

## **TECASINT 4000**

---

### **1. Identification of the article and of the company**

**Trade name:**

TECASINT 4011 natural,  
TECASINT 4021 black, TECASINT 4021 M1 black, TECASINT 4021 M2 black,  
TECASINT 4041 black,  
TECASINT 4051 brown,  
TECASINT 4111 natural,  
TECASINT 4121 black

**Application:**

Semi-finished engineering plastics, finished parts

**Note:**

The present product is an article in the sense of regulation (EC) No 1907/2006 (REACH).

**Manufacturer/Supplier:**

Ensinger Sintimid GmbH  
Ensingerplatz 1  
A-4863 Seewalchen  
Österreich  
Tel. +43 7662 88 788 0  
www.ensingerplastics.com

**Competent person:**

phib@ensingerplastics.com

---

### **2. Hazards identification**

**Classification and labelling:**

The product is not classified and doesn't need any labelling.

**Other hazards:**

There are no known risks, if the regulation/details for handling are observed.

---

### **3. Composition/information on ingredients**

**Description:**

Article based on polyimide (PI) / CAS No 26298-81-7 or 1381939-09-8.  
Possibly containing graphite and/or molybdenum disulphide (MoS<sub>2</sub>).  
Possibly containing glass fibres.  
Possibly containing additives and processing aids.

**Information on ingredients:**

The product doesn't contain any substance, which is supposed to be released under normal or reasonably foreseeable conditions of use.

## **TECASINT 4000**

---

### **4. First aid measures**

**After inhalation:**

After inhalation of thermal decomposition products, remove person from the danger zone. Oxygen supply, apply artificial respiration if necessary. Keep quiet, warm and seek medical help.

**After skin contact:**

In case of skin irritation caused by glass fibres, wash skin thoroughly with cold water. Do not use warm water, as this will open the pores of the skin, thus enabling the fibres to enter more deeply. Do not rub or scratch. Remove contaminated clothing. In the event of persisting skin irritation seek medical help.

**After eye contact:**

If a foreign body (splinter, chip) enters the eye do not rub. Immobilize the eye, cover both eyes with bandages, consult an eye specialist.

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

Treat symptomatically.

---

### **5. Firefighting measures**

**Suitable extinguishing media:**

Water spray, alcohol-resistant foam, carbon dioxide, dry chemical foam.

**Unsuitable extinguishing media:**

Water jet.

**Special hazards arising from the article:**

With carbonization and incomplete combustion toxic gases develop, predominantly carbon dioxide and carbon monoxide. The development of further fission and oxidation products is dependent on the conditions of burning. Traces of other toxic substances may develop under certain conditions of burning. The release of sulphur dioxide and other sulphur oxides is possible.

**Advice for firefighters:**

If exposed to fumes and carbonization gases during fire-fighting measures, rescue operations and cleanup wear a self-contained breathing apparatus.

The product is difficult to ignite and is self-extinguishing.

In an advanced state of fire, the molten polymer must be cooled with water. Water used to extinguish the fire and fire remainders must be collected and water disposed of, in accordance with local regulations.

## **TECASINT 4000**

---

### **6. Accidental release measures**

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

No special measures necessary.

**Environmental precautions:**

No special measures necessary.

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

Mechanical cleaning up.

Avoid dry sweeping. Use an appropriate suction device for cleaning to avoid the generation of dust.

---

### **7. Handling and storage**

**Precautions for safe handling:**

Avoid overheating of material by improper handling. The "Ensinger machining recommendations for semi-finished engineering plastics" are to be observed.

Mechanical processing should generate as little dust as possible. A local extraction system must be installed, or else a proper ventilation of the workplace must be guaranteed.

Take measures against static discharge. Keep away from sources of ignition.

Avoid inhalation of dust/mist/vapour.

General industrial hygiene regulations are to be observed.

Wash hands before breaks and at the end of workday.

Tobacco should not be kept in the workplace.

Do not eat, drink or smoke in the workplace.

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

No special measures necessary.

The appropriate company regulations for fire prevention are to be followed.

## TECASINT 4000

---

### 8. Exposure controls/personal protection

**Control parameters:**

In case of mechanical processing the general limit for dust is valid.

**Exposure controls:**

The working area should be well ventilated.

**Respiratory protection:**

Wear protective breathing apparatus in case of dust exposure and/or insufficient ventilation (e.g. DIN EN 143 type FFP1/FFP2).

**Eye/face protection:**

For mechanical operations wear safety glasses with side pieces or fully closed and tight-fitting goggles (DIN EN 166).

**Hand protection/skin protection:**

For mechanical processing of fibre reinforced products loose fitting, tight work clothes should be worn. Persons with sensitive skin should wear leather protective gloves (DIN EN 388).

Skin protection should be used (barrier cream containing tanning agent).

---

### 9. Physical and chemical properties

**Appearance:**

solid (semi-finished or finished parts)

**Melting point/Melting range:**

N/A

**Relative density:**

> 1,3 g/cm<sup>3</sup>

**Flash point:**

N/A (solid)

**Explosive properties:**

N/A

**Solubility(ies):**

insoluble (water, 20 °C)

**Odour/odour threshold:**

odourless

**Initial boiling point and Boiling range:**

N/A (solid)

**Decomposition temperature:**

> 550 °C

**Flammability (solid, gas):**

N/A

**Vapour pressure:**

N/A (solid)

**Partition coefficient: n-octanol/water:**

N/A

## TECASINT 4000

---

### 10. Stability and reactivity

**Chemical stability:**

Product is stable. No hazardous reactions known when stored and handled according to instructions and used for its intended purpose.

**Conditions to avoid:**

Do not heat to a temperature above the decomposition temperature.

**Incompatible materials:**

No information available.

**Hazardous decomposition products:**

No decomposition and hazardous reactions known when handled according to instructions.

By strong overheating of the material carbon oxides, nitrogen oxides, sulphur oxides and other toxic vapours can be generated.

---

### 11. Toxicological information

**Acute toxicity:**

Glass fibres and dust released during mechanical processing may cause irritation of eyes and skin. The symptoms will disappear after end of contact.

Inhalation of glass fibres and glass fibre dust may cause cough, irritation of nose and throat and sneezing. Massive exposition may cause breathing difficulties, stasis of secretions and chest tightness

**Chronic toxicity:**

When used and handled according to specifications, the product does not have any harmful effects.

The glass fibres contained in this product are endless filament glass fibres.

Endless filament glass fibres are classified as not carcinogenic. Their diameter is larger than 3 µm and they are therefore not respirable (definition of World Health Organisation WHO). Endless fibre filaments do not possess cleavage planes which would allow them to split lengthwise into fibres with smaller diameters, rather they break across the fibres, resulting in fibres which are of the same diameter as the original fibre with a shorter length. The critical fibre geometry is therefore almost never reached.

For your information: The carcinogenic influence of fibres (so called WHO fibres) largely depends on the fibre geometry and the bio-persistence. If the fibre diameter (d) is smaller than 3 µm and the fibre length (l) larger than 5 µm and l/d ratio greater than 3, then the fibre may enter the upper respiratory tract, accumulate there and in case of sufficient bio-persistence cause serious lung diseases.

**Other information:**

In our experience and according to the literature provided to us the product does not cause any noxious effects when used and handled according to regulations.

---

### 12. Ecological information

No relevant information available.

Due to the consistency of the product a disperse distribution in the environment is not likely. Therefore, according to the present state of knowledge negative ecological effects are not expected.

## TECASINT 4000

---

### 13. Disposal considerations

**Waste treatment methods:**

Product residues can be recycled or treated in an energy recovery plant.

**European waste catalogue:**

The unpolluted product has no dangerous properties and is therefore not a hazardous waste within the meaning of regulation on the European List of wastes.

**Waste codes/waste identification:**

The exact assignment to a waste code must be carried out source- and use-related.

Proposals for the waste code numbers based on the probable use of the unpolluted product:

07 02 13 (waste plastic)

20 01 39 (plastics from separately collected fractions)

**Packaging:**

Uncontaminated or cleaned packaging can be recycled without verification.

---

### 14. Transport information

Not classified as dangerous in the meaning of transport regulations.

---

### 15. Regulatory information

**Safety, health and environmental regulations/legislation specific:**

According to annex II of the REACH regulation there is no legal obligation to compile safety data sheets for articles.

We explicitly would like to point out that the present product handling information sheet (PHIS) is a voluntary information sheet for the handling of products, based on the same principle as our safety data sheets.

**EU regulations:**

According to regulation (EC) No 1272/2008 (CLP) articles are not subject to classification and labelling requirements.

Information pursuant to Article 33 of Regulation (EC) No 1907/2006 (REACH): That article doesn't contain any substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0,1 % weight by weight (w/w).

**Chemical safety assessment:**

A chemical safety assessment is not necessary for articles and therefore has not been carried out.

**National regulations:**

Storage class VCI/TRGS 510 (Germany): 11 (flammable solid materials)

## **TECASINT 4000**

---

### **16. Other information**

**Indication of changes:**

Amended scope.

Status as of 07/21.

Previous version V01.0, status as of 03/18.

---

Our information and statements reflect the current state of our knowledge and shall inform about our products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values. They do not represent guaranteed properly values and therefore they must not be used for specification purposes. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. It is the user's responsibility to ensure that existing legislation and regulation are followed.