# SECTION 1: Identification of the substance/preparation and of the company

**1.1 Product identifier** Material Safety Data Sheet valid from May 13 2019

Trade name: ABS

**1.2 Relevant identified uses of the substance or mixture and uses advised against**
General use: Polymer for 3D printing application

**1.3 Details of the supplier of the safety data sheet**

| | |
|---|---|
| Company name: | Prima Printer Nordic AB |
| Street/POB-No.: | Kantyxegatan 25 F |
| Postal Code, city: | SE 213 76 Malmö, SWEDEN |
| WWW: | www.primacreator.com |
| E-mail: | info@primacreator.com |
| Telephone: | + 46 40 684 97 90 |

# SECTION 2: Hazards identification

**2.1 Classification of the substance or mixture**
**Classification according to EC regulation 1272/2008 (CLP)**
This mixture is classified as not hazardous.

**Classification according to Directive 67/548/EEC or 1999/45/EC**
This preparation is classified as not hazardous.

**2.2 Label elements**
**Labelling (CLP)**
Hazard statements: not applicable
Safety precautions: not applicable

**Labelling (67/548/EEC or 1999/45/EC)**
R phrase(s): not applicable
S phrase(s): not applicable

**2.3 Other hazards**
Dust: Can cause skin, eye and respiratory tract irritation. Fine dust: explosive
The melted product can cause severe burns.
Swallowing may cause gastrointestinal irritation and pain of guts.

## SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

**3.2 Mixtures**

Chemical characterization: Polymer mixture, enhanced for 3D printing
CAS No. 9003-56-9: > 98 % Styrene-acrylonitrile-butadiene copolymer
CAS No. 100-42-5: < 0,1 % Styrene

## SECTION 4: First aid measures

**4.1 Description of first aid measures**

General information: Immediately remove any contaminated clothing, shoes or stockings.

After inhalation: Provide fresh air. Put victim at rest and keep warm. Seek medical attention

In case of skin contact: The melted product can cause severe burns.
Do not attempt to remove molten product, or molten product that has cooled, from skin without medical assistance.
After contact with molten product, cool skin area rapidly with cold water. Consult physician.

After eye contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Consult an eye specialist in the event of irritation.

After swallowing: Rinse mouth with water. Drink one or two glasses of water.
Never give an unconscious person anything through the mouth. seek medical attention.

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

Dust: Skin irritation, eye irritations and redness

**4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

## SECTION 5: Firefighting measures

**5.1 Extinguishing media**

Suitable extinguishing media:
Water fog, foam, extinguishing powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:
High power water jet

**5.2 Special hazards arising from the substance or mixture**

In case of fire may be liberated: hydrogen cyanide, carbon monoxide and carbon dioxide ($CO_2$).
In case of dust (Fine dust): danger of dust explosion

**5.3 Advice for firefighters**

Special protective equipment for firefighters:
Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information: Hazchem-Code: -
Do not allow fire water to penetrate into surface or ground water. Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regula tions of the local authorities.

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation.
Wear personal protection equipment. Do not breathe dust.

**6.2 Environmental precautions**

Do not allow to penetrate into soil, waterbodies or drains.

**6.3 Methods and material for containment and cleaning up**

Avoid generation of dust. Remove all sources of ignition.
Take up mechanically. Collect in closed containers for disposal.

Additional information: Special danger of slipping by leaking/spilling product.

**6.4 Reference to other sections**

Refer additionally to chapter 8 and 13.

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe dust.
In the case of the formation of dust: Withdraw by suction. Molten material: Avoid contact with the substance.

Precautions against fire and explosion:

Take precautionary measures against static discharge. Keep away from sources of ignition. Use grounding equipment. Use explosion-proof equipment and non-sparking tools/utensils. Avoid open flames.
Dust forms explosive mixtures with air.

**7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storerooms and containers:

Store in a well-ventilated place. Keep container tightly closed. Protect against heat / sun rays. Protect from moisture contamination.

Storage class: 11 = Combustible solids

**7.3 Specific end use(s)**

No information available.

## SECTION 8: Exposure controls/personal protection

| CAS No | Type | Limit value |
|---|---|---|
| x | x | x |
| x | x | x |
| x | x | x |
| x | x | x |
| x | x | x |
| x | x | x |
| x | x | x |

**8.1 Control parameters**
Occupational exposure limit values:

**8.2 Exposure controls**
Provide good ventilation and/or an exhaust system in the work area.

**Occupational exposure controls**
Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A-P2 according to EN 14387.
Hand protection: Protective gloves according to EN 374.
Glove material: Nitrile rubber - Layer thickness: 0,11 mm. Breakthrough time: >480 min. Observe glove manufacturer's instructions concerning penetrability and breakthrough time. In case of melting: Protective gloves against heat according to EN 407.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Eye protection: Tightly sealed goggles according to EN 166.
Body protection: Wear suitable protective clothing. boots or Wear protective shoes.
General protection and hygiene measures:
Molten material: Avoid contact with skin.
Do not inhale dust particles or vapours. Keep away from sources of ignition. Wash hands before breaks and after work.
In case of dust: Particular danger of slipping when spread on the ground.

Environmental exposure controls
Do not allow to penetrate into soil, waterbodies or drains.

## SECTION 9: Physical and chemical properties

| | |
|---|---|
| 9.1 | Information on basic physical and chemical properties |
| Appearance: | Physical state: solid: pellets Colour: natural colours (whitish) |
| Odour: | Weak, characteristic |
| Odour threshold: | No data available |
| pH value: | No data available |
| Melting point/melting range: | > 100 ºC (DIN EN ISO 306) |
| Boiling temperature/boiling range: | No data available |
| Flash point/flash point range: | > 400 ºC |
| Vapourisation rate: | No data available |
| Flammability: | Not highly flammable. |
| Explosive properties: | Dust explosion risk at fine dust |
| Explosion limits: | No data available No data available |
| Vapour pressure: | No data available |
| Vapour density: | No data available |
| Density: | at 20 ºC: approx. 1,04 g/cm³ (DIN 53479) |
| Water solubility: | insoluble |
| Partition coefficient n-octanol/water: | No data available |
| Autoflammability: | not self-igniting |
| Thermal decomposition: | approx. 300 ºC |
| To avoid thermal decomposition, do not overheat. | |
| Viscosity, dynamic: | No data available |
| Explosive properties: | No data available |
| Oxidizing characteristics: | Oxidising potential: not oxidising |

**9.2 Other information**

| | |
|---|---|
| Ignition temperature: | > 400 ºC (DIN 51794) |
| Bulk density: | at 20 ºC: approx. 600 kg/m³ (DIN 53466) |
| Additional information: | No data available |

## SECTION 10: Stability and reactivity

**10.1 Reactivity**

refer to 10.3

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

In case of dust (Fine dust): danger of dust explosion

**10.4 Conditions to avoid**

Protect from excessive heat. Keep away from sources of ignition and heat.
Avoid dust formation.

**10.5 Incompatible materials**

Strong oxidizing agents

**10.6 Hazardous decomposition products**

In case of fire may be liberated: hydrogen cyanide, carbon monoxide and carbon dioxide ($CO_2$).

Thermal decomposition: approx. 300 ºC
To avoid thermal decomposition, do not overheat.

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects**

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.
Aspiration hazard: Lack of data.

Other information:

| | |
|---|---|
| Styrene: | Harmful if inhaled. Causes damage to organs through prolonged or repeated exposure. lung damages<br>May be fatal if swallowed and enters airways.<br>Causes serious eye irritation. Causes skin irritation. |
| Acrylonitrile: | Toxic by inhalation, in contact with skin and if swallowed.<br>May cause cancer. Suspected of damaging the unborn child.<br>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 evidence of aquatic toxicity |
| Water Hazard Class: | nwg = non-hazardous to water (WGK catalog number 766) |

**12.2. Persistence and degradability**

| | |
|---|---|
| Further details: | Biodegradation: Product is not readily biodegradable.<br>The product is likely to persist in the environment. |
| Effects in sewage plants: | In sewage treatment plants it may be separated mechanically. |

**12.3 Bioaccumulative potential**

To avoid bioaccumulation plastics should not be disposed in the sea or in other water environments.
Partition coefficient n-octanol/water:
No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

**12.6 Other adverse effects**

| | |
|---|---|
| General information: | Do not allow to enter into ground-water, surface water or drains. |

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**

**Product**

Waste key number: 07 02 99 = wastes from the MFSU of plastics, synthetic rubber and man-made fibres
MFSU = manufacture, formulation, supply and use

Recommendation: With due observance of the regulations laid down by the local authorities, this must be brought to a suitable incineration plant/waste disposal site.

**Contaminated packaging**

Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

## SECTION 14: Transport information

**14.1 UN number**

not applicable

**14.2 UN proper shipping name**

ADR/RID, IMDG, IATA: Not restricted

**14.3 Transport hazard class(es)**

not applicable

**14.4 Packing group**

not applicable

**14.5 Environmental hazards**

Marine pollutant No

**14.6 Special precautions for user**

No dangerous good in sense of these transport regulations.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No data available

## SECTION 15: Regulatory information

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

**National regulations - Great Britain**

Hazchem-Code: -

**National regulations - USA**

Hazard rating systems: NFPA Hazard Rating:
Health: 1 (Slight)
Fire: 1 (Slight)
Reactivity: 0 (Minimal) HMIS Version III Rating:
Health: 1 (Slight)
Flammability: 1 (Slight) Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor

**15.2 Chemical Safety Assessment**

For this substance a chemical safety assessment is not required.

## SECTION 16: Other information

**Further information**

Reason of change: Changes in section 1: product name, Changes of product list General revision
Date of first version: 30.01.2013

**Department issuing data sheet**

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.