

*SUPPORT DOCUMENT FOR THE
PCB DISPOSAL AMENDMENTS, FINAL RULE*

*REQUEST FOR DATA IN SUPPORT OF A
TSCA USE AUTHORIZATION FOR NON-LIQUID PCB APPLICATIONS*

April 16, 1998

*U.S. Environmental Protection Agency
Office of Pollution Prevention & Toxics
National Program Chemicals Division*

Use Authorization for Non-Liquid PCB Uses

EPA has deferred final regulatory action on proposed §761.30(q), a provision which would authorize the continued use of certain non-liquid PCB uses, for future rulemaking. In the Notice of Proposed Rulemaking (59 FR 62809, 12/6/94), EPA solicited comments on authorizing the use of PCBs in existing applications that had not been authorized by previous PCB rulemakings. Items not authorized, but currently in use and identified as containing PCBs include some wool felt insulating materials, plastics, paint formulations, small rubber parts, adhesive tape, insulating materials used in electrical cabling, fluorescent light ballast potting materials, gaskets in heating, ventilation and air conditioning and other duct systems, natural gas pipeline, coatings for ceiling tiles, flooring and floor wax/sealants, roofing and siding materials, adhesives, waterproofing compounds, anti-fouling compounds, fire retardant coatings, coal-tar enamel coatings for steel water pipe and underground storage tanks, and any number of other chemical uses such as additives and plasticizers. Although EPA received many comments supporting the proposed authorization, many commenters wanted EPA to drop many, if not all, of the proposed conditions associated with the authorization. However, insufficient data were submitted to EPA which would allow the Agency to make the requested changes based on the statutory finding of no unreasonable risk.

EPA intends to publish a Supplemental Notice to solicit data on the items identified above that could be used by the Agency in its review of the risks of exposure from PCBs that might be associated with these applications. EPA is particularly interested in data relating to paints, caulking and coal-tar enamel coatings used on steel water pipe and underground tanks. Due to the potential lag time that may be necessary to either develop or assemble these data, the following listing identifies the types of data that would be required to adequately assess the risks associated with specific authorized uses.

- (1) Wipe sample data for each of the products (or classes of products, i.e., paint) for which uses would be authorized. These data should be collected from products that are known to contain PCBs (i.e., based on bulk sample results or from historic knowledge). Also, the detection limits for these materials should be sufficiently low to ensure that risks can be calculated down to the 10^{-6} range. Table 1 provides an estimate of the detection limits that would be required to estimate a 10^{-6} risk level for the products for which exposure scenarios have been developed by EPA.

- (2) Transfer data. Information on the transfer of PCBs to human skin from the non-liquid PCBs listed in Table 1.
- (3) Air monitoring data for each of the products (or classes of products, i.e., paint) for which uses would be authorized. These data should be collected from products that are known to contain PCBs (i.e., based on bulk sample results or from historic knowledge). Also, the detection limits for these materials should be sufficiently low to ensure that risks can be calculated down to the 10^{-6} range. Table 1 provides an estimate of the detection limits that would be required to estimate a 10^{-6} risk level for the products for which exposure scenarios have been developed by EPA.

Each product (or class of products, i.e., paint) sampled must contain high enough concentrations of PCBs in their bulk sample to be representative of the highest concentrations of PCBs in the product (or class of products, i.e., paint). For example, commenters provided information that paint formulations with 10-12% PCBs were recommended in the commercial formulation manuals. Therefore, wipe sample and air monitoring data for products such as paints should come from those coatings with bulk sample levels of 10-12% PCBs. In addition to the collected data, EPA would like a copy of the sampling plan that was used in collecting the data and a description of the quality assurance/quality control procedures that were applied to the data set. Quality assurance measures should be capable of distinguishing between PCBs that have leached out from the surfaces of the non-liquid matrix versus those surface PCBs that are the result of a spill or other release. The attached table summarizes the current status of the materials that would be the subject of an authorization with regard to the available data for assessing risk, and the detection limits that would need to be met in order to calculate risks in the 10^{-6} range.

The Supplemental Notice which EPA plans to publish later this year, will provide specific information regarding the date and location for these data submissions.

Table 1. Non-liquid PCB Uses ^a

Non-liquid PCB Use	Current Status of Data Available for Dermal Risk Assessment	Current Status of Data Available for Inhalation Risk Assessment	Required Detection Limits for Calculating a 10 ⁻⁶ Dermal Risk Level ^b (basis)	Required Detection Limits for Calculating a 10 ⁻⁶ Inhalation Risk Level ^c (basis)
gaskets	bulk sample data only	no sampling data	9.9E2 ug/100 cm ² (SA=30 cm ² /d; FR=2 d/y)	0.02 ug/m ³
plastics	bulk sample data (cable) and wipe sample data	no sampling data	4.6E-1 ug/100 cm ² (SA=520 cm ² /d; FR=250 d/y)	0.02 ug/m ³
plasticizers	no sampling data	no sampling data	4.6E-1 ug/100 cm ² (SA=520 cm ² /d; FR=250 d/y)	0.02 ug/m ³
light ballasts	bulk sample data and wipe sample data	no sampling data	4.6E-1 ug/100 cm ² (SA=520 cm ² /d; FR=250 d/y)	0.02 ug/m ³
dried paints	bulk sample data and wipe sample data	no sampling data	9.2E-1 ug/100 cm ² (SA=260 cm ² /d; FR=250 d/y)	0.02 ug/m ³
rubber parts	bulk sample data and wipe sample data	no sampling data	7.9 ug/100 cm ² (SA=30 cm ² /d; FR=250 d/y)	0.02 ug/m ³
flooring	bulk sample data and wipe sample data	no sampling data	9.55 ug/100 cm ² (SA=520 cm ² /d; FR=12 d/y)	0.02 ug/m ³
roofing/siding	bulk sample data and wipe sample data	no sampling data	4.6E-1 ug/100 cm ² (SA=520 cm ² /d; FR=250 d/y)	0.02 ug/m ³
insulation	bulk sample data and wipe sample data	no sampling data	9.5 ug/100 cm ² (SA=520 cm ² /d; FR=12 d/y)	0.02 ug/m ³
caulk	bulk sample data and wipe sample data	no sampling data	7.9E+1 ug/100 cm ² (SA=3 cm ² /d; FR=250 d/y)	0.02 ug/m ³
floor wax	no sampling data	no sampling data	9.5 ug/100 cm ² (SA=520 cm ² /d; FR=12 d/y)	0.02 ug/m ³
sealants/coatings	no sampling data	no sampling data	4.6E-1 ug/100 cm ² (SA=520 cm ² /d; FR=250 d/y)	0.02 ug/m ³
waterproofing	no sampling data	no sampling data	4.6E-1 ug/100 cm ² (SA=520 cm ² /d; FR=250 d/y)	0.02 ug/m ³
antifouling compounds	no sampling data	no sampling data	4.6E-1 ug/100 cm ² (SA=520 cm ² /d; FR=250 d/y)	0.02 ug/m ³
fire retardant coatings	no sampling data	no sampling data	4.6E-1 ug/100 cm ² (SA=520 cm ² /d; FR=250 d/y)	0.02 ug/m ³

ceiling tile	bulk sample data and wipe sample data	no sampling data	4.6 ug/100 cm ² (SA=260 cm ² /d; FR=50 d/y)	0.02 ug/m ³
adhesive tape	bulk sample data and wipe sample data	no sampling data	9.9E3 ug/100 cm ² (SA=3 cm ² /d; FR=2 d/y)	0.02 ug/m ³

- ^a Some of the data submitted to EPA are somewhat limited in their application to the proposed authorization.
- ^b Assumes the following: BW (body weight) = 71.8 kg; LT (lifetime) = 75 years; TF (fraction of PCBs transferred to skin on contact) = 0.25; FA (fraction of transferred PCBs that is absorbed) = 0.33; ED (duration of exposure) = 10 years; SF (slope factor) = 4 mg/kg/day⁻¹; and SA (surface area of the body contacting the PCB surface per day; cm²) and FR (frequency of exposure; days/year) are scenario-specific.
- ^c Assumes the following: BW (body weight) = 71.8 kg; LT (lifetime) = 75 years; IR (inhalation rate) = 10 m³/day; FR (frequency of exposure) = 250 days/year; ED (duration of exposure) = 10 years; SF (slope factor) = 4 mg/kg/day⁻¹.