Summary

Exemplary embodiments provide automatic injection devices, housing components for automatic injection devices and methods for fabricating the same. An exemplary housing of an automatic injection device may be overmolded with one or more gripping surfaces to facilitate gripping and manipulation of the automatic injection device by a user when performing an injection. In an exemplary embodiment, an overmolded left gripping surface may extend along a left side of the housing and an overmolded right gripping surface may extend along a right side of the housing opposite to the left side.

According to a first aspect of the present invention, there is provided an automatic injection device, comprising: a housing having a first body portion cooperatively engageable with a second body portion to define a cavity therein; a proximal portion of the housing adapted to be gripped by a user includes a first width at a proximal terminal end thereof, a second width adjacent to a neck portion, and a third width at the neck portion; a distal portion of the housing adapted to perform an injection includes a fourth width; a first aperture formed in the first body portion; and a second aperture formed in the first body portion.

In accordance with an exemplary embodiment, an automatic injection device is provided with a housing enclosing a cavity for accommodating a container. A first overmolded gripping surface is provided to extend longitudinally along a portion of the housing on a first exterior surface of the housing. A second overmolded griping surface is provided to extend longitudinally along a portion of the housing on a second exterior surface of the housing opposite to the first exterior surface.

In an exemplary embodiment, the first and second overmolded gripping surfaces on the housing are formed of a first material having a first touch perception, and non-gripping surfaces on the housing are formed of a second material having a second touch perception. In an exemplary embodiment, the first and second overmolded gripping surfaces on the housing are formed of a first material having a first hardness, and non-gripping surfaces on the housing are formed of a second material having a second higher hardness.

In an exemplary embodiment, the automatic injection device includes a removable distal cap for protectively covering an injection needle couplable to the container, an exterior surface

CLAIMS

1. An automatic injection device, comprising:

a housing having a first body portion cooperatively engageable with a second body portion to define a cavity therein;

a proximal portion of the housing adapted to be gripped by a user includes a first width at a proximal terminal end thereof, a second width adjacent to a neck portion, and a third width at the neck portion;

a distal portion of the housing adapted to perform an injection includes a fourth width;

a first aperture formed in the first body portion; and

a second aperture formed in the first body portion.

2. The automatic injection device of claim 1, wherein the first aperture is formed in the proximal portion of the housing.

3. The automatic injection device of claim 2, wherein the second aperture is formed in the distal portion of the housing.

4. The automatic injection device of claim 1, wherein a mid-portion of the proximal portion of the housing has a width greater than any of the first width, the second width, the third width, or the fourth width.

5. The automatic injection device of claim 1, wherein the second width is greater than the first width.

6. The automatic injection device of claim 1, wherein the third width is less than the second width.

7. The automatic injection device of claim 1, wherein the housing further comprises a recessed or stepped portion formed in the distal portion.

8. The automatic injection device of claim 7, further comprising a removable cap that frictionally engages with the recessed or stepped portion of the housing.