

# Safety information for articles

acc. to the regulation REACH 1907/2006/EC



**Polymer name: Rigid PVC films**  
**L, M, N or R types 201 to 298 or 403 to 480**  
**(except M222, M223)**

<b>1.</b>	<b>Substance/Preparation and Company Identification</b> Polymer: <p style="text-align: right;">Rigid PVC films <b>L, M, N or R types 201 to 298 or 403 to 480</b> (except M222, M223)</p> Company name: <p style="text-align: right;">Klöckner Pentaplast GmbH P.O. Box 11 65 56401 Montabaur Germany</p> Information about material/preparation: <p style="text-align: right;">Phone: +49 2602 915 0 (identical with emergency information)</p>
<b>2.</b>	<b>Composition/Information on Ingredients</b> Chemical description: Polyvinyl Chloride Dangerous components: None
<b>3.</b>	<b>Hazard Identification</b>  Not applicable
<b>4.</b>	<b>Emergency and First Aid Procedures (only necessary when handled without care)</b>  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 occurs: 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.  Advises 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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made / revised: 23 / 06.03.2015

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<b>5.</b>	<b>Fire Fighting Procedures</b>  Suitable extinguishing media: Water spray, powder, carbon dioxide  Unsuitable extinguishing media: None  Burning may release: Carbon Dioxide (CO <sub>2</sub> ) Water vapour (H <sub>2</sub> O) 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.
<b>6.</b>	<b>Spill or Leak Procedures</b>  Personal precautions: Not applicable Environmental precautions: Not applicable  Methods of cleaning: Pick up by mechanical means for disposal or reuse
<b>7.</b>	<b>Handling and Storage Precautions</b>  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 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 (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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<b>8.</b>	<b>Exposure Control/Personal Protection</b>  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 <sup>3</sup> ) (Germany as TRK-value acc. to TRGS 102) <b>For Penta brand films, a VCM value of ≤ 0,5 ppm is guaranteed.</b>  Protection: Given the special precautions mentioned under "7. Handling," these traces present no toxic risk to the processing personnel. Gloves should be worn when handling hot material. Safety glasses are normally recommended for all industrial workplaces when handling hot material.
<b>9.</b>	<b>Physical and Chemical Properties</b>  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 - 1,60 g/cm <sup>3</sup> Solubility of PVC: Soluble in: tetrahydrofuran 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
<b>10.</b>	<b>Stability and Reactivity</b> Conditions to avoid:  Thermal degradation by overheating (see 7.)

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<b>11.</b>	<b>Information about Toxicity</b>  PVC is recognized as safe and biologically inert. Klöckner Pentaplast certifies that its rigid films comply 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 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.
<b>12.</b>	<b>Ecological Information</b>  PVC is not soluble in water (WKG 0, by supplier self declaration); PVC is harmless in contacts with fish and bacteria. In a water treatment plant, PVC can be separated mechanically.
<b>13.</b>	<b>Disposal Considerations</b>  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 rigids comply to the European Packaging Directive EU 94/62, as well as its actual valid amendments.
<b>14.</b>	<b>Transport</b>  No hazardous material according to transport regulations (ADR, RID, ADNR, IMDG, IATA).
<b>15.</b>	<b>Regulatory Information</b>  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
<b>16.</b>	<b>Further Information</b>  Klöckner Pentaplast rigid films 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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