

TWO NINE JAPAN *Kyoto* Japan



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"We can solve your troubles in pharmaceutical tableting."

Sticking to the punch surfaces is one of the most troublesome problems during pharmaceutical tableting process. Some of them can be prevented by the design of formulation. But all of them can not be solved, so they need to be helped by the choice of suitable devices. Some types of tableting punches with different surfaces help to decrease the sticking partly. The punches surface plated with a usual wet method could not solve the sticking problems. It also makes the environmental undesirable. In recent years, it is considerably popular to design and develop orally disintegrating tablets (ODT). ODTs have to be prepared more carefully, because they need to keep a good disintegration property and an adequate mechanical strength. They need to choose the suitable tableting punches to prevent the sticking completely.

TWO NINE JAPAN(TNJ) introduces the distinguished tableting punches, "TOP Finish Punch Series." Our punches with a unique surface have been developed to prevent the sticking completely. Three types of TOP finish punches in this series are provided for various formulations with different actives. (TOP Finish Punch Series)

TOP finish punches are pre-treated on its top surfaces before coating and then coated CrN with a new dry coating method. This pre-treatment and CrN coating improve the anti-sticking, the anti-erosion and endurance of tableting punches. Customers can choose the best TOP finish punch among this series to fit for their own formulations.

[TOP Punch] TOP finishing of punch surface is very different from the mirror surface of the usual tableting punches. It has suitable roughness on its top surface. Tablets don't contact with flat surface area of punch but at the asperities of punch surface.

[Dream TOP Punch] This type of punch has much finer roughness on its surface, so it is much more effective to prevent the sticking for some types of pharmaceutical tablets.

[Crystal TOP Punch] Not only this punch is very effective to prevent the sticking. It is also effective to produce the tablets with smooth surfaces. This punch has the smoothest pre-treated surface among (TOP Finish Punch series).



ECO Mirror

To wash the punches mechanically in the box of ECO Mirror makes them clean. It can be kept in the constant condition during the manufacture of tablets. To use the **ECO Mirror** periodically at the producing factory prevents tableting troubles and brings good efficiency of produce and good stability of products.

In the research and development area, it must be effective. After using **ECO Mirror**, it is easy for the researchers to evaluate a new formulation and to detect the origin of the tableting troubles. In consequence, it shortens the time to develop a new formulation and a new product.



DRY-WASH ECO Mirror

Recycle system of tableting punch top



Recently, coating method on punch surface is changing from an old wet plating method to a new dry coating method. The usual punch materials are not suitable for the new method. Changing all punches into new materials will bring the high initial cost to the pharmaceutical companies. In our recycle system of tableting punch top, the old punches will have the new tips of punch top. They can be coated with a new dry coating method. Cost for the new punches can decrease and the old punches can reuse economically.