



Automotive 'Squeak & Rattle' Coatings

What is a squeak?

Squeaks are caused by the phenomenon known as Stick-Slip. Stick slip occurs when two or more mating surfaces have frictional properties where differences in the static (stationary or break out) and dynamic (moving) friction cause a juddering movement. When this happens at high frequency this movement generates a noise or squeak. Often this is amplified by the resonance of one or other of the components.

Some material types and material pairs (combinations) when mated together are more prone to stick slip and designers strive to eliminate these likely 'squeak' causes.

Often however this is not possible and in order to eliminate the potential for unwanted noise they must employ an isolation material between the surfaces. In the past anti-squeak tape or foam pads were used however in more recent times coatings or the application of a lubricant film have become the favoured solution.



Many different factors need to be taken into account when selecting a coating. These include:

- Materials & compatibility
- Temperature of the application, upper, lower and nominal
- Texture or finish of the substrate
- Type of contact & surface area
- Durability
- UV resistance
- Fogging characteristics
- Method of application and production process, curing time etc
- Handling of the component

IKV products include, fluid film coatings, dry film anti-friction coatings, greases and dispersions.

'Krytox', 'Zarox' and 'Fluor' PFPE type coatings are extensively used on plastic & vinyl interior trim, leather seats, sealing systems, sunroof seals, glass channels and many other applications. They are also extensively used in the aftermarket by dealers and service centres and many manufacturers release these materials as a service item.

The universal compatibility and ease of application are ideal for these conditions as the materials will not harm any surface or material and can also be used as a diagnostic tool. They are available in a range of different packaging including applicator bottles and aerosols.

Dry film coatings are also used including 'Filmsec' PTFE based lubricants & bonded films and our extensive range of 'Triboline' anti-friction coatings which can modify the frictional properties of the substrate and the surface finish.

Further information and assistance is available from IKV Group. We have the most extensive range of anti-squeak coatings and materials along with extensive knowledge and experience of accurate application.