



## VACUUM CASTING TECHNICAL PACK

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# VACUUM CASTING



## TECHNICAL SPECIFICATION

CAPACITY (MM)

300 X 400 X 350

820 X 600 X 600

820 X 1800 X 600

Quantity

Up to 20 - 25 parts per tool

Tolerances

0.3mm / 0.3% > 100mm

Wall Thickness

Min. 1.5 mm  
(Due to resin flow.)

Letters & Logos

Min. 0.5mm

Gap between raised &  
recessed letters

Min. 1.5 mm

Materials

AME SG-95 | AME 8891 | AME 8051 |  
AME 8263 | AME PX234HT | AME 8060-1 | AME 3351 | AME 9012

Materials can be requested\*





| MATERIAL                             | AME SG-95                            | AME 8891                              | AME 8051                         | AME 8263                   | AME PX234HT                                | AME 8060-1                                 | AME 3351                                               | AME 9012                                             |
|--------------------------------------|--------------------------------------|---------------------------------------|----------------------------------|----------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------------------|------------------------------------------------------|
| <b>Description</b>                   | Highly versatile all-round material. | Flexible rubber. Adjustable hardness. | Great for panels and enclosures. | UL94 SVA FAR 25 Compliant. | Suitable for prototypes & technical parts. | Suitable for prototypes & technical parts. | Waterclear UV stable. Excellent mechanical properties. | Compliant to both Dry and Wet food FDA requirements. |
| <b>Available Colours</b>             | Transparent                          | White/ Translucent                    | White/ Opaque                    | White/ Translucent         | Brown                                      | Translucent/ Yellowish                     | Transparent                                            | White                                                |
| <b>Flexible</b>                      |                                      | x                                     |                                  |                            |                                            |                                            |                                                        |                                                      |
| <b>Rigid</b>                         | x                                    |                                       | x                                | x                          | x                                          | x                                          | x                                                      |                                                      |
| <b>High Temp.</b>                    |                                      |                                       | x                                |                            | x                                          | x                                          |                                                        |                                                      |
| <b>Low Temp.</b>                     | x                                    |                                       |                                  |                            |                                            |                                            | x                                                      |                                                      |
| <b>Flame Retardant</b>               |                                      |                                       |                                  | x                          |                                            |                                            |                                                        |                                                      |
| <b>Shore Hardness</b>                | 74 - 82D                             | 20 - 90A                              | 77 - 84D                         | 83D                        | 80D                                        | 80D                                        | 75 - 80D                                               | 68 - 77D                                             |
| <b>Tensile Strength</b>              | 58 MPa                               | 2 - 17 MPa                            | 63 MPa                           | 68 MPa                     | 61 MPa                                     | 47 MPa                                     | 60 - 64 MPa                                            | 40 N/mm <sup>2</sup>                                 |
| <b>Tensile Modulus</b>               | 2,521 MPa                            | -                                     | 2,150 MPa                        | -                          | 1,800 MPa                                  | 1,225 MPa                                  | 1,500 - 1,800 MPa                                      | -                                                    |
| <b>Flexural Strength</b>             | 99 MPa                               | -                                     | 95 MPa                           | 93 MPa                     | 80 MPa                                     | 60 MPa                                     | 95 - 100 MPa                                           | 51 N/mm <sup>2</sup>                                 |
| <b>Flexural Modulus</b>              | 2,400 MPa                            | -                                     | 2,200 MPa                        | 2,200 MPa                  | 1,850 MPa                                  | 1,310 MPa                                  | 2,150 - 2,450 MPa                                      | 1310 N/mm <sup>2</sup>                               |
| <b>Heat Deflection Temp.</b>         | 72° C                                | -                                     | 92° C                            | 80° C                      | 195° C                                     | 105 - 175° C                               | 51 - 90° C                                             | 90° C                                                |
| <b>Elongation Break</b>              | 25%                                  | 270 - 330%                            | 18%                              | 15%                        | 13%                                        | 43%                                        | 4.5 - 5.5%                                             | 25%                                                  |
| <b>Yield Strength</b>                | 64.2 MPa                             | 7 - 34 MPa (Tear Strength)            | 62 MPa                           | -                          | -                                          | -                                          | -                                                      | -                                                    |
| <b>Thermal Conductivity (W / mk)</b> | 0.208                                | -                                     | 0.225                            | 7                          | -                                          | -                                          | -                                                      | -                                                    |





## AME SG-95



Vacuum Casting (VC)  
Material Datasheet



An all-round, ABS-like material. It can be spray painted in a wide variety of colours. Ideal for snap-fits and low temperature applications.

| Measurement           | Value     |
|-----------------------|-----------|
| Shore Hardness        | 74 - 82D  |
| Tensile Strength      | 58 MPa    |
| Tensile Modulus       | 2,521 MPa |
| Flexural Strength     | 99 MPa    |
| Flexural Modulus      | 2,400 MPa |
| Heat Deflection Temp. | 72° C     |
| Elongation Break      | 25%       |

Actual values may vary depending on build conditions. Our technical team can advise.



## AME 8891



Vacuum Casting (VC)  
Material Datasheet



A soft and flexible rubber-like material with a high elongation break and a variety of shore hardness choices.

| Measurement           | Value      |
|-----------------------|------------|
| Shore Hardness        | 20 - 90A   |
| Tensile Strength      | 2 - 17 MPa |
| Tensile Modulus       | -          |
| Flexural Strength     | -          |
| Flexural Modulus      | -          |
| Heat Deflection Temp. | -          |
| Elongation Break      | 270 - 330% |
| Tear Strength         | 7 - 34     |

Actual values may vary depending on build conditions. Our technical team can advise.

# AME 8051



Vacuum Casting (VC)  
Material Datasheet



An ABS-type resin suitable for panels and enclosures. High temperature resistance with flexing properties.

| Measurement           | Value     |
|-----------------------|-----------|
| Shore Hardness        | 77 - 84D  |
| Tensile Strength      | 63 MPa    |
| Tensile Modulus       | 2,150 MPa |
| Flexural Strength     | 95 MPa    |
| Flexural Modulus      | 2,200 MPa |
| Heat Deflection Temp. | 92° C     |
| Elongation Break      | 18%       |

Actual values may vary depending on build conditions. Our technical team can advise.

# Image TBC

## AME 8263



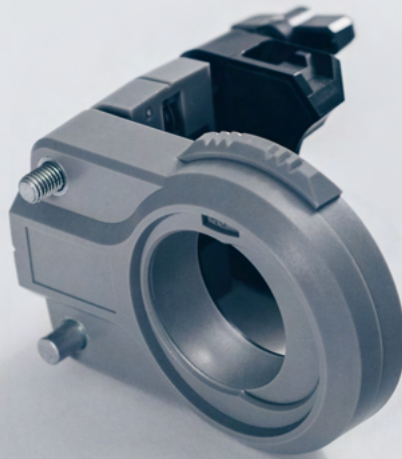
Vacuum Casting (VC)  
Material Datasheet



UL94 SVA FAR 25 Compliant.

| Measurement           | Value     |
|-----------------------|-----------|
| Shore Hardness        | 83D       |
| Tensile Strength      | 68 MPa    |
| Tensile Modulus       | -         |
| Flexural Strength     | 93 MPa    |
| Flexural Modulus      | 2,200 MPa |
| Heat Deflection Temp. | 80° C     |
| Elongation Break      | 15%       |

Actual values may vary depending on build conditions. Our technical team can advise.



## AME PX234HT



Vacuum Casting (VC)  
Material Datasheet



A polyurethane resin that is suitable for prototypes & technical parts.

| Measurement           | Value     |
|-----------------------|-----------|
| Shore Hardness        | 80D       |
| Tensile Strength      | 61 MPa    |
| Tensile Modulus       | 1,800 MPa |
| Flexural Strength     | 80 MPa    |
| Flexural Modulus      | 1,850 MPa |
| Heat Deflection Temp. | 195° C    |
| Elongation Break      | 13%       |

Actual values may vary depending on build conditions. Our technical team can advise.

# AME 8060-1



Vacuum Casting (VC)  
Material Datasheet



Similar to PP/PE. Suitable for prototypes and technical parts.

| Measurement           | Value        |
|-----------------------|--------------|
| Shore Hardness        | 80D          |
| Tensile Strength      | 47 MPa       |
| Tensile Modulus       | 1,225 MPa    |
| Flexural Strength     | 60 MPa       |
| Flexural Modulus      | 1,310 MPa    |
| Heat Deflection Temp. | 105 - 175° C |
| Elongation Break      | 43%          |

Actual values may vary depending on build conditions. Our technical team can advise.

# AME 3351



Vacuum Casting (VC)  
Material Datasheet



**UV-stable, water clear vacuum casting material. Has excellent mechanical properties and can simulate thermoplastics.**

| Measurement           | Value             |
|-----------------------|-------------------|
| Shore Hardness        | 75 - 80D          |
| Tensile Strength      | 60 - 64 MPa       |
| Tensile Modulus       | 1,500 - 1,800 MPa |
| Flexural Strength     | 95 - 100 MPa      |
| Flexural Modulus      | 2,150 - 2,450 MPa |
| Heat Deflection Temp. | 51 - 90° C        |
| Elongation Break      | 4.5% - 5.5%       |

Actual values may vary depending on build conditions. Our technical team can advise.

# AME 9012



Vacuum Casting (VC)  
Material Datasheet



**Simulates ABS. Compliant to both Dry and Wet food  
FDA requirements.**

| Measurement           | Value                  |
|-----------------------|------------------------|
| Shore Hardness        | 68 - 77D               |
| Tensile Strength      | 40 N/mm <sup>2</sup>   |
| Tensile Modulus       | -                      |
| Flexural Strength     | 51 N/mm <sup>2</sup>   |
| Flexural Modulus      | 1310 N/mm <sup>2</sup> |
| Heat Deflection Temp. | 90° C                  |
| Elongation Break      | 25%                    |

Actual values may vary depending on build conditions. Our technical team can advise.