Safety data sheet
according to Regulation (EC) No 1907/2006

TECAFIL PA6 GF

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:
TECAFIL PA6 GF30 black

Relevant identified uses of the substance or mixture:
Plastics/polymer processing (3D- based on Fused Filament Fabrication)

Details of the supplier of the safety data sheet:
Ensinger GmbH
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www.ensingerplastics.com

Competent person:
sdb@ensingerplastics.com

2. Hazards identification

Classification of the substance or mixture according to Regulation (EC) No 1272/2008 (CLP):
No need for classification according to GHS criteria for this product.

Label elements:
The mixture is not subject to specific labelling in accordance with GHS criteria.

Other hazards:
There are no known risks, if the regulation/details for handling are observed.
Contact with molten product may cause severe burns.

3. Composition/information on ingredients

Description of the mixture:
Mixture based on polyamide 6 (PA 6), CAS No 25038-54-4.
Containing glass fibres.
Possibly containing additives and processing aids.

Information on ingredients:
Ingredients with labelling requirements are not contained.

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:
After contact with molten polymer cool immediately with plenty of cold water. Contact an eye specialist.

After ingestion:
In case of persistent symptoms seek medical help.

Most important symptoms and effects, both acute and delayed:
No hazard is expected under intended use and appropriate handling.

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 substance or mixture:
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 hydrogen cyanide 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.
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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Collect product (Danger of slipping).

Environmental precautions:
Let not enter surface water and sewage water system.

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.
Under high processing temperatures or excessively long residence harmful gases and vapours might develop. Use with adequate ventilation. Local exhaust ventilation should be provided.

General industrial hygiene regulations are to be observed.
Wash hands before breaks and at the end of workday.
Food and 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.

8. Exposure controls/personal protection

Control parameters:
The general limit for dust is valid.

Exposure controls:
The working area should be well ventilated.

Respiratory protection:
If technical measures are insufficient, protective breathing apparatus must be worn. Use dust mask with at least filter type P2 (DIN EN 140/142/143) or filter apparatus with ventilator and helmet or hood, at least TH2P (DIN EN 12941).

Eye/face protection:
Safety glasses with side-shields

Hand protection/skin protection:
Wearing of gloves, for example gloves made from leather (DIN EN 388), is recommended for people with sensitive skin.
Skin protection should be used (barrier cream containing tanning agent).

9. Physical and chemical properties

Appearance:
solid (monofilament)

Melting point/Melting range:
ca. 220 °C

Relative density:
> 1g/cm³

Flash point:
N/A (solid)

Flammability (solid, gas):
> 400 °C

Vapour pressure:
N/A (solid)

Solubility(ies):
insoluble (water, 20 °C)

Auto-ignition temperature:
N/A

Viscosity:
N/A (solid)

Oxidising properties:
N/A

Other information:
No data available.

Odour/odour threshold:
product-specific

Initial boiling point and Boiling range:
N/A (solid)

pH (20 °C):
N/A (solid)

Evaporation rate:
N/A

Upper/lower flammability or explosive limits:
N/A

Vapour density:
N/A

Partition coefficient: n-octanol/water:
N/A

Decomposition temperature:
> 300 °C

Explosive properties:
no data available

10. Stability and reactivity

Reactivity:
No hazardous reactions known when stored and handled according to instructions and used for its intended purpose.

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

Possibility of hazardous reactions:
No hazardous reactions known when stored and handled according to instructions.

Conditions to avoid:
Do not heat to a temperature above the decomposition temperature.

Incompatible materials:
Strong acids and strong oxidizing agents.

Hazardous decomposition products:
No decomposition when handled according to instructions.
By strong overheating of the material carbon monoxide, hydrogen cyanide and other toxic organic vapours can be generated.

11. Toxicological information

Acute toxicity:
With proper use and in accordance with regulations there are no known dangers to health.
Contact with molten product can cause burns.

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) largeley depends on the fibre geometry and the bio-persistency. 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-persistency 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

Toxicity:
Data about ecological effects are not available for this product.

Persistence and degradability:
No data available.

Bioaccumulation potential and mobility in soil:
Biodegradability is not probable due to the consistency as well as the insolubility in water of the product.

Results of the PBT and vPvB assessment:
The product does not fulfil the criteria for classification as PBT or vPvB.

Other adverse effects:
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.

13. Disposal considerations

Waste treatment methods:
Product residues can be recycled or treated in an energy recovery plant.
When segregated, unpolluted product residues can be recycled mechanically.

European waste cataloque:
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.

UN number:
Not applicable.

UN proper shipping name:
Not applicable.

Transport hazard class(es):
Not applicable.

Packing group:
Not applicable.

Environmental hazards:
Not applicable.

Special precautions for user:
No special precautions.

Transport in bulk according to Annex II of Marpol and the IBC Code:
Not applicable.

15. Regulatory informaton

Safety, health and environmental regulations/legislation specific:
A safety data sheet for this article is not required by law. The particulars given in this Safety Data Sheet are not required in accordance with article 31 and annex II of the Regulation (EC) No 1907/2006. They merely serve the purpose of providing sufficient information on the voluntary basis with a view to ensure the safe utilization of such mixture.

EU regulations:
No dangerous substance in the sense of EU-directives.

Chemical safety assessment:
A chemical safety assessment has not been carried out.

National regulations:
Storage class VCI/TRGS 510 (Germany): 11 (flammable solid materials)
Water hazard class (Germany): not hazardous to water (Kenn-Nr. 766, BAnz AT 10.08.2017 B5)

16. Other information

The full text of hazard statements:
No H-phrases listed in the document.

Indication of changes:
Amended scope.
Status as of 11/20.
Previous version V01.0, status as of 11/19.

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