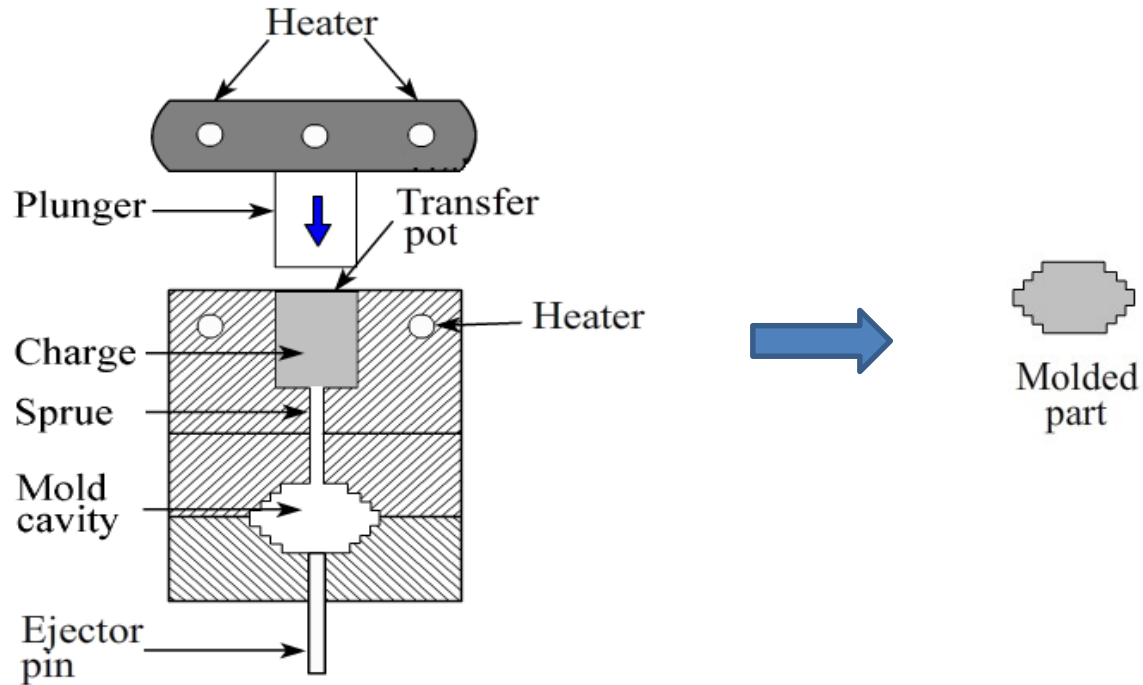


# Transfer Molding

- Transfer molding process combines the principle of compression and transfer of the polymer charge.
- Resin is transferred from the transfer pot to the mold.
- No extra pressure is required.

# Transfer Molding Process



# Transfer Molding Process

- The required amount of resin is weighted and inserted into the transfer pot before the molding process.
- The resin is preheated in the transfer pot.
- The transfer pot is heated by the heating elements above the melting point of the resin.

# Transfer Molding Process

- This allows a faster flow of material through the sprue into the mold cavity.
- A plunger is used to push the material from the transfer pot through sprue into the mold cavity.

# Transfer Molding Process Cont..

- A “piston and cylinder” arrangement is built in the transfer pot so that the resin is squirted into the mold cavity through a sprue.
- The mold is held closed until the resin gets cured.
- The mold cavity is opened and the molded part can be removed with the help of ejector pin.

# Transfer Molding Animation

[https://www.youtube.com/watch?v=Lp7go\\_TMe28](https://www.youtube.com/watch?v=Lp7go_TMe28)

# Process Parameters

- Heating time
- Melting temperature of the charge
- Applied pressure
- Cooling time

# Materials Used

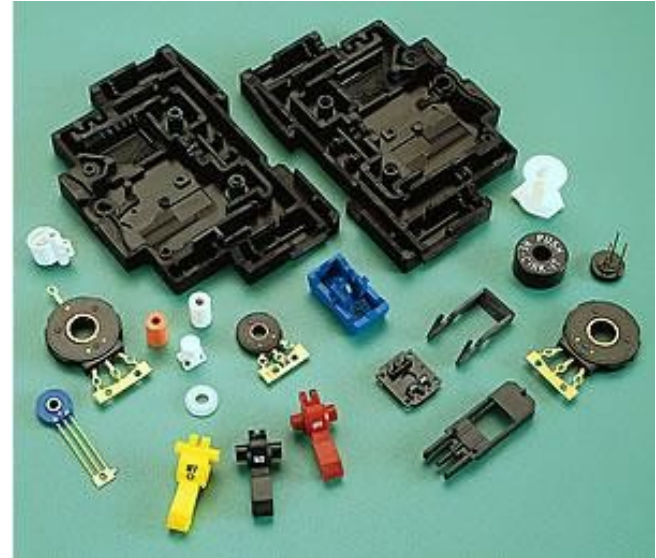
Generally, thermosets (such as epoxy, polyester, phenol-formaldehyde, vinyl ester, and silicone) are processed by transfer molding process, but certain thermoplastic materials can also be processed.



# Applications

- It is widely used to enclose or encapsulate items such as coils, integrated circuits, plugs, connectors, pins, and studs.
- It is suitable for molding with ceramic or metallic inserts which are placed in the mold cavity.
- When the heated polymer fills the mold it forms bonding with the insert surface.
- It is also used for manufacturing radio and television cabinets and car body shells.

# Applications



# Advantages

- High production rate
- Fast setup time and lower setup costs than injection molding
- Lower maintenance costs than injection molding
- Plastic parts with metal inserts can be processed
- Better flexibility in part design
- Durable and dimensionally stable parts
- Uniform thickness of parts

# Limitations

- Wastage of material
- Production rate lower than injection molding
- Air can be trapped in the mold