Safety information

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1. Identification of the product and the company

1.1 Product name

Product: Glass fibre-reinforced polypropylene in the form of rectangular sheets.

1.2 Supplier Mitsubishi Chemical Advanced Materials Composites AG

Hardstrasse 5, 5600 Lenzburg, Switzerland

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Email: lab.ch@mcam.com

1.3 Telefone number

Tel: +41 (0) 62 885 81 50 Monday - Friday: 08:00 - 17:00

2. Hazards identification

2.1 Classification: Not applicable.

2.2 Label elements: None.

Supplementary label elements for certain mixtures

EUH208: Contains Hexamethylentetramin. May produce an allergic reaction.

2.3 Other hazards:

Hazards to human and environment:

If incorrectly heated for a long time, the material will decompose under emission of flammable gases. The real processing parameters must be adjusted to the existing press line (press, oven and handling). For further information on processing please refer to the document "Processing guidelines SymaLITE".

For safe processing, the processing parameters should not be exceeded.

The product is reactive when used as directed. In this case, phenol, formaldehyde and ammonia can be released, the limits are to be observed.

Because the filament diameter of the glass fibers is considerably over 10 μ m they are not respirable (a hazard exists when fiber diameters are less than 3 μ m). Furthermore the glass fibers can not get respirable during normal industrial processing due to their amorphous structure. On the other hand, glass fibers indeed can cause irritation of the skin, eyes, nose and throat. However it is a purely mechanical irritation and not an allergic reaction.

3. Composition / Information on ingredients

3.1 Chemical nature:

Polypropylene and copolymers of propylene and polyethylen terephthalate, stabilizers, additives, viscose, glass fibers, flame retardant.

3.2 Hazardous ingredients

| Substance name | EG-No. | CAS-Nr. | content (w%) | classification acc. to regulation (EC) 1272/2008 |
|-------------------------|-----------|------------|-----------------|--|
| phenolic resin | - | 9003-35-4 | < 0.2 % | - |
| red phosphorus | 231-768-7 | 7723-14-0 | < 0.5 % | Flam. Sol. 1, H228 |
| | | | | Aqu. Chron. 3, H412 |
| hexamethylentetramin | 202-905-8 | 100-97-0 | < 0.1 % | Skin Sens. 1, H317 |
| RegNr. 01-2119474895-20 | | | | Flam. Sol. 2, H228 |
| melamine cyanurate | 253-575-7 | 37640-57-6 | s < 0.5 % | STOT RE 2, H373 |
| RegNr. 01-2119510711-53 | | | | |

For the wording of the listed risk phrases refer to section 16.

4. First aid measures

4.1 General advice:

Measures are required, when vapors and gases are produced when handling.

4.2 After skin contact:

Generally the product does not irritate the skin. Cool rapidly with cold water after contact with molten product. Do not remove solidified product from skin. Seek medical treatment.

4.3 After eye contact:

Flush eyes for several minutes under running water with the eyelid wide open. Consult doctor if symptoms persist.

4.4 After swallowing:

If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Get medical attention if symptoms occur.

4.5 After inhalation:

If inhaled, remove to fresh air. Get medical attention if symptoms occur.

4.6 Information for the physician:

Dust from the glass fibers may cause mechanical irritation (micro injuries) of the eyes, skin and upper respiratory track. Treat symptomatically.

5. Firefighting measures

5.1 Suitable extinguishing media:

All usual media are suitable (e.g. water spray, dry chemical, foam, carbon dioxide CO₂).

5.2 Not recommended extinguishing media based on safety reasons:

Do not use a solid water stream to avoid spreading the fire.

5.3 Special hazards arising from the product itself:

Risk of spread of fire by burning drips. Melted drips can cause burns (Rinse thoroughly with water, seek medical help). Fight fire from protected location or maximum possible distance. Cool environment of fire. Avoid contact with hot material. In case of fire, the following materials can be released: Flammable gases, carbon monoxide (CO), carbon dioxide (CO_2), nitrogen oxides (NO_x), ammonia,



hydrogen fluoride, phosphoric acid. Under certain fire conditions, traces of other toxic gases can not be excluded.

Accumulation of dust may pose a fire hazard at high concentrations.

5.4 Advice for firefighters:

Use self-contained breathing apparatus and wear protective clothing.

6. Accidental release measures

6.1 Personal precautions:

Keep away sources of ignition. Ensure adequate aeration. Avoid dust formation. Avoid contact with the skin and the eyes. Wear suitable personal protective equipment.

6.2 Environmental precautions:

Do not allow residues to enter drains or watercourses.

6.3 Procedures for cleading up:

Sweep up spillage mechanically to prevent slipping.

7. Handling and storage

7.1 Precautions for safe handling:

Advice on safe handling:

Our products are flammable. Follow the standard safety precautions for protection against fire. Take reasonable precautions and hygienic measures.

Avoid accumulation of dust particles. During thermal processing small quantities of volatile hydrocarbons can be produced. Provide exhaust air ventilation for gases given off while overheating the material during processing. Avoid formation of explosive dust-air mixtures by good air ventilation and carefully adjusted processing temperatures. Follow the processing recommendations of Mitsubishi Chemical Advanced Materials Composites AG.

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

People with hypersensitive skin or chronic respiratory disease should not work with this product

Hygiene measures:

The usual hygiene measures have to be taken into account during the work; especially when handling the product do not drink, eat or smoke and wash hands and face during breaks and after work.

7.2 Conditions for safe storage:

Storage compatibility:

Strong oxidants / strong acids (pH <3) / strong bases (pH> 11) can decompose the fibers.

Further information on storage conditions:

Protect from moisture. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Ground tank and equipment to be filled. Take measures against electrostatic discharges. Store in a dry, cool and well ventilated place.

8. Exposure controls / personal protection

8.1 Control parameters:

Ammonia, CAS-Nr. 7664-41-7 occupational exposure limits acc. to TRGS 900 (state 05/2015)

Value: 20 ppm / 14 mg/m³

Limit: 2(I)



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Comments: Y a risk of fetal damage does not need to be feared if the occupational

exposure limits and the biological limit value are observed.

Formaldehyde, CAS-Nr. 50-00-0 occupational exposure limits acc. to TRGS 900 (state 05/2015)

Value: 0.3 ppm / 0.37 mg/m³

Limit: 2(I)

Comments: Sh Skin Sensitizing substance

Y a risk of fetal damage does not need to be feared if the occupational

exposure limits and the biological limit value are observed.

X carcinogenic substance cat. 1A / 1B. For activities involving this hazardous substance, §10 ordinance on hazardous substances must also be observed.

Phenol, CAS-Nr. 108-95-2 occupational exposure limits acc. to TRGS 900 (state 05/2015)

Value: 2 ppm / 8 mg/m³

Limit: 2(II)

Comments: H Skin resorptive

DNEL / DMEL values are not available.

PNEC values are not available.

General dust limit:

inhalable fraction (E dust): 10 mg / m³ (TWA) Respirable fraction (A-dust): 1.25 mg / m³ (TWA)

8.2 Additional information for the design of technical equipment:

(see chapter 7)

8.3 Personal protective equipment:

8.3.1 Hand protection:

Wear protective gloves and protective clothing when handling heated blanks.

8.3.2 Body protection:

Long-sleeved clothing and safety footwear.

8.3.3 Eye protection:

Safety goggles.

8.3.4 Respiratory protection:

Inhalation of gaseous degradation products which can arise on severe overheating of the material is to be avoided. Provide adequate ventilation when processing. In case of insufficient ventilation or long effect, use respirator that complies with EEC Directive 89/686.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance: Sheets of thermoplastic semi-finished products.

Color: Various

Odor: Nearly odorless at standard climate

Odor threshold: Not specified PH value: Not applicable

Melting area: Softening of PP starts at 140 °C (284 F). PES-Fiber at ~110 °C (230 F).



Flash point: Not determined.

Ignition point: 360 - 500 °C (662 - 932 F) DIN 51794 (PET-scrim)

Decomposition temperature > 170 °C (viskose), > 280 °C (PET)

Explosion hazard: Not determined

Relative self-ignition temperature: Not determined.

Self-ignition temperature (1000cm³/24h): Not determined.

Density: (SymaLITE® at 21 °C (69.8 F) 0.10 - 1.50 g/cm3 depending on glass content and

consolidation.

Solubility in water: Insoluble

9.2 Other information:

See Mitsubishi Chemical Advanced Materials Composites AG Processing Guidelines.

The above information is not intended for use in preparing product specifications. Please contact Mitsubishi Chemical Advanced Materials Composites AG before you agree in writing specifications.

10. Stability and reactivity

10.1 Reactivity:

This material is considered to be non-reactive under normal environmental conditions.

10.2 Chemical stability:

The product is stable under normal handling and storage conditions.

10.3 Possibility of hazardous reactions:

Under normal conditions of storage and if used as directed, hazardous reactions will not occur. When processing, flammable gases may be produced.

10.4 Conditions to avoid:

When exceeding temperature and time, a slow thermal decomposition with releasing of flammable gases takes place. Autoignition of SymaLITE® is possible when the heated and molten SymaLITE leaves the furnace and is exposed to an oxygen atmosphere without cooling. Avoid electrostatic charge.

10.5 Incompatible materials:

Strong oxidants / strong acids (pH <3) / strong bases (pH> 11) can decompose the fibers.

10.6 Hazardous decomposition products:

See chapter 11.

11. Toxicological information

According to our experience and the information available to us the product is not harmful to health, provided it is handled and processed according to the given recommendations.

Information on toxicological effects:

All data in this section refer to certain substances contained in the product. When heated to above 150 °C as intended, formaldehyde, phenol and ammonia can be released.



With prolonged processing and / or excessive processing temperatures following substances can be released:

Flammable gases, carbon monoxide (CO), carbon dioxide (CO₂), nitrogen oxides (NO_x), fluorine containing pyrolysis products. These substances can produce an irritating and harmful effect.

Acute toxicity:

Based on the available data, the classification criteria are not met.

Corrosion / irritation of skin and eyes:

Based on the available data, the classification criteria are not met.

Sensitation on respiratory tract / skin:

Based on the available data, the classification criteria are not met.

Substance exposure species result
Hexamethylentetramin skin Guinea pig sensitizing

The product is not skin sensitizing. Sensitive individuals can still trigger allergies

CMR effects:

No carcinogenicity, mutagenicity or reproductive toxicity effects known.

Specific target organ toxicity (single exposition):

No information available.

Specific target organ toxicity (repeated exposition):

No information available.

Aspiration hazard:

No information available.

Ensure good air ventilation of the working area.

12. Ecological information

12.1 Toxicity:

Ecology general: Do not spread the product in the environment. The product does not pose a particular environmental hazard.

12.2 Persistence and degradability:

Water-insoluble solid. The product can be mechanically separated. Not readily biodegradable.

12.3 Bioaccumulative potential:

Low bioaccumulation potential.

12.4 Mobility in soil:

No adverse effects on bacteria are expected.

12.5 Results of PBT- und vPvB-assessment:

There are no details as no chemical safety report (CSR) is required.

12.6 Other adverse effects:

Do not allow product to reach ground water, water course or sewage system.

13. Disposal considerations

13.1 Product:

The product is recyclable. Contact manufacturer!

Contaminated product can be disposed in accordance with local regulations or incinerated in a suitable plant.

13.2 Contaminated packaging:

The generation of waste should be minimized. If packaging waste can not be recycled, dispose according to national and regional regulations.

14. Transport information

Our products are not dangerous substances.

14.1 Transport by road / rail (ADR / RID):

Not a dangerous good.

14.2 Transport by sea (IMDG):

Not a dangerous good.

14.3 Transport by air (ICAO/IATA):

Not a dangerous good.

15. Regulatory information

15.1 Labelling according to EEC directives::

This product is an article as defined in chapter 3.3 of regulation (EC) no. 1907/2006 (REACH). It does not contain substances that are to be released under normal or reasonably foreseeable conditions of use. There is no registration requirement for substances in articles within the meaning of chapter 7.1 of the regulation. The product does not contain substances listed in the candidate List or in Reach Annex XIV. A material safety data sheet for this product is not required for articles in accordance with chapter 31. Mitsubishi Chemical Advanced Materials Composites AG is committed to its customers to communicate appropriate information on safe handling and use. A specific format for this information is not specified.

15.2 National legislation / regulations: :

For the ingredients no chemical safety assessments (CSA) are available.

All applicable national and local regulations have to be observed.

16. Other information

GHS Hazard statements of components:

H228 Flammable solid

H302 Harmful if swallowed

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

H332 Harmful if inhaled

H335 May cause respiratory irritation

H373 May cause damage to organs through prolonged or repeated exposure

H412 Harmful to aquatic life with long lasting effects



Abbreviations and acronyms:

CAS = Chemical abstract service (division of the American Chemical Society).

DNEL = Derived no effect level.

DMEL = Derived minimal effect level.

PNEC = Predicted no effect concentration.

PBT = Persistent, bioaccumulative and toxic.

vPvB = Very persistent and very bioaccumulative.

ADR = Accord européen sur le transport des marchandises dangereuses par route (European agreement: concerning the international carriage of dangerous goods by road).

RID = Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulation concerning the international transport of dangerous goods by rail).

IMDG = International maritime code for dangerous goods.

ICAO = International civil aviation organization.

IATA = International air transport association.

REACH = Registration, evaluation, authorisation and restriction of chemicals.

CSA = Chemical safety assessment

Data provided in this safety information sheet refer exclusively to the article described and not to a combination of this product with any other kind of substances, preparations or articles respectively processes. All information and instructions provided in this safety information sheet is based on the scientific and technical knowledge that was in effect on the date which is stated on this safety information sheet. The data do not represent a quarantee of quality characteristics. Mitsubishi Chemical Advanced Materials Composites AG can not be held responsible for any defect in the product covered by this safety information sheet, if the existence of such a defect is not detectable considering the current scientific and technical knowledge.

The person in possession of this safety information sheet is responsible for ensuring that the information contained is read and thoroughly understood by all persons using this product, dealing with, disposing or in any other manner beeing in contact with the material.

Recipients of our product must take responsibility for complying with existing laws and regulations.

Source of information: Internal data and publically available information.