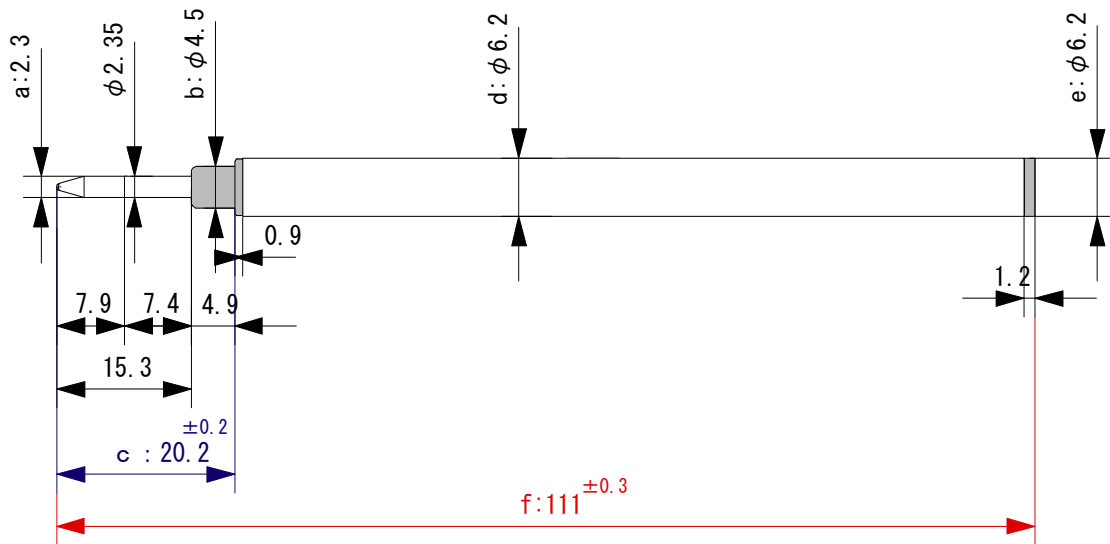


【 Non-dry Ceramic Roller Refill 】



• Plug(part marked in gray) is made of plastic.

Ink Composition: Dyestuff + Water + Additives

Property Capillary action

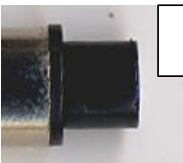
Feature: Non-Dry Mechanism, Silicone Carbide(SiC) Ceramic Ball



Non-Dry Mechanism

Based on the location of Air Exchange Hole, Non-dry refills can be categorized into two types.

First type: ①



Air exchange hole is located at the End plug

Disadvantage:
Depending on the storage environment, ink evaporates from the end plug, even though cap is on.

Second type: ②



Air exchange hole is located at the Connector

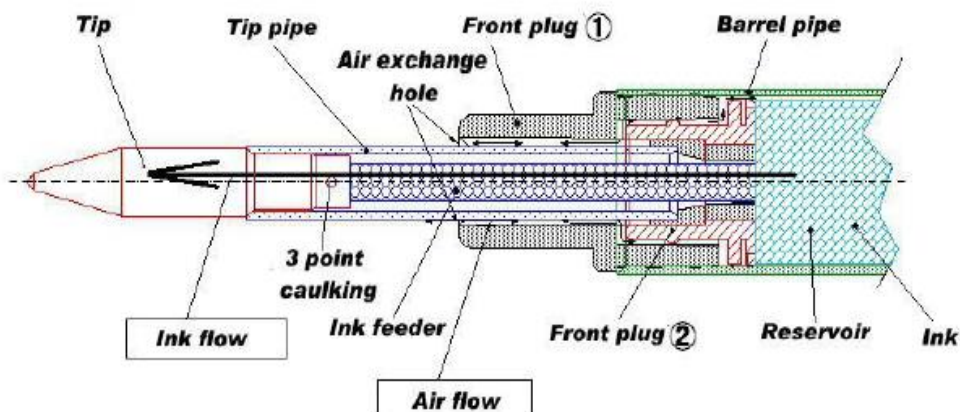
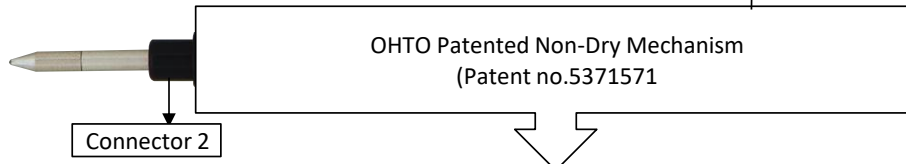
Due to the complex mechanism of non-dry system, tip connector tend to be of plastic.

Connector 1

Connector(SUS)

Connector(Plastic)

Disadvantage:
Writing pressure causes bend of tip connector resulting bad writing quality, thus un-suitable for luxury pens.



Ceramic Ball(SiC)

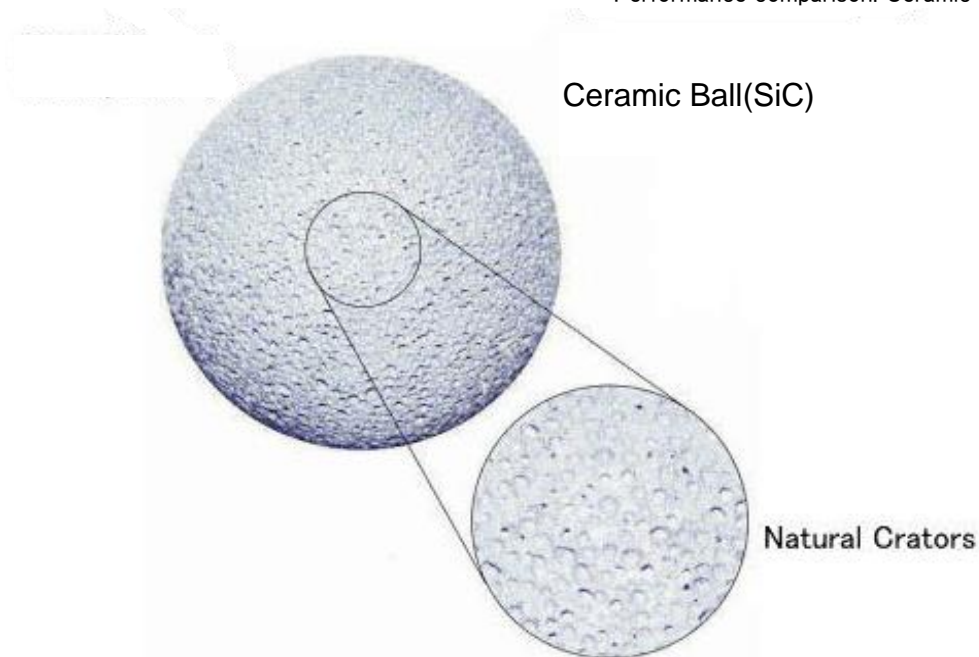
Prerequisites for the ball of quality Roller pen

1) Surface of the ball should be appropriately uneven

CERAMIC BALL(SiC) possess unlimited craters on the surface.

Natural reservation of ink on these craters helps to give ultra smooth writing continuously.

Performance comparison: Ceramic Ball(SiC): ◎ TC Ball : ○



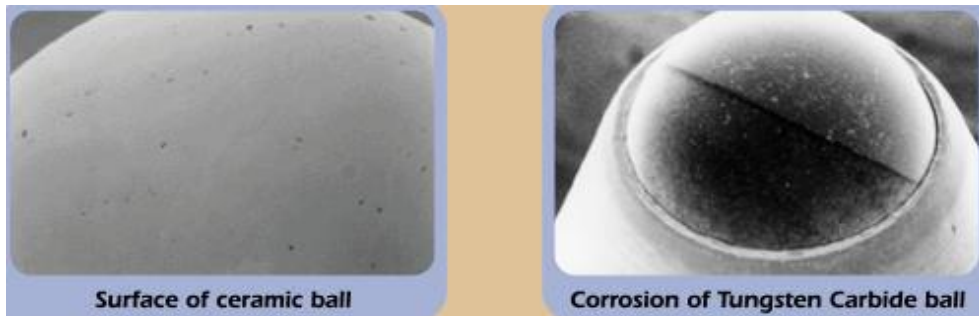
2) Writing Ball should possess Chemical stability property to perform storage stability

- Chemical resistance
- Corrosion resistance
- Friction resistance

CERAMIC BALL(SiC) performs excellent storage stability because the ball does not rust.

It is very strong against corrosion and friction

Performance comparison: Ceramic Ball(SiC): ◎ TC Ball : ○



3) Ball should have Hardness property to avoid deformation

CERAMIC BALL(SiC) is as hard as diamond, and very difficult to deform.

It perform smooth rotation always.

Performance comparison: Ceramic Ball(SiC): ◎ TC Ball : ○

■ Benefits:

- Smooth and Instant writing
- Controlled ink outflow
- Non dry mechanism
- Shelf life: 10years

Specification:

Size: 111

Ball diameter: 0.4mm/0.5mm/0.7mm /1.0mm

Material:

Ball: Silicone Carbide(SiC)Ceramic

Tip shape: Cone

Tip housing:: SUS

Connector 1: SUS

Connector 2: PP

Barrel: SUS

Cap: PP

End plug: PP

Ink feeder: Polyester

Reservoir: PP

Ink Color: Blue/Black/Blue black/Red

Ink content: 0.95g

Writing distance:

0.4mm: 1000m

0.5mm: 800m

0.7mm: 700m