Tectonic 3D

Safety Data Sheet

SECTION 1 – Identification of the substance/mixture and of the company

Product Name AURA ABS EC
Chemical Name Acrylonitrile Butadiene Styrene
Pure substance/mixture Mixture

Section 1.2 – Relevant identified uses of the substance or mixture and uses advised against

Application Additive Manufacturing
Used advised against Not identified.

Section 1.3 – Details of the supplier of the safety data sheet

Manufacturer

Tectonic 3D B.V.
High Tech Campus 9
5656 AE Eindhoven
The Netherlands
Tel +31 (0) 408517575
https://www.tectonic-3d.com/

E-mail address info@tectonic-3d.com

Section 1.4 – Emergency telephone number

Europe
Emergency telephone: +31 (0) 408517575 (08.00-17.00 CET)

United Kingdom See above.

SECTION 2 – Hazards Identification Summary

Section 2.1 – Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Section 2.2 – Label elements

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Symbols/Pictograms
Not applicable.

Signal word
None.

Hazard Statements
Not applicable.

Precautionary Statements
Not applicable.

Section 2.3 – Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3 – Composition/information on ingredients

Section 3.1 – Substances

Not applicable

Section 3.2 – Mixtures

Chemical Name	Component	EC No	CAS No	REACH Registration Number	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acrylonitrile Butadiene Styrene	N -Phenyl maleimide modified ABS	Polymer	88077-74-1	No data available	99	Not classified

SECTION 4 – First Aid Measures

Section 4.1 – Description of first aid measures

Inhalation

Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. Consult a physician after significant exposure.

Skin Contact

In contact with molten product immediately flush with cold water for at least 10 min. Do not peel solidified polymer of skin. Obtain medical attention.

Eye Contact

Rinse thoroughly with plenty of water for at least 20 minutes, also under the eyelids. Consult a physician immediately.

Ingestion

Do not induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur and show mSDS.

Section 4.2 – Most important symptoms and affects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Section 4.3 – Indication of any immediate medical attention and special treatment needed

If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5 – Firefighting Measures

Section 5.1 – Extinguishing media

Suitable extinguishing media

ABC-powder Carbon dioxide (CO_2), Water spray jet alcohol resistant foam, Extinguishing powder.

Unsuitable extinguishing media

None known.

Section 5.2 – Special hazards arising from the substance or mixture

Specific hazards during firefighting	: Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate.Dense smoke is produced when product burns.
Hazardous combustion products	
In case of fire:	: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Carbon monoxide Carbon dioxide Combustion products may include trace amounts of: Styrene. Hydrogen cyanide.

Section 5.3 – Advice for firefighters

Special protective equipment for firefighters	: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves) If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Section 5.4 – Additional information

Further information	: Keep people away. Isolate fire and deny unnecessary entry Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone. Handheld dry chemical or carbon dioxide extinguishers may be used for small fires.

Section 6 – Accidental Release Measures

Section 6.1 – Personal precautions, protective equipment and emergency procedures

6.1.1. Personal precautions:

Personal precautions	: Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Section 6.2 – Environmental precautions

Environmental precautions	: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Section 6.3 – Methods and material for containment and cleaning

Methods for cleaning up	: Contain spilled material if possible. Sweep up. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Section 6.4 – Reference to other sections

References to other sections, if applicable, have been provided in the previous sub-sections.

Section 7 – Handling and Storage

Section 7.1 – Precautions for safe handling

Advices on safe handling	: No smoking, open flames or sources of ignition in handling and storage area.Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. Use with adequate ventilation. When appropriate, unique handling information for containers can be found on the product label. Workers should be protected from the possibility of contact with molten resin. Do not get molten material in eyes, on skin or clothing. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge.

Section 7.2 – Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	: Store in accordance with good manufacturing practices.

Section 7.3 – Specific end use(s)

See the Technical data sheet (sTDs) for further information

Section 8 – Exposure Controls/Personal Protection

8.1 – Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Although some of the additives used in this product may have exposure guidelines, these additives are encapsulated in the product and no exposure would be expected under normal handling conditions.

Section 8.2 – Exposure Controls

Engineering controls: Do not purge with this material to avoid release of high levels of fumes; use non-phenyl maleimide modified acrylonitrile-butadiene-styrene for purging. Provide local exhaust ventilation to control airborne levels below the exposure guidelines and prevent fume deposits.

8.2.2. Individual protection measures

Eye/face protection	Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent. If exposure causes eye discomfort, use a full-face respirator (meeting standard EN 136) with organic vapor cartridge (meeting standard EN14387).
Skin protection	**Hand protection:** Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized. Use gloves to protect from mechanical injury. Selection of gloves will depend on the task. Use gloves with insulation for thermal protection (EN407), when needed. **Other protection:** No precautions other than clean body-covering clothing should be needed.
Respiratory protection	Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. Use an approved air-purifying respirator when vapours are generated at increased temperatures or when dust or mist is present. Use the following CE approved air-purifying respirator: When dust/mist are present use aParticulate filter, type P2 (meeting standard EN 143). When combinations of vapours, acids, or dusts/mists are present use a/an Organic vapor cartridge with a particulate pre-filter, type AP2 (meeting standard EN 14387).

8.2.3. Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

8.3 Additional information

No data available

Section 9 – Physical and Chemical Properties

Section 9.1 – Information on basic physical and chemical properties

Appearance	Filament
Color	Natural
Odor	Oderless
Odor threshold	Not available

Property	Value	Remarks Method
PH		Not applicable
Melting point	100 °C - 150 °C	No information available
Freezing point		Not applicable
Boiling point / boiling range		Not applicable
Flash point		No information available
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Explosive limits		Not applicable
Upper explosive limits		Not applicable
Lower explosive limits		Not applicable
Vapor Pressure		Not applicable
Vapor Density		Not applicable
Relative Density		No information available
Water Solubility		Insoluble in water
Water		Insoluble
Solubility(ies)		No information available
Partition Coefficient	No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).	No information available
Autoignition Temperature	>400 °C	No information available
Decomposition Temperature		Not applicable
Kinematic Viscosity		No information available
Dynamic Viscosity		No information available
Explosive properties		No information available
Oxidizing properties		No information available
Density		No information avaiable
Bulk Density		No information available
Molecular weight		No information available

Section 9.2 – Other information

No information available

Section 10 – Stability and Reactivity

Section 10.1 – Reactivity

No dangerous reaction known under conditions of normal use.

Section 10.2 – Chemical stability
The product is stable under recommended storage and handling conditions.

Section 10.3 – Possibility of hazardous reactions
Will not occur. Under normal conditions. Polymerization will not occur.

Section 10.4 – Conditions to avoid
Avoid temperatures above 280 °C . Exposure to elevated temperatures can cause product to decompose.

Section 10.5 – Incompatible materials
No information available.

Section 10.6 – Hazardous decomposition products
Decomposition products depend upon temperature, air supply and the presence of other materials.. Processing may release fumes and other decomposition products. At temperatures exceeding melt temperatures, polymer fragments can be released. Fumes can be irritating.

Section 11 – Toxicological Information

Section 11.1 – Information on toxicological effects

Acute oral toxicity
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.

Single dose oral LD50 has not been determined.
Typical for this family of materials.
LD50, Rat, > 5 000 mg/kg Estimated.

Information for components:
N-Phenylmaleimide modified ABS
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.

Single dose oral LD50 has not been determined.
Typical for this family of materials. LD50, Rat, > 5 000 mg/kg Estimated.

Acute dermal toxicity

Acute dermal toxicity
No adverse effects anticipated by skin absorption.

The dermal LD50 has not been determined.
Typical for this family of materials.
LD50, Rabbit, > 2 000 mg/kg Estimated.

Information for components:
N-Phenylmaleimide modified ABS
No adverse effects anticipated by skin absorption.

The dermal LD50 has not been determined.
Typical for this family of materials. LD50, Rabbit, > 2 000 mg/kg Estimated.

Acute inhalation toxicity
No adverse effects are anticipated from single exposure to dust. Vapours released during thermal processing may cause respiratory irritation.
The LC50 has not been determined.

Information for components:
N-Phenylmaleimide modified ABS
No adverse effects are anticipated from single exposure to dust. Vapours released during thermal processing may cause respiratory irritation.

The LC50 has not been determined.

Skin corrosion/irritation
Prolonged contact is essentially no irritating to skin.
Mechanical injury only.
Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.

Information for components:
N-Phenylmaleimide modified ABS
Prolonged contact is essentially no irritating to skin.
Mechanical injury only. Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.

Serious eye damage/eye irritation
Solid or dust may cause irritation or corneal injury due to mechanical action.
Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.

Information for components:
N-Phenylmaleimide modified ABS
Solid or dust may cause irritation or corneal injury due to mechanical action.
Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.

Respiratory or skin sensitization
Sensitization
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Information for components:
N-Phenylmaleimide modified ABS
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity STOT – Single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Information for components:
N-Phenylmaleimide modified ABS
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Aspiration hazard
Based on physical properties, not likely to be an aspiration hazard.

Information for components:
N-Phenylmaleimide modified ABS
Based on physical properties, not likely to be an aspiration hazard.

Specific Target Organ Systemic Toxicity STOT – Repeated exposure
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Information for components:
N-Phenylmaleimide modified ABS
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
No relevant data found.

Information for components:
N-Phenylmaleimide modified ABS
No relevant data found.

Teratogenicity
No relevant data found.

Information for components:
N-Phenylmaleimide modified ABS
No relevant data found.

Reproductive toxicity
No relevant data found.

Information for components:
N-Phenylmaleimide modified ABS
No relevant data found.

Mutagenicity
No relevant data found.

Information for components:
N-Phenylmaleimide modified ABS
No relevant data found.

Section 11.2 – Information on other hazards

Endocrine disrupting properties
Endocrine disrupting potential: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 12 – Ecological Information

Section 12.1 – Toxicity

Acute toxicity to fish
Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

Section 12.2 – Persistence and degradability
Biodegradability: This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

Section 12.3 – Bio accumulative potential
Bioaccumulation: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

Section 12.4 – Mobility in soil
In the terrestrial environment, material is expected to remain in the soil.
In the aquatic environment, material will sink and remain in the sediment.

Section 12.5 – Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

No relevant data found.

Section 12.6 – Endocrine disrupting properties

Endocrine disrupting potential	: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 12.7 – Other adverse effects
No relevant data found.

Section 13 – Disposal Considerations

Section 13.1 – Waste treatment methods
For uncontaminated material the disposal options include mechanical and chemical recycling or energy recovery. In some countries landfill is also allowed. For contaminated material the options remain the same, although additional evaluation is required. For all countries the disposal methods must be in compliance with national and provincial laws and any municipal or local by-laws. All disposal methods must be in compliance with the EU framework Directives 2008/98/EC and their subsequent adaptations, as implemented in National Laws and Regulations, as well as EU Directives dealing with priority waste streams. Transboundary shipment of wastes must be in compliance with Regulation (EC) No 1013/2006 and subsequent modifications.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services

Section 14 – Transport Information

14.1 UN Number	Not regulated as a dangerous good
14.2 UN Proper Shipping Name	Not regulated as a dangerous good
14.3 Transport Hazard Class(es)	Not regulated as a dangerous good
14.4 Packing Group	Not regulated as a dangerous good
14.5 Environmental Hazard	Not regulated as a dangerous good
14.6 Special Precautions for user	Not applicable.

14.7 Maritime Transport in bulk according to IMO instruments
Not applicable for product as supplied.

Section 15 – Regulatory Information

Section 15.1 – Safety, health and environmental regulation/legislation specific for the substance or mixture

REACH Regulation (EC) No. 1907/2006
This product contains only components that have been either registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No.1907/2006 (REACH)., Polymers are exempted from registration under REACH. All relevant starting materials and additives have been either registered or are exempt from registration according to Regulation (EC) No. 1907/2006 (REACH)., The indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer´s/user´s responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Listed in Regulation: Not applicable

ABM (Algemene Beoordelingsmethodiek): Please contact our product stewardship specialist via the Customer Information contact details in Section 1 for information on the assessment of substances and preparations within the context of the implementation of the water discharge policy.

Further information
Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Section 15.2 – Chemical Safety assessment
Not applicable

Section 16 – Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Issue Date	9-July-2025
Revision Date	No information available
Revision Note	No information available

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006, COMMISION REGULATION (EU) No. 830/2015 of 20 May 2015

End of Safety Data Sheet