Material Safety Data Sheet

klöckner pentaplast

Polymer name: Rigid PVC Films

1.	**Substance/Preparation and Company Identification**	
	Polymer:	Rigid PVC (Vinyl) films
	Company name:	Klöckner Pentaplast of America, Inc. 3585 Klöckner Road, P.O. Box 500 Gordonsville, VA 22942 USA
	Information about material/preparation:	Phone: +1.540.832.3600 (identical with emergency information)
2.	**Composition/Information on Ingredients**	
	Chemical description:	Polyvinyl Chloride
	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 effected persons to fresh air. In case of irritation of respiratory system or if feeling unwell after prolonged exposure, seek medical attention.
	Skin contact:	If contact with hot (melt) product occurs, wash with plenty of water. Treat as for a thermal burn.
	Eye contact:	After contact with hot (melt) product, immediately flush eyes with water for at least several minutes. Seek medical attention.
	Ingestion:	To avoid irritation, seek medical advice.
	Advice for the doctor:	After inhalation of decomposed products, treat symptoms (decontamination, vital functions). If necessary, take action against irritation of the mucous membranes with HCl.

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Revision: 7/2013

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5. Fire Fighting Procedures

Suitable extinguishing media:	Water spray, powder, carbon dioxide
Unsuitable extinguishing media:	None
Burning may release:	Carbon Dioxide (CO_2) Water vapour (H_2O) Hydrochloric gas (HCl) If the burning material cannot get enough air, release of carbon monoxide, soot, and other gases and vapors is possible.
Special protective equipment:	If necessary, use air-bottled or air circulating apparatus for fire fighters.
Further information:	PVC-U does not burn without a slave flame (self extinguishing). Observe local regulations when contaminated 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 (long-term contact) >200°C (short-term contact/i.e., warm forming) It is advisable to install low exhaust ventilation in the vicinity of processing machines in all areas where melt or high-temperature processing is carried out. (Germany should observe TRGS 402)
Fire and Explosion Protection:	Take precautionary measures against static discharge (i.e., using proper grounding techniques) when handling rolls or sheets in dry rooms (especially to avoid harm to people). According to VDI 2263, page 1, paragraph 2.1.2.3 (dd May 1990), PVC is not dust explosive as delivered by Klöckner Pentaplast.
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 advice for design of machines:	See item 7
Components with limits to be observed (depending upon work station):	PVC is recognized as safe. However, it may contain trace amounts of: Vinylchloride monomer VCM, CAS-No. 75-01-4, EINECS-No. 2008310 MAK-Value: 2ppm (5 mg/m^3) (Germany as TRK-value acc. to TRGS 102) **For Penta brand films, a VCM value of ≤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 glasses are normally recommended for all industrial workplaces when handling hot material.

9. Physical and Chemical Properties

Form:	Mono films
Color:	From clear to black as required
Smell:	Odorless under normal conditions, melt material has a specific odor know as "plastic."
Change of state:	Softening temperature (DIN EN ISO 306): 60-90°C Glass transition temperature: approx 80°C Ignition temperature: see point 7 Density (DIN EN ISO 1183-2): 1,25-1,45 g/cm^3
Solubility of PVC:	Soluble in: tetrahydrofurance and cyclohexanone Partly soluble in: different aromatic hydrocarbons Not soluble in: water, diluted acids and bases
Fire supporting properties:	PVC products are not easily combustible without a slave flame source

10. Stability and Reactivity

Conditions to avoid:	Thermal degradation by overheating (see 7.)

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11. Information about Toxicity

PVC is recognized as safe and biologically inert.	Klöckner Pentaplast certifies that its rigid film and sheet product complies with the most recent package requirements for heavy metals of the Toxic Packaging Clearing House (TPCH, formerly CONEG) legislation and the latest March 9, 2005, requirements of the Directive 2013/2/EU, as well as the Commission Decision of 2011/534/EU amending the Directive 2002/95/EC [RoHS-Reduction of Hazardous Substances] in their actual valid version.

12. Ecological Information

PVC is not soluble in water (WKG 0, by supplier self declaration); PVC is harmless in contacts with fish and bacteria. In a water treatement plant, PVC can be separated mechanically.

13. Disposal Considerations

Klöckner Pentaplast guarantees the recycling of customers' material (=100% kp material). Recycling of printed or other used material is also possible, but this depends on the degree of impurities.

Uncontaminated material is normally used as material for recycling, but can also be treated as household or incineration waste in accordance with local regulations.

European Waste-Catalogue: code 200139 for plastics.

Klöckner Pentaplast certifies that its rigid film and sheet product complies to the European Packaging Directive EU 94/62, as well as its amendments.

14. Transport

No hazardous material according to transport regulations (ADR, RID, ADNR, IMDG, IATA).

15. Regulatory Information

EEC labelling acc. Regulation (EC) 1272/2008 (Directive 67/548/EEC) as well as its actual valid amendments:	Not applicable
National legislation acc. to § 4a GefStoffV:	Not applicable NB: This means PVC films are not considered hazardous materials.

16. Further Information

Klöckner Pentaplast rigid films and sheet products do not contain any Ozone depleting substances, including those listed in the 1990 Clean Air Act Amendments.

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.

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