

SAFETY DATA SHEET IN ACCORDANCE WITH REGULATION (EU) NR. 07/2006/EU

Company:	Senosan GmbH Wilhelm-Klepsch-Str.1, 5721 Piesendorf, Austria	Issued by / Edition:	OM/01
		Issue date:	10/2012
Product:	SENOSAN® VP AM1800TopX-11-01 SENOSAN® VP AM1800TopX-MET-12-01	Side:	1/7
		Print date:	12.12.2012

Senosan GmbH points out that the whole safety data sheet should be read since it contains important information. It is expected that the precautionary measures laid down in this document will be heeded in so far as no other corresponding precautionary measures for applications of the product are demanded.

1. Material/Preparation and company name

- 1.1 Description of the material or preparation:
Co-extruded ABS/PMMA sheets with polymercoating based on polyacrylates
- 1.2 Company:
Senosan GmbH
Wilhelm-Klepsch-Str. 1, 5721 Piesendorf
Austria
- 1.3 Information origin department:
TS&D
Tel.: 06549-7444-60607 or 60612
Fax: 06549-7444-91632
e-mail: office@senco-rd.com
- 1.4 Emergency information: 0043 6549 7444-10381

2. Composition/component details:

<u>Chemical characteristics:</u>	Preparation of acrylnitrile-butadien-styrene co-polymer and polymethyl methacrylate, polyacrylate, lubrication medium, colourants
<u>Composition:</u>	ABS: Acrylnitrile-butadien-styrene-co-polymer, CAS Nr. 26657-42-1, CAS Nr. 9003-56-9 PMMA: Methyl methacrylate and ethyl acrylate co-polymer and acrylic-styrene-rubber, CAS Nr. 9010-88-2
<u>Form:</u>	Polymercoating: high cross-linked polyacrylate, solid; films or sheets as semi-finished product (possibly granulate/re-grind)
<u>Colour:</u>	Various, dependent on colouration
<u>Odour:</u>	odourless
<u>Dangerous content:</u>	to current knowledge, none

3. Possible dangers:

Not a dangerous product in the sense of EU criteria.

- 3.1 Dangerous decomposition: With thermal decomposition, traces of hydrocarbon materials (ethyl benzol, styrene, acrylnitrile) arise. Combustion products alongside smoke are carbon di- and monoxide. Irritation of air ways, coughing or breathlessness possible

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- 3.2 Dangerous reactions: With oxidising material
- 3.3 Further details: Avoid overheating. At temperatures over 250°C, the plastic is broken down by the release of degradation products

4. First Aid measures:

- 4.1 After spillage, run-offs, gas emission: Not relevant for sheet semi-finished products.
Mechanically remove re-grind, granulate and dispose of correctly
- First Aid: No special measures necessary.
- 4.2 Further details:
- Inhalation: In a solid condition, no health-damaging effects are to be expected with correct handling. After breathing-in of decomposition products: rest, fresh air, medical help.
- Skin contact: Should melted material come into contact with the skin, cool under running water. Under no circumstances remove the material from the skin. Seek medical attention. Otherwise wash off under shower or running water. With this kind of exposure, no detrimental effect is to be expected.
- Eye contact: After contact with melted product, immediately cool eyes with cold water and take patient to hospital. In the case of a mechanical effect (plastic particle) and the onset of pain, contact doctor (eye specialist).
- Swallowing: Health-damaging effects are not expected in this respect when correct usage of material takes place.

5. Fire fighting measures

- Suitable extinguishing means: Water, (mist or spray), foam, dry extinguishing means, synthetic foam carbon dioxide (CO₂)
- Non-suitable extinguishing means for safety reasons: None

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<u>In the event of possible release of:</u>	Nitrogen oxide, carbon monoxide, methacrylate, acrylate, carbon dioxide (CO ₂) and steam.
<u>Additionally, small quantity of other products can arise:</u>	Traces of styrene and prussic acid. Monomers and other breakdown products.
<u>First Aid:</u>	With appearance of irritation by vapours in the case of fire : calm, fresh air and symptomatic treatment
<u>Special protection equipment:</u>	In event of fire, wear independent breathing protection equipment and fire protection clothing. If no protective clothing is available, fight fire from a safe distance or from a protected place.
<u>Further details:</u>	Burning class A (solid materials) cool with water and thoroughly saturate to prevent re-occurrence of fire. Remains of fire site and contaminated extinguishing water should be correctly disposed of to local authority guidelines.

6. Measures in event of unintentional release:

<u>After spillage/leakage (granulate/regrind):</u>	Mechanically pick up sheet parts or granulate/regrind, due to danger of slipping, leaking or spilled granules/regrind must be picked up mechanically, especially from a hard floor – or the area must be sealed-off by a cordon.
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7. Storage and handling

7.1	<u>Storage:</u>	Store in a cool and dry place, avoid effects of heat or wetness, and also avoid extreme cold/warm temperature changes due to condensation build-up. Do not expose to direct sunlight. With regrind/granulate avoid build-up of dust by using suitable ventilation or suction methods. Official regulations regarding dust explosion dangers must be adhered to.
7.2	<u>Handling:</u>	Ensure good suction removal/ventilation on processing machinery. In the event of strong material overheating, gas forming decomposition products can be released.
	<u>Ventilation:</u>	General or localised room ventilation in accordance with industrial work practices should be sufficient for normal processing.
	<u>Breathing protection</u>	In event of dust build-up, use permitted particle filter (Type P2). Necessary for large quantities of free running regrind/granulate.
	<u>Eye protection:</u>	Wear safety glasses

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<u>Skin protection:</u>	Wear long-sleeved clothing covering the whole body
<u>Hand protection:</u>	Wear work gloves to prevent physical injury
<u>Work hygiene:</u>	Wash hands before breaks and at end of work

8. Exposure limitation and personal protection equipment

8.1 Further observations for the design of technical equipment::
Good, general ventilation should suffice. With processing at high temperatures, localised ventilation should be installed for the removal of arising fumes.

8.2 Components with work-place related threshold values to be observed::

During processing the following can be released:

MAK- / TRK-value:

Methyl methacrylate: CAS8062-6
Peak limited exceeding factor 1

MAK Value 1994: 210 mg/m³ = 85 mg/m³ (A)
S – the working material brings about allergic over-sensitive reactions which are much over average.

Styrene: CAS100-42-5 EG-Nr. 601-026-00-0

MAK: 20ml/m³ = 85 mg/m³ (A)

1,3 Butadien: CAS106-99-05 as section III A2 of MAK List (A)

TRK: 5ml/m³ = 11 mg/m³ (A)

Acrylnitrile: CAS107-13-1 as section III A2 of MAK List (A)

TRK: 2ml/m³ = 4,5 mg/m³ (A) EU-Category C2

Personal protection equipment

Ventilation : Ensure good suction removal/ventilation on the processing machine. If suitable ventilation measures are taken, one can assume safely staying within the MAK limit values.

Breathing protection: In event of dust build-up, use permitted particle filter (Type P2)

Eye protection: Wear safety glasses

Skin protection: Wear clean, long-sleeved clothing covering the whole body

Hand protection: Wear work gloves to prevent physical injury

Other: -

9. Physical and safety details

Form: Sheets as semi-finished product (possibly regrind/granulate)

Colour: Various, dependent on pigmentation

Odour: odourless

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Condition change/Softening temperature:	> 70°C
Melt temperature:	> 80°C
Boiling temperature:	n. a.
Density:	ca. 1,05 (at 25°C) g/cm ³ DIN53479
Bulk density (regrind/granulate):	n. a.
Solubility in water:	insoluble
Flashpoint:	n. a.
Ignition temperature:	> 300°C
Explosion limit:	n. a.
Thermal decomposition:	> 250°C

10. Stability and reactivity

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|------|---|--|
| 10.1 | <u>Chemical stability:</u> | Stable under normal handling and storage conditions |
| 10.2 | <u>Conditions to be avoided:</u> | To avoid thermal decomposition, do not overheat. Decomposition from 250°C, beyond this temperature the polymer begins to break down into monomers and oligomers and into various oxidation products. |
| 10.3 | <u>Materials to be avoided:</u> | Strong oxidising agents |
| 10.4 | <u>Possible thermal Decomposition products:</u> | Monomers, other degradation products, fumes released can contain traces of hydrocarbons. |

11. Toxicology details

<u>Swallowing:</u>	Is regarded as physiologically inactive. Oral toxicity/single intake of regrind or granulate is presumably very low. Swallowing of regrind/granulate can cause constipation.
<u>Eye contact:</u>	Solid material or dust can lead to irritation or injury to of the cornea due mechanical effects.
<u>Skin contact:</u>	Injury only due to mechanical effects, skin absorption is improbable due to physical properties.
<u>Breathing in:</u>	Dust can cause irritation of the upper air ways. Due to the physical properties, at room temperature, exposure to vapours is improbable; at higher temperatures, vapour concentrations can occur which can cause irritation and other effects. When handling under the influence of higher temperatures the relevant MAK value for styrene and methyl methacrylate is to be observed.

12. Details regarding ecology

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The sheet product consists of a water insoluble solid polymer which under normal environmental conditions has no disadvantageous effects on plants, animals and micro-organisms.

Details regarding elimination: No data available, insoluble in water

Behaviour in environment Due to the consistency and the water insolubility of the product, a bio-availability is not probable.

Mobility: Due to the consistency of the product, no dispersed distribution into the environment is possible

Degradation: In the ground the product/polymer is potentially very difficult to degrade.

13. Details regarding disposal:

Waste: All efforts should be made to re-cycle the product (plastic waste) and to re-process it into films or sheets. When doing this, the guidelines contained in this data sheet should be observed. Clean, untreated material can be stored or passed on to re-cyclers. By-products and intermediate products and processing waste can be re-cycled. Contaminated or mixed product waste should be disposed of in accordance with regulations i.e. at suitable waste disposal sites or for incineration in an approved plant having regard to local authority regulations. Description and encoding in accordance with European Waste Catalogue (EAK) by the waste originator.

14. Transport details:

Not dangerous goods in the sense of transport regulations.

15. Regulations:

- 15.1 Marking in accordance with EU guidelines: The sheet products and regrind/granulate are not subject to marking according to Dangerous Materials Regulations and Guideline 67/548/EWG and 88/379/EWG in their current form at the time of Safety Data Sheet issue.
- 15.2 National Regulations - Germany Storage Class VCI: 11 = combustible solid materials
- Water Endangering Class: WGK 0: generally not water endangering (self rating)
WGK-Catalogue Number 766

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To be observed are the regulations of the Employee Protection Law (Austria) and the accompanying regulations in their relevant valid edition.

16. Other details:

Senosan GmbH requires every customer or consignee of the above product to read this Safety Data Sheet carefully and if necessary make the relevant specialist content available in order to recognise and understand the data contained in this Safety Data Sheet and the dangers associated with the product. The information contained in it is to our

best knowledge correct at the time of issue. However, no guarantee is given, either expressly or non-expressly. The regulations to be followed are subject to changes and can vary from one another. It lies therefore in the responsibility of the purchaser/user in his functions to observe the laws on federal, regional and local levels. The details contained here concern only the product as it is despatched or granulate or regrind which is produced from it. Since the use of the product is not within the control of the manufacturer, it is the duty of the purchaser/user to lay down the necessary conditions for safe contact with the product. Due to the increase in sources of information for manufacturer specific safety data sheets we do not see ourselves as responsible for safety data sheets which you have not received from us. If you have received safety data sheets from another source or if there is uncertainty regarding the relevance to the present of the safety data sheets, please make contact with us to receive the most up to date safety data sheets.

Our general Sale and Delivery Conditions apply for guarantees and liabilities

Source of the most important data contained here:

Product information sheets and safety data sheets of raw material manufacturers and suppliers.