



# velleman®

## Material Safety Data sheet

**Velleman**  
(Brand)

**3 mm (1/8") ABS FILAMENT (different colors)**  
(Product name)

**ABS3x1 (x denotes color)**  
(Product identification)

**manufactured / imported by:**

VELLEMAN NV.  
Legen Heirweg, 33  
9890 Gavere  
Belgium

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### **Description:**

Plastic reel with 1 kg of 3mm (1/8") ABS- filament for use with the K8200 3D printer. The reel is vacuum packed in plastic foil together with a bag of desiccant and stored in a cardboard box.

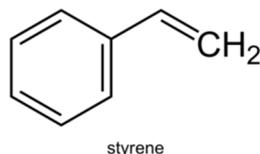
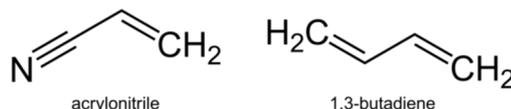
Specifications of the filament are:

- Density: 1.01 g/cm<sup>3</sup> (@ 21.5 °C) / 0.036 lb/in<sup>3</sup> (@ 70.7 °F)
- Print temperature: 220-245 °C / 428-473 °F
- Impact strength: 16 kJ/m<sup>2</sup> / 7.6 ft-lb/in<sup>2</sup>

The filament is available in different colors  
(x= B: black, W: white)

### **Chemical Identification:**

Name: Acrylonitrile butadiene styrene; polymer  
Family: Polyester  
Common names: Acrylonitrile butadiene styrene, ABS  
Formula: (C<sub>8</sub>H<sub>8</sub>·C<sub>4</sub>H<sub>6</sub>·C<sub>3</sub>H<sub>3</sub>N)<sub>n</sub>  
Structure:



## Substances:

| CAS nr.    | identification            | Hazard – risk |
|------------|---------------------------|---------------|
| 8003-563-9 | ABS                       | None known    |
| 110-30-5   | N, N Ethylene bisteramide | None known    |
| 51063-13-9 | Poly (DL Lactide)         | None known    |

## Quality of selected polymers:

- Residual monomer < 0.2%
- Residual solvent < 0.02%
- Residual catalyst <200ppm
- Heavy metal < 10ppm
- Water content: ≤ 0.5%

## NFPA rating / HMIS rating:



|            |   |
|------------|---|
| HEALTH     | 0 |
| FIRE       | 1 |
| REACTIVITY | 0 |

## Health hazard information:

Unlikely to cause irritation

Medical conditions aggravated by exposure: none expected, based on available information

## First aid:

Eye contact: Solid or dust may cause irritation or corneal injury due to mechanical action  
Skin contact: Essentially non-irritating to skin, mechanical injury only  
Inhalation: No harmful effects expected, if any symptoms obtain medical support  
Ingestion: No harmful effects expected, if any symptoms obtain medical support

## Precautions for safe handling and use:

For operations where eye or face contact can occur, eye protection is recommended

Avoid breathing dust, although it is non-irritating to skin it is advisable to wash hands thoroughly with soap and water after handling

Hot and/or melted polymer can severely burn the skin – handle with care

Extrude only in a well-ventilated area, although there are no human health effects aggravated by exposure to this product certain sensitive individuals and individuals with respiratory impairments may be affected by exposure to components in the processing fumes. The processing fumes may cause eye, skin and respiratory tract irritation and in severe cases nausea and headache.

Never burn filament, toxic gasses and vapors will be generated if exposed to fire.

If exposed to fumes from overheating or combustion leave contaminated area and breathe fresh air, seek medical attention if symptoms develop (at a later time).

### Exposure control methods:

Use local ventilation to control fumes from hot processing

### Fire and explosion hazard information:

Keep away and upwind from fire

Avoid dispersion of dust in the air to reduce dust explosion hazard

#### Fire-fighting:

Use water (mist or light spray at first), CO<sub>2</sub>, dry chemical powder or foam to extinguish fires

Firefighters must wear self-contained positive pressure breathing apparatus and fully protective equipment

### Reactive data:

Stability: stable

Incompatibility: stable

Water solubility: insoluble

Polymerization: will not occur

Conditions to avoid: exposure to open flame or temperatures above 276°C (530°F) for prolonged time

Combustion: hazardous combustion products are phenolic compounds, nitrogen oxide, hydrogen bromide, carbon monoxide, small amounts of hydrogen, cyanide and styrene.

### Physical properties:

Appearance: solid filament

Odor: possible slight organic odor

Specific gravity: > 1.02

Melting point: > 100°C (212°F)

Flash point: 404°C (759°F) – estimate

Auto ignition: 466°C (871°F)

### Spill or leak procedures:

Collect for disposal, use appropriate personal protective equipment during clean-up

### Waste disposal:

Disposal must be made in accordance with the applicable governmental regulations.

Preferred options are recycling.

### Storage conditions:

Keep dry in a cool place, when the plastic foil is opened store in a container together with a desiccant to maintain product quality. Keep the container closed until it is ready for use.

### Shipping information:

D.O.T.: not regulated as hazardous by D.O.T

**The contents and format of this MSDS/SDS are in accordance with REGULATION (EC) No 1907/2006, EU Commission directive 1999/45/EC, 1967/548/EEC**

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