

*Reliable solution  
for all your rubber needs*



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## Rubber Mould Release

**PinnovaX 10001 & PinnovaX 10002**



**YOUR PATNER IN  
FLAWLESS MOULDING**



**WHEN PERFECTION  
MATTERS**

# PinnovaX Rubber Mould Release



*Your partner in moulding*

## The Products :

**PinnovaX Mould Release:** Designed for more complex applications, this grade ensures robust performance, reducing mould fouling and extending the life of your release, even under demanding conditions.

**PinnovaX Mould Release (Premium):** Our most efficient and advanced grade product which is perfect for high-end and intricate rubber goods. It maximizes efficiency and reduces production time.



## Product Claims:



- Achieving a flawless finish on rubber products and PinnovaX the right Mould Release agents can make all the difference.
- Advanced Rubber PinnovaX Mould Release formulations are specifically designed to enhance product quality, ensure a smooth surface finish, minimize production losses.
- Our innovative solutions are here to support your success in producing top-tier rubber goods with consistent quality and minimal waste, all while advancing sustainability goals and visual defects, and improve overall efficiency.

## The Difference:

Flawless

Efficient

Pleasant

Cost effective

Superior surface

Easy to use

## Using Guideline :

Take one part PinnovaX mould release agent and mix with five parts water in a spray bottle. Shake well and spray the mixture evenly onto the mould cavity. Use a microfiber cloth to clean and remove any excess release agent. Now you're ready for moulding'



In the field of rubber manufacturing, moulding techniques play a crucial role in shaping the final product. As rubber technologists, we look into the intricacies of these techniques, carefully considering their advantages and disadvantages, and exploring their practical applications.



## 1. The Precision of Injection Moulding

Injection moulding is a highly automated process capable of producing intricate shapes with high precision. The rubber compound is heated until it becomes flowable, then it is injected into the mould under high pressure.

**Advantages:** High production rate, consistent quality, and reduced waste.

**Challenges:** High initial setup and tooling costs, and requires precise control of process parameters.

● **Applications:** Predominantly used in the automotive industry for producing large volumes of parts like seals, gaskets, and wiper blades.

## 2. The Simplicity of Compression Moulding

Compression moulding is one of the oldest and simplest rubber moulding processes. The rubber compound is placed into a mould cavity. The mould is then closed and heated, causing the rubber to flow and fill the mould.

**Advantages:** Low tooling costs, suitable for low-volume production, and can handle large, bulky parts.

**Challenges:** Slow production rate, labour-intensive, and not suitable for complex shapes.

**Applications:** Used in production of majority of rubber products including large parts like bumpers, boots, and automotive bellows.

## 3. The Versatility Transfer Moulding

Transfer moulding is a variation of compression moulding where the rubber compound is placed in a “pot” located between the top plate and the plunger. When the mould is closed, the rubber is compressed by the plunger and flows through sprues into the mould cavities.

**Advantages:** Suitable for intricate parts, less flash, and better dimensional control than compression moulding.

**Disadvantages:** Slower than injection molding, and higher tooling costs.

**Applications:** Used for parts that require tight tolerances, such as seals, gaskets, and valves.

## 4. The Strength of Rubber-to-Substrate Bonding

Rubber-to-Substrate Bonding is a specialized process where rubber is bonded to a substrate (usually metal) during the moulding process. The substrate is prepared with a bonding agent before the rubber is applied.

**Advantages:** Creates a strong bond between the rubber and substrate, eliminating the need for secondary assembly operations.

**Challenges:** Requires careful preparation of the substrate, and not all rubbers are suitable for bonding.

**Applications:** Used for parts that require the strength of metal and the flexibility of rubber, such as vibration isolators and engine mounts.

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# Rubber Mould Release Agent: Issue, Impacts, and Solutions



In the rubber manufacturing process, mould release agents are vital for ensuring the smooth removal of rubber products from moulds. However, improper application or selection of release agents can lead to numerous issues that affect product quality and production efficiency.

## Improper Release Agent

**Impact:** Using an unsuitable release agent can result in poor adhesion, causing surface defects, incomplete curing, and difficulties in demoulding. This can compromise the quality of the final product and increase production costs due to rework and waste.

**Solution:** It is crucial to select the appropriate release agent based on the specific material and process requirements. Conducting thorough testing and consulting technical data sheets can aid in making the right choice.



## Over-Spraying Release Agent

**Impact:** Excessive application of release agents can cause parts of the agent to mix with the rubber compound, leading to delamination and cracking of the product. This not only affects the structural integrity of the product but also results in increased material waste and production downtime.

**Solution:** Apply release agents in light, frequent coats rather than a single heavy application. Focus on critical areas where release is necessary and avoid spraying excessive amounts. Regular training for operators on proper application tech-

## Minimal or No Spray

**Impact:** Insufficient or no application of release agent can cause the rubber to stick to the mould, resulting in damaged products and increased wear on the mould. This can lead to higher maintenance costs and reduced mould lifespan.

**Solution:** Ensure that a sufficient amount of release agent is applied to all necessary areas of the mould. Use a consistent spraying technique and maintain a regular schedule for application. Implementing quality control checks can help monitor and adjust the amount of release agent used.

## Contamination by Grease and Impurities

**Impact:** Contamination of the rubber mould by grease and other impurities can lead to poor surface finish, adhesion issues, and reduced product quality. This can also cause defects in the final product, such as surface blemishes and structural weaknesses.

**Solution:** Regularly clean and maintain moulds to prevent contamination. Use clean, lint-free cloths and appropriate cleaning agents to remove any grease or impurities. Implementing a strict cleaning protocol and conducting routine inspections can help maintain mould cleanliness and ensure high-quality products.

**Conclusion ;** By ensuring the use of proper release agents, selecting the appropriate spraying techniques, and reducing die contamination, manufacturers can improve product quality, reduce waste, and enhance production efficiency and the lifespan of dies.



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