acc. to 2001/58/EC



Rigid PVC-films: K, L, M, N or R, types 201 to 298 or 403 to 480

(except K203, M204, K205, M222, M223)

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made / revised: 11 / 21.11.2006

## 1. Substance / Preparation and Company Identification

*Trade mark*: Rigid PVC-films

K, L, M, N or R, types 201 to 298 or 403 to 480

(except K203, M204, K205, M222, M223)

Company: KLÖCKNER PENTAPLAST GmbH & Co. KG

Industriepark Werk Gendorf D – 84504 Burgkirchen

**GERMANY** 

<u>information about material/preparation:</u> Tel.: +49 / (0)8679 7 2222 (for emergency use also)

# 2. Composition / Information on Ingredients

Chemical Description

Composition of Polyvinylchloride acc. to DIN ISO 7728: PVC-U

Dangerous components

none

#### 3. Hazard Identification

not applicable

#### 4. Emergency and First Aid Procedures

(only necessary when handled without care)

Inhalation: If PVC decomposes due to overheating or in contact with fire:

Remove affected persons to fresh air. In case of irritation of respiratory system or if feeling unwell after prolonged exposure,

get medical attention.

Skin contact: If contact with hot (melt) product occur: Wash with plenty of water,

treat as for thermal burn.

Eye contact: After contact with hot (melt) product: Immediately flush eyes with

water for several minutes at least, get medical attention.

Ingestion: To avoid mechanical irritation, get medical advice.

Advices for the doctor: After inhalation of decomposed products: Symptomatic

treatment (decontamination, vital functions), if necessary action against irritations of the mucous membranes by HCl.

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## 5. Fire-Fighting Procedures

Suitable extinguishing media: Water spray, Powder, Carbon dioxide

PVC-U does not burn without a slave flame (self-extinguishing).

Unsuitable extinguishing media: none

Burning may release: Carbon dioxide (CO<sub>2</sub>)

Water vapour (H<sub>2</sub>O) Hydrochloric gas (HCI)

If the burning material cannot get enough air, release of carbon monoxide, soot and other

gases and vapours is possible.

Special protective equipment: If necessary, use air-botteled or air-circulating apparatus

for fire-fighters.

Further information: Observe local regulations when contamined water and

burning waste are removed.

6. Spill or Leak Procedures

Personal Precautions: not applicable Environmental Precautions: not applicable

Methods of Cleaning: Pick up by mechanical means for disposal or

reuse.

## 7. Handling and Storage Precautions

#### **Handling**

Avoid overheating the material, it decomposes to gaseous components (see also 5.). Thermal degradation does not occur at low temperatures, but becomes faster at higher temperatures.

Decomposition: > 150 °C at long term contact

> 250 °C at short term contact (e.g. warm

forming)

It is advisable to install local exhaust ventilation in the vicinity of processing machines in all areas where melt or high temperature processing is carried out (Germany: observe TRGS 402)

#### Fire and explosion protection

Take precautionary measures against static discharge, e.g. by using proper grounding techniques, when handling rolls or sheets in dry rooms (esp. to avoid damage to personnel!). Acc. to VDI 2263, page 1, par. 2.1.2.3 (dd. May 1990) PVC is not dust explosive as delivered by KLÖCKNER PENTAPLAST GmbH.

# Storage:

Take precautionary measures to avoid fire hazard. Store in normal room conditions, without direct exposure to sunlight.

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#### 8. Exposure Control / Personal Protection

Additional advices tips for design of machines: see item 7

Components with limits to be observed (depending on work station)

PVC is recognized as safe. However, it may contain trace amounts of Vinyl chloride monomer VCM CAS-Nr. 75-01-4 EINECS-Nr. 2008310

2 ppm ( 5 mg/m<sup>3</sup> ) MAK-Value: (Germany, as TRK-Value acc. to TRGS 102):

## For PENTA-films a VCM value lower than 0,5 ppm is guaranteed

Given the special precautions mentioned under 7. HANDLING, these traces present no toxic risk to the processing personnel.

#### Protection

Gloves should be worn when handling hot material. Safety lasses are normally recommended for all industrial workplaces, e.g. when handling melts material.

#### 9. Physical and Chemical Properties

Form: mono films

Colour: from clear to black, as required

Smell: odourless under normal conditions, melt material has a

specific odour known as "plastic".

Change of state: Softening temperature 60 ... 90°C

(DIN EN ISO 306):

Glass transition temperature: approx. 80 °C Ignition temperature: see point 7

Density (DIN 53479): 1,25...1,45 g/cm<sup>3</sup>

Solubility PVC: soluble in: e.g. tetrahydrofurane and

cyclohexanone

partly soluble in: different aromatic

hydrocarbons

not soluble in: water, diluted acids and

bases

Fire supporting properties: none

PVC products are also not easily combustible without fire

protecting equipment.

#### 10. Stability and Reactivity

Conditions to avoid

Thermal degradation by overheating (see point 7.).

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## 11. Information about Toxicity

acute toxicity

PVC is recognised as safe and biologically inert.

The films do not contain the following heavy metals: cadmium (Cd), lead (Pb), mercury (Hg), nickel (Ni), cobalt (Co) or chromium-VI (Cr<sup>VI</sup>).

## 12. Ecological Information

PVC is not soluble in water (WGK 0, by supplier self declaration); PVC is harmless in contact with fishes and bacteria.

In water treatment plant PVC can be separated mechanically

## 13. Disposal considerations

KLÖCKNER PENTAPLAST GMBH & CO. KG guarantees the recycling of customer's clean and pure PVC (= 100% KP-material). Recycling of printed or other used material is also possible, but it depends on the degree of impurities.

European Waste catalogue 75/442/EEC: 200103 (for small pieces of plastic)

200106 (for other pieces of plastic)

Regarding the heavy metal limits the film meet the requirements of the EC directive 94/62/EC and their supplements 99/42/EC, 99/177/EC, 2004/12/EC and 2005/20/EC.

#### 14. Transport

PVC is not considered as a hazardous material: German regulations (GefStoffV) No hazardous material acc. to transport regulations (ADR; RID; ADNR; IMDG; IATA).

# 15. Regulations

EEC labelling: No declaration required acc. to 67/548/EEC and its

updated versions.

National legislation acc. to § 4 a GefStoffV: not applicable

NB: This means PVC-film are not considered as hazardous materials.

#### 16. Other Declaration

PENTA-films acc. to 1 bear the "RAL Quality Sign" and they are produced and controlled under regulations of "Gütegemeinschaft Kalandrierte PVC-Hart-Folien für Verpackungs-zwecke e.V., Wiesbaden".

All PENTA-films are produced under the regulations of Quality Management System DIN EN ISO 9001:2000. Further more our Environmental Management System is certified according to the EN ISO 14001:2004.

The information and recommendations contained herein are based upon present data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein