Product Handling Information Sheet (PHIS)
Information on the safe handling of products

TECAMID 66 GF TF

1. Identification of the article and of the company

Trade name:
TECAMID 66 GF25 TF10 mod. natural, TECAMID 66 GF30 TF15 HI natural, TECAMID 66 GF30 TF15 HI black, TECAMID 66 GF30 TF13 SL2 natural

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:
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Informing department / competent person:
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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 polyamide 66 (PA 66), CAS No 32131-17-2.
Contining glass fibres and polytetrafluoroethylene (PTFE).
Possibly containing additives and processing aids.

Information on ingredients:
There are no substances from the candidateliste (SVHC) in the product present above a concentration of 0,1 % weight by weight (w/w).
The product doesn`t contain any substance, which is supposed to be released under normal or reasonably foreseeable conditions of use.

4. First aid measures

General advice:
No special measures necessary.

After inhalation:
After accidental inhalation of fumes or thermal decomposition products, remove person from the danger zone. Oxygen supply, apply artificial respiration if necessary. Keep quiet and warm, seek medical help immediately. Symptoms of poisining often first appear after some hours.

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.

5. Firefighting measures

Suitable extinguishing media:
Water spray, alcohol-resistant foam, carbon dioxide, dry chemical foam.

Unsuitable extinguishing media:
Water jet.

Hazardous combustion products / fire gases:
With carbonization and incomplete combustion toxic gases develop, predominantly carbon dioxide and carbon monoxide. The development of further fission and oxidation products is dependant on the conditions of burning. Traces of other toxic substances may develop under certain conditions of burning.
The release of dense black smoke, nitrogen oxide, amines, nitriles, ammonia, aliphatic and aromatic hydrocarbons, aldehydes, caprolactam, oranic acids and hydrogen cyanide is possible.

Special protective equipment for firefighting:
If exposed to fumes and carbonization gases during fire-fighting measures, rescue operations and cleanup wear a self-contained breathing apparatus.

Additional advice:
The product ignites in a flame and continues to burn on removal of the source.
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:
No special measures necessary.

Environmental precautions:
No special measures necessary.

Methods for 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

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.

Storage:
No special measures necessary.
The appropriate company regulations for fire prevention are to be followed.
Large quantities of product should not be stored with inflammable materials. If in fire, fluorocarbon polymers can cause relatively toxic gases to be released.

8. Exposure controls / personal protection

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

substance	EC No	CAS No	exposure limit value	biological limit value	comment	source	country (type)
general dust limit value (a-dust)			3 mg/m³		respirable fraction	TRGS 900	DE
general dust limit value (e-dust)			10 mg/m³		inhalable fraction	TRGS 900	DE

Measures to prevent exposure:
If appropriate ventilation systems are used, the values will stay well below the limits
Technical measures have priority over personal protective equipment.

Respiratory protection:
Wear protective breathing apparatus in case of insufficient ventilation. Composite filter for organic, inorganic, acetous inorganic and alkaline fumes/vapours and toxic particles (e.g. DIN EN 14387 type ABEK-P3).

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

Hand / skin protection:
Skin protection should be used (barrier cream containing tanning agent).
For mechanical processing of glass fibre reinforced products loose fitting, tight work clothes should be worn. Persons sensitive to glass fibres should wear leather protective gloves (DIN EN 388).

9. Physical and chemical properties

Appearance:
solid (semifinished or finished parts)

Odour:
product-specific

Melting point / Melting range:
ca. 260 °C

Boiling point / Boiling range:
not applicable

Density:
ca. 1,5 g/cm³

Decomposition temperature:
> 300 °C

Flash point:
not applicable

Ignition temperature:
> 400 °C

Explosive properties:
not applicable

Vapour pressure:
not applicable

Water solubility (20 °C):
insoluble

Partition coefficient: n-octanol/water:
not applicable

10. Stability and reactivity

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 melting or decomposition temperature.

Substances to avoid:
Strong acids and strong oxidizing agents.

Hazardous decomposition products:
No decomposition and hazardous reactions known when handled according to instructions.
By strong overheating of the material gaseous decomposition products, especially hydrofluoric acid, tetrafluoroethylene, hexafluoropropylene, perfluoroisobutylene, carbonyl difluoride, aldehydes, organic acids, ammonia, amines and hydrogen cyanide can be generated.

11. Toxicological information

Acute effects:
With proper use and in accordance with regulations there are no known dangers to health.
Slight inhalation of thermal decomposition products or smoking contaminated tobacco can cause "fluorine polymer fever" after 2 - 6 hours (allergic alveolaritis with influenza-like symptoms: high temperature, shivering, chest pains, cough, increased pulse). Treatment is generally not necessary, symptoms disappear after 48 hours.
The result of massive inhalation of thermal decomposition products (in temperatures > 450 °C) is that after a symptomless time (4 - 24 hours) pulmonary oedema starts with the danger of suffocation.
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) 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

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

Recovery / recycling:
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 Liste 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)
12 01 05 (plastics shavings and turnings)
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 informaton

Information on regulation (EC) No. 1907/2006 (REACH):
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.
A chemical safety assessment ist not necessary for articles and therefore has not been carried out.
Information pursuant to Article 33: 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).

EU regulations:
According to regulation (EC) No 1272/2008 (CLP), directives 67/548/EC and 1999/45/EC articles are not subject to classification and labelling requirements.
No dangerous substance in the sense of EU-directives.

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

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16. Other information

Indication of changes:
First issue, status as of 04/14.

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.