



# VarzBinder®

## Description

**VarzBinder®** is a modified polymer bitumen produced by **Varziran** company, which is offered with the aim of improving durability, increasing life and creating special properties for road surface. The result of using Phoenix Binder in hot asphalt mixture is to create more tolerance and durability in low and high temperatures, withstand heavy traffic pressure and overcome the problems caused by inherent defects of bitumen in Iran, increase in axial loads, increase in tire pressure, lack of sand. It is good and finally, reducing the occurrence of common problems such as cracks and surface complications.

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### usage

The technology of using **VarzBinder®** has different applications for use in roads and areas with heavy traffic load or with special features, including the following:

### Types of applications

- Asphalt coating
- Top layer, in order to bear the load of heavy traffic and harsh weather conditions
- Preparation of porous asphalt
- Thin asphalt, with thicknesses of 15 mm to 30 mm

## Application areas

### highways

- High traffic roads inside and outside the cities
- Internal roads, belt roads, bus roads, highways and freeways with heavy traffic.
- Porous, noise-reducing and anti-slip coating in places where more durable pavement, lower costs and longer useful life are needed.

### Airports

- The location of airplanes and the end of the runway
- Airport runways
- Service ways
- Aircraft parking area

### anchorages

- Container collection areas
- Warehouse and storage areas

### Execution of special pavements

- bridges
- Tunnels
- Types of parking lots (classified and other types)



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point:

**VarzBinder®** is prepared according to the conditions and requirements of each project. This means that the group of specialists and consultants of **Varziran** company calculates, designs and prepares the special formula needed for bitumen modification according to the climatic conditions, traffic volume and other factors affecting the road structure.

## Advantages:

A defining feature of **VarzBinder®** is elastic property and as a result the elastic property of the asphalt mixture made with this material, which increases the flexibility of the coating properties in a wide range of dimensions. This improvement in properties is caused by reducing plastic deformation and increasing fatigue resistance. On the other hand, by increasing the adhesion and consistency of bitumen, many problems in this regard are reduced or eliminated. Some of these created properties are mentioned below:

- Better resistance against thermal cracks and wear and tear due to the passage of time
- Excellent resistance against rutting in the path of the wheels, shrinking, cracking in the cold and fatigue
- Resistance to disintegration of the asphalt mixture
- Higher resistance to moisture damage
- More life and durability of road paving
- Reducing the occurrence of common problems such as cracks and surface complications
- Saving costs by increasing the periods of partial, total and renovation repairs

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## Economic benefits:

**VarzBinder®** preserves the capital spent for road construction in long periods. Of course, **VarzBinder®** may cost more than ordinary bitumen at the beginning, but its exceptional quality will save significant money in the long run. Common problems such as cracks and surface complications are reduced and the time needed to renew the coating becomes longer. The results of the workshop indicate that, despite the fact that **VarzBinder®** increases the initial costs of road construction projects, but on the other hand, it reduces the current value of the costs necessary for maintenance and repairs during the life of the project as an economic choice in comparison. It is considered traditional bitumen.