MATERIAL SAFETY DATA SHEET

Flexible 98A

Revision date: 25.06.2015

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Trade name : **Flexible 98A**

Relevant identified uses of the substance or mixture and uses advised against
End Use - Thermoplastic polyurethane resin. For industrial conversion as a raw material for manufacture of articles or goods.

Details of the supplier of the safety data sheet:
AzureFilm d.o.o.
Orleška cesta 16
Telephone: +386 (0)31 718 800
Email: info@azurefilm.com

Emergency telephone number:
Centro Antiveleni Riguarda: +386 (0)31 718 800

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
This product is not classified as dangerous according to EC norm 1272/2008/CE (CLP) .

Label elements:
This product does't need dangerous label according to EC norm 1272/2008/CE (CPL)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Type of product:
Polymer. Thermoplastic polyurethane. Polyurethane polymer from methylenediphenyl diisocyanate, glycols, polyether polyol and additives.

4. FIRST AID MEASURES

Description of first aid measures.
In case of skin contact: CONTACT WITH THE HOT MELT: Cool immediately with plenty of water. Do not remove product crusts which may have formed neither forcibly nor by applying any solvents to the skin involved. To obtain treatment for possible burns, and appropriate skin care, seek medical advice immediately.
Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Most important symptoms and effects, both acute and delayed.
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed.
Notes to Physician: If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:
Water, Foam, Dry chemical

Special hazards arising from the substance or mixture:
Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen, isocyanate vapors and traces of hydrogen cyanide. In the event of fire and/or explosion do not breathe fumes.

Advice for fire-fighters:
During fire-fighting respirator with independent air-supply and airtight garment is required. Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Put on protective equipment (see section 8).
Granules - slip hazard. The pellets can give a fall risk. Hold down the pellets and remove.
Ensure adequate ventilation/exhaust extraction. Keep unauthorized persons away.

Environmental precautions:
Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up:
Use mechanical handling equipment. Avoid dust formation. Sweep up and shovel into suitable containers for disposal.

Reference to other sections:
For further disposal measures see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling:
Advice on safe handling. No smoking, open flames or sources of ignition in handling and storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. Use with adequate ventilation. When appropriate, unique handling information for containers can be found on the product label. Workers should be protected from the possibility of contact with molten resin. Do not get molten material in eyes, on skin or clothing. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate.

Conditions for safe storage, including any incompatibilities:
Keep container tightly closed and dry. Storage temperature: < 40 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

When processing this product, particularly if processing takes place at elevated temperatures, a good generale ventilation equipment can be sufficen. For some operations a local ventilation can be necessary.

Control parameters :
A control for “general dust ” OEL-IT, TWA 10 mg/mc as inhalable fraction, oe 3 mg/mc as alveolar fraction), can be sufficent as control parameter.

Exposure controls: **Personal Protection**
Eye/Face Protection: Use safety glasses. Safety glasses should be consistent with Directive 89/686/EEC Category 2. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent. If exposure causes eye discomfort, use a full-face respirator.
Skin Protection: No precautions other than clean body-covering clothing should be needed.
Hand protection: Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized. Use gloves with insulation for thermal protection, when needed.
Respiratory Protection: For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator. In dusty or misty atmospheres, use an approved particulate respirator. Use a CE approved air-purifying respirator with cartridge/filter. When dust/mist are present use a/an particulate filter, type P2. When combinations of vapors, acids, or dusts/mists are present use a/an organic vapor cartridge with a particulate pre-filter, type AP2.
Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
a) Appearance: solid granular. Color: uncolored, slightly yellow
b) Odour: almost odourless
c) Odour threshold: non estabilished
d) pH: not applicable
e) Melting point: > 100°C
f)) Boiling point/boiling range: not applicable

g) Flash point: not applicable
h) Evaporation rate: not established
i) Flammability (solid, gas): not applicable
j) Upper/lower flammability or explosive limits: not applicable
k) Vapour pressure: not applicable
l) Vapour density: not applicable
m) Density: ca. 1,2 g/cm³. Apparent density: 500 - 700 kg/m3
n) Solubility: practically insoluble in water and in many organic solvents.
o) Partition coefficient (n−octanol/water): not applicable
p) Autoignition temperature: not applicable
q) Decomposition temperature: depolymerization > 230 °C
r) Viscosity: solid
s) Explosive properties: not established: non estabilished
t) Oxidising properties: non estabilished

Other informations

10. STABILITY AND REACTIVITY

Reactivity.
Not reactivity observed in normal conditions

Chemical stability.
Thermal decomposition begins at 230 °C.

Possibility of hazardous reactions.
No hazardous reactions observed in normal conditions.

Conditions to Avoid:
Avoid temperatures above 230°C. Exposure to elevated temperatures can cause product to decompose.

Incompatible Materials:
None known.

Hazardous decomposition products.
Decomposition products depend upon temperature, air supply and the presence of other materials. Processing may release fumes and other decomposition products. At temperatures exceeding melt temperatures, polymer fragments can be released. Fumes can be irritating.
Smouldering or incomplete combustion leads to the formation of toxic gas mixtures consisting mainly of CO, CO2 and nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
a) Acute Toxycity
Ingestion. Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.
Very low acute toxicity for inhalation, skin and eye contact.
Acute toxicity LD50 oral, rat: > 5000mg/Kg

Acute toxicity LD50 subcutaneous, rat: > 5000mg/Kg

b) Skin corrosion/irritation
Not corrosive. Essentially nonirritating to skin. The dust can be irritant for the skin, the eye and respiratory. During thermal operation (melt): skin irritation, eye and respiratory irritation.

c) Eye contact
Solid or dust may cause irritation or corneal injury due to mechanical action. Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.

d)Sensitization, respiratory and skin.
No sensitisation observed.

No further data available. According to our experience and information the product has no harmful effects on health if properly handled.

12. ECOLOGICAL INFORMATION

Do not allow to escape into waterways, wastewater or soil.

Toxicity
Toxicity not expected for this material. Material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

Persistence and Degradability
This water-insoluble polymeric solid is expected to be inert in the environment. Photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

Bioaccumulative potential
No bioconcentration of the polymeric component is expected because of its high molecular weight. In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment.

Mobility in soil
Water-insoluble. Low mobility.

Results of PBT and vPvB assessment
Non available

Other adverse effects
None

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with applicable international, national and local laws, ordinances and statutes. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Waste treatment methods

After containers have been emptied as thoroughly as possible (e.g. by pouring, scraping or draining until "drip-dry"), they can be sent to an appropriate collection point set up within the framework of the existing take-back scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.
The product is suitable for mechanical recycling. After appropriate treatment it can be remelted and reprocessed into new moulded articles. Mechanical recycling is only possible if the material has been selectively retrieved and carefully segregated according to type.

14. TRANSPORT INFORMATION

Classified not dangerous for the transport.
ADR/RID Not dangerous goods
ADN Not dangerous goods
IATA Not dangerous goods
IMDG Not dangerous goods

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Autorization and limitation not known

Chemical Safety Assessment

Not available

16. OTHER INFORMATION

Disclaimer urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Disclaimer Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product.