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VOC440507841

Category: 44 – Surface Coating of Vinyl-coated Fabric or Vinyl Sheets

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

May 7, 1984

MEMORANDUM

SUBJECT: Exclusion of Vinyl Plastisols From VOC Compliance Calculations

FROM: G. T. Helms, Chief
Control Programs Operations Branch (MD-15)

TO: William S. Baker, Chief
Air Programs Branch, Region II

The State of New Jersey Department of Environmental Protection has submitted information to the Volatile Organic Compound (VOC) Reasonably Available Control Technology (RACT) Clearinghouse indicating that, in some instances, vinyl plastisols are being included in VOC equivalency calculations. (See attached copy of State of New Jersey letter dated April 10, 1984, showing the State's response to a company's bubble application.

Plastisols are a composition of finely divided resin and a plasticizer (a substance added to a polymer composition to soften and add flexibility to the product). Plastisol is applied to the product as a thick gel which solidifies when heated. Plastisols may be applied to cloth, vinyl upholstery in automobiles, paper used to make products such as artificial leather goods, book covers, carbon paper, and components of automobile interiors, etc.

Since the vinyl coating control technique guideline (CTG) specifically excludes the application of vinyl plastisol to the fabric (see page vi of the CTG document entitled "Control of Volatile Organic Emissions From Existing Stationary Sources - Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles and Light-Duty Trucks, " EPA-450/2-77-008, dated May 1977), we agree with the State of New Jersey Department of Environmental Protection that vinyl plastisols should not be included in VOC equivalence calculations.

Should you have any questions, please contact John Calcagni (629-5665)
or Bill Polglase (629-5516)

Attachment

cc: Chief, Air Branch, Regions I, III-X
VOC Contact, Regions I, III-X
Gary Pierce, State of New Jersey
Paul Truchan, Region II

Attachment

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
JOHN FITCH PLAZA, CN027, TRENTON, N.J. 08625

April 10, 1984

Your application dated June 18 and June 24, 1982 for the mathematical combination of source emissions (bubble) is being returned for revision because it contains source gases for which volatile organic substance emission standards have not been set and, therefore, such source gases may not be included in the bubble.

The application of vinyl plastisol is not a surface coating application regulated by N.J.A.C. 7:27-16.5. The Department of Environmental Protection (NJDEP) specifically excludes the application of vinyl plastisol as a regulated surface coating operation within the definitions of vinyl coating and surface coating of fabric. Also, EPA Guidelines Series (EPA 450/2-77-008) Control of Volatile Organic Substances from existing Stationary Source - Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light Duty Trucks state that "vinyl coating refers to any printing or decorative or protective top coat applied over vinyl coated fabric or vinyl plastisol to the fabric (emissions from the application of plastisols are near zero)." Therefore, reasonably available control technology (RACT) emission rates for volatile organic substances have not been set for application of vinyl plastisol.

N.J.A.C. 7:27-16.6 (c)5 states, "The Department may approve such mathematical combining of source gases provided: ii. The sum of the emission rates of the separate source gases does not exceed the sum of the maximum allowable emission rates for the separate source gases as determined under subsections 16.5(a), 16.5(e), 16.6(a) and 16.6(b)." Since the application of vinyl plastisol is not covered by any of these subsections, this operation can not be included in a mathematical combination of source gases (bubble).

In view of the relatively low VOC emission rate for a vinyl plastisol operation, is it not likely that VOC RACT emission standards for application of vinyl plastisol will be set by NJDEP or EPA for control of ozone. Even if such standards were set, they would have to result in reductions in actual emissions prior to any control measure, leaving little, if any, additional emission reductions available for credit within a bubble.

Furthermore, control apparatus on vinyl plastisol coating lines are usually installed for the reduction of opacity and particulates to achieve compliance with N.J.A.C. 7:27-16.11(b) states that, "Whenever a VOC subject to the emission rate provisions of this subchapter is also subject to the emission rate provisions of any subchapter of the chapter, the relevant provisions of the subchapter requiring the lowest allowable rate will apply."

Since Subchapter 6 is more stringent than Subchapter 16 for plasticizer emissions, the Subchapter 6 allowable applies to the plasticizer portion of the emissions.

For the above reasons the application of vinyl plastisol may not be included in a mathematical combination of sources.

Please advise Mr. Allan Edwards, Chief, Enforcement Branch, on what course of action you will take to comply with N.J.A.C. 7:27-16.5 for the sources covered by that section. If a revised bubble application, not including vinyl plastisol, is to be part of the compliance plan, you may contact Mr. William Hart, Supervisor, New Source Review, at 609-984-3032 concerning application assistance.

Very truly yours,

William O'Sullivan
Chief, Bureau of
Engineering and Technology

kc

cc: W. Hart
G. Pierce
A. Edwards
Field Office
M. Polakovic
W. Baker, EPA Region II
EPA Clearinghouse