

**Safety Data Sheet
According to regulation (EC) 1907/2006**

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Trade name: UniversalABS

1.2 Relevant identified uses of the substance or mixture:

Sector of use: 3D Printing

Application of the substance or mixture: 3D Filament – FFF

1.3 Details of the supplier of the safety data sheet:

TAG PLASTURGIE

N°188 Z.I. Ovest Mohammedia

Marocco

Phone: +212 (0)5 23 31 51 40

Email: contact@tag-plasturgie.com

1.4 Emergency telephone number: ORFILA: +33 (0)1 45 42 59 59

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

The product is not classified according to the CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 None

Hazard pictograms None

Signal word None

Hazard statements None

SECTION 3: Composition/information on ingredients

3.1 Substances: Acrylonitrile-Butadiene Styrene copolymer >98%

Additives <2%

Dangerous components: None

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: If used in normal condition, the filament is not hazardous. Immediately remove any clothing soiled by the filament. Take affected persons out into the fresh air. Seek medical treatment.

After inhalation: In case of gases evolving from melted resin, move subject to fresh air.

After skin contact: If Immediately wash with water and soap and rinse thoroughly. If redness, itching or burning sensation develops, get medical attention. After contact with the molten product, cool rapidly with cold water. Do not pull solidified product off the skin. Seek medical treatment.

After eye contact: Immediately rinse the exposed area with water for at least 15 minutes. If redness, itching or burning sensation develops, do not rub eyes and immediately get medical attention.

After swallowing: Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed:

At molding state, expected to cause burns to skin. Irreversible dermatitis will occur if you do not wash affected skin immediately and thoroughly.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing powder agents:

Fire-extinguishing powder carbon dioxide (CO₂)

Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons, unsuitable extinguishing agents: Not known

5.2 Special hazards arising from the substance or mixture: In case of fire, the following can be released: Carbon monoxide (CO)/Carbon Dioxide (CO₂)

Under certain fire conditions, traces of the other toxic gases cannot be excluded, e.g.: Hydrogen cyanide (HCN)

5.3 Advice for fire fighters

Protective equipment: Firefighters should wear appropriate protective equipment Mouth respiratory protective advice.

Additional information: Cool endangered receptacles with water spray

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Stop leak if you can do so without risk

Remove combustible materials

Ensure adequate ventilation

Use personal protective equipment as indicated in paragraph 8

6.2 Environmental precautions: Do not waste in environment.

6.3 Methods and material for containment and cleaning up: Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

6.4 Reference to other sections:

See section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Protective equipment and emergency procedures:

Keep away from foodstuffs and beverages. Do not eat, drink, smoke or sniff while working. Ensure adequate ventilated place.

Molten state: Avoid skin contact with the liquefied material.

Avoid breathing dust, fume or vapor.

7.2 Conditions for safe storage, including any incompatibilities:

Store in cool, dry conditions in well-sealed receptacles.

Further information about storage conditions:

Protect from heat and direct sunlight.

7.3 Specific end use(s): 3D Printing

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Exposure controls

Respiratory protection: Not necessary if room is well-ventilated.

Protection of hands: Protective gloves (Leathergloves)

Eye protection: Safety glasses

Safety glasses should be worn. At treating hot polymer or molding, face shield should be recommended.

Skin and body protection: Protective work clothing

Limitation and supervision of exposure into the environment: Prevent the material from spreading into the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Form: Filament

Colour: Natural or colored

Odour: Odourless or negligible

Change in condition:

Flash point: 404°C

Flammability (solid, gaseous): Product is not flammable

Danger of explosion: Product does not present an explosion hazard.

Vapour pressure: Not applicable because it is a solid mixture

Density at 20 °C: 1.03-1.10g/cc

Auto-ignition temperature: 466°C

Decomposition temperature: >300°C

Viscosity: Not applicable

Explosive properties: Not explosive

Oxidizing properties: Not oxidizing

9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity: No dangerous reaction if used and stored in normal conditions.

10.2 Chemical Stability: Stable at normal temperature. The filament is stable if stored and handled as prescribed.

10.3 Possible side reactions: No hazardous reactions if stored and handled as prescribed.

10.4 Conditions to avoid: Avoid high temperature, flames, and other sources of ignition.

10.5 Incompatible materials: Not applicable.

10.6 Hazardous decomposition products: In case of fire: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Acute toxicity (oral): Lack of data.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Lack of data. May cause irritations.

Eye damage/irritation: Lack of data. May cause irritations.

Sensitisation to the respiratory tract: Lack of data. Not to be expected

Skin sensitisation: Lack of data. Not to be expected

Germ cell mutagenicity/Genotoxicity: Lack of data. Not to be expected

Carcinogenicity: Lack of data. Not to be expected

Reproductive toxicity: Lack of data. Not to be expected

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.

Dusts: Irritating to eyes, respiratory system and skin.

Specific target organ toxicity (repeated exposure): Lack of data.

Other information

1.1 Styrene:

Harmful if inhaled. Causes damage to organs through prolonged or repeated exposure.

May be fatal if swallowed and enters airways.

Causes serious eye irritation. Causes skin irritation.

1.2 Acrylonitrile:

Toxic by inhalation, in contact with skin and if swallowed.

May cause cancer. Suspected of damaging the unborn child.

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.

1.3-Butadiene:

May cause cancer. May cause genetic defects.

Symptoms

Dust: Can cause skin, eye and respiratory tract irritation.

The melted product can cause severe burns.

Thermal treatment, Processing:

Irritating to eyes, respiratory system and skin.

In case of ingestion: Swallowing may cause gastrointestinal irritation and pain of guts.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: Further details:

Biodegradation: Product is not readily biodegradable.

The product is likely to persist in the environment.

Effects in sewage plants:

In sewage treatment plants, it may be separated mechanically.

12.3 Bioaccumulate potential: To avoid bioaccumulation plastics should not be disposed in the sea or in other water environments.

12.4 Mobility in soil: No further relevant information available.

12.5 Results of PBT and vPvB assessment: According to the revised Annex XIII of regulation (EC) 1907/2006 and (EC) 253/2011: No information available on the product as such.

12.6 Other adverse effects: Do not allow to enter into ground-water, surface water or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation: Check for possible recycling. Chemical residues generally count as special waste
Must not be disposed together with household garbage. Disposal must be made according to official regulations.

Uncleaned packaging:

Recommendation:

Packaging should be treated accordingly. Disposal must be made according to official regulations.

SECTION 14: Transport information

Accordance with ADR (road) RID (rail) IMDG (sea) and IATTA (air) The substance is not classified under transport regulation.

Nor registered as dangerous goods.

ONU Labels: None

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Authorization and / or restrictions on use: None

Other EU regulations: The following substances are under European Seveso regulation:

Substance	Seveso category	Other Seveso categories	Seveso concentrations	Categories
Acrylonitrile	2	9i i	10 % ≤ C < 20 %	2
Buta-1,3-diene	0	8	-	-
Styrene	6	-	C ≥ 12,5 %	-

SECTION 16: Other information

The contents and format of this safety data sheet are in accordance with Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the registration, evaluation and authorization of chemical substances, and Restriction of Chemicals (REACH). This sheet complements the technical sheets but does not replace the quantities and characteristics which not guaranteed. The information it contains is based on the state of knowledge of our suppliers about the product concerned at the date of writing. They are given in good faith. The list of regulatory requirements and applicable precautions simply intended to help the user to fill its obligations when using the product. It is not exhaustive and does not exempt the user from further obligations other texts applicable to detention or to the specifics of the implementation of which remains solely responsible in the context of risk analysis that it must lead before using the product. The user's attention is drawn to the possible risks incurred when a product is used for other purposes than those for which it is designed.