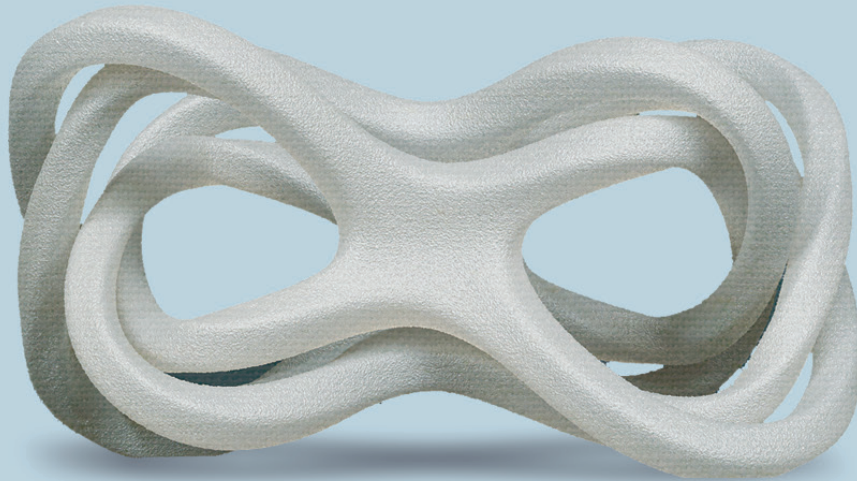




## KIMYA **ASA-S**



**ASA-S FILAMENT** is ideal for outdoor applications.

| **GOOD WEATHER RESISTANCE** | **GOOD UV PERFORMANCE**

### FILAMENT PROPERTIES

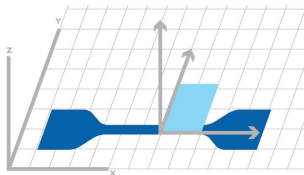
| DESCRIPTION                            | TEST METHODS                             | UNITS             | VALUES     |
|--|--|-------------------|------------|
| Diameter                               | INS-6712                                 | mm                | 1.75 ± 0.1 |
| Density                                | ISO 1183-1                               | g/cm <sup>3</sup> | 1.056      |
| Moisture rate                          | INS-6711                                 | %                 | < 1        |
| Melt Flow Index (MFI) (@220°C – 10 kg) | ISO 1133-1                               | g/10min           | 4 – 10     |
| Glass transition temperature (Tg)      | ISO 11357-1 DSC (10°C/min – 20 to 300°C) | °C                | 108        |

## PRINT PARAMETERS AND SPECIMENS DIMENSIONS

|                              |                    |
|------------------------------|--------------------|
| <b>PRINTING DIRECTION</b>    | XY                 |
| <b>PRINTING SPEED</b>        | 50 mm/s            |
| <b>INFILL</b>                | 100% - rectilinear |
| <b>INFILL ANGLE</b>          | 45°/-45°           |
| <b>EXTRUSION TEMPERATURE</b> | 250°C              |
| <b>BED TEMPERATURE</b>       | 95°C               |

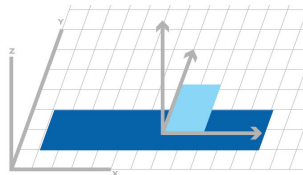
## RESULTS

### TENSILE TEST



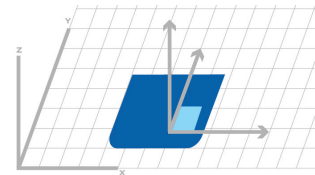
Dim.(mm): 75x12.5x2  
Specimen type: ISO 527-5A

### BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

### HARDNESS



Dim.(mm): 45x45x4

## PRINTED SPECIMENS PROPERTIES

|                              | PROPERTIES  | TEST METHODS    | UNITS             | VALUES |
|------------------------------|---|-----------------|-------------------|--------|
| <b>MECHANICAL PROPERTIES</b> | Tensile modulus   | ISO 527-2/5A/50 | MPa               | 1,685  |
|                              | Tensile Strength  | ISO 527-2/5A/50 | MPa               | 38,8   |
|                              | Tensile strain at strength                                  | ISO 527-2/5A/50 | %                 | 2,4    |
|                              | Tensile stress at break                                     | ISO 527-2/5A/50 | MPa               | 34,6   |
|                              | Tensile strain at break                                     | ISO 527-2/5A/50 | %                 | 4,3    |
|                              | Flexural modulus  | ISO 178         | MPa               | 1,662  |
|                              | Flexural stress at conventionnal deflection (3,5% strain)** | ISO 178         | MPa               | 57,3   |
|                              | flexural strength   | ISO 178         | MPa               | >5*    |
|                              | Charpy impact resistance                                    | ISO 179-1/1eA   | kJ/m <sup>2</sup> | 13,0   |
|                              | Shore Hardness  | ISO 868         | Shore D           | 74     |

\*According to ISO 178, end of the test at 5% deformation even if there is no specimen break

\*\* The data should be considered as indicative values - Properties can be influenced by production conditions.