle engines; it is not expected that there will be any negative impact when 10% alcohol is used

Does E10 affect my engine?

Water and dirt **must** be kept out of ALL Gasoline products. However, E10 gasoline is more severely affected by dirt and water than the leaded or unleaded gasoline which we have been using for the past 15 years. Ethanol is water soluble and therefore may separate from the blend if excessive moisture is present. Excessive water will reduce the octane of the fuel and may cause engine knock.

Petrojam has taken an additional step in blending E10 gasoline by introducing an anti-corrosion agent, thereby, reducing the corrosive effect that gasoline may have on a car's engine. During normal operation of gas stations there may be accumulation of condensate water in underground storage, however, this is not considered enough to cause phase separation.

Gas station operators have specific methodologies for testing for water in their tanks.

The custody chain for gasoline involves petroleum terminal, tanker drivers and petrol stations. It is necessary for proper stewardship to be exercised at all levels of this chain to prevent water contamination.

Ethanol also acts as a solvent and can mobilize pre existing scales and other fuel deposits in the fuel system. If a vehicle is not properly maintained prior to using E10 the 'dirt' in the engine may be flushed into the fuel system. Gas filters (which will accumulate the muck) should be changed prior to using E10 for the first time.

It is a common belief that older cars (pre-1980's) may have a problem using E10 gasoline and even unleaded (MTBE) fuel. The components of the car which may come into contact with gasoline fuel system (hoses, seals, O-rings, membranes and gaskets), would have already been changed maybe several times in a motor car of this age (25-30yrs).

Handling gasoline

All gasoline in Jamaica contains a dye. If the gasoline spills on your car or any other surface, it should be washed off as soon as possible to prevent staining. E10 87 is green in colour and E10 90 is yellow in colour.

Is E10 used outside of Jamaica

E10 gasoline is not a new product to the world and is being used in many countries. The gasoline octane enhancer (MTBE) is being phased out worldwide due to its harmful effects on the environment. Ethanol is now the octane enhancer being utilized.

If I receive 'bad gas' what do I do?

As with all previous blends of gasoline return to the gas station from which the gasoline originated as the first point of contact.

The gas may be contaminated with water and hence has reduced octane. Ask the gas station operator to check for water contamination or dirt.