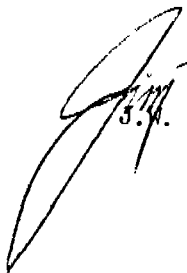


INTER-OFFICE MEMO **TENNECO CHEMICALS, INC.**

TO H.B. Carr AT Piscataway DATE July 16, 1975
FROM J.W. Poarch AT Burlington COPY TO P.A. Lobo
R.S. Miller
W. Miringoff
A.C. Siegel
G.G. Thompson
✓ File
SUBJECT CIBA-GEIGY ANTIOXIDANTS - Irganox 1010 & 1076

R&D is presently evaluating the above antioxidants (Reference J.W.P. to R.S. Miller dated May 15, 1975) for the purpose of preventing color development during stripping. In addition to this use there is a possible application as a short-stop on the higher molecular weight homopolymer resins. The question of FDA approval must be answered if these antioxidants are ever to be used in production of resins for food contact applications.

Please evaluate the enclosed list of FDA approvals which CIBA-GEIGY has already obtained to determine if we can fit into any of the categories, or do we need to have a separate approval.


J.W. Poarch

Attachment

JWP/gs

COLORITE 011285

FDA STATUS OF CIBA-GEIGY STABILIZERS

JULY, 1973

I. Existing Approvals

1. IRGANOX 1010

A. Olefin polymers, excluding EPDM (121.2566/121.2501)

max. conc. - 0.5%
max. thickness - no restrictions
food limitations - no restrictions

B. Ethylene-methacrylic acid copolymers (121.2566/121.2582)

max. conc. - 0.05%
max. thickness - 5 mil
food limitations - no restrictions

max. conc. - 0.5%
max. thickness - no restrictions
food limitations - nonalcoholic food only

C. Ethylene-acrylic acid copolymers (121.2566/121.2564)

(same as "B" above)

D. Adhesives (121.2520)

max. conc. - no restrictions
max. thickness - no restrictions
food limitations - no restrictions

E. Isobutylene Polymers (121.2566/212.2590)

max. conc. - 0.5%
max thickness - no restrictions
food limitations - nonalcoholic food only

F. Ethylene-vinyl acetate copolymers (121.2566/121.2570)

(same as "E" above)

G. Polystyrene and rubber-modified polystyrene (121.2566/121.2510)

(same as "E" above)

H. Styrene-butadiene copolymers (used in compliance with regulations in Subpart F of CFR 121, i.e., SBR is not approved under one Section as are most polymers)

(same as "E" above)

Roger L. Shaw
Polymer Additives Dept.
Bristol, Connecticut Office
203 588 2188

CIBA-GEIGY

Plastics & Additives Division
CIBA-GEIGY Corporation
Ardley, New York 10502
914 478 3131

COLORITE 011286

2. IRGANOX 1076

A. Olefin polymers, excluding EPDM (121.2566/121.2501)

- a. non-fatty foods
 - max. conc. - 0.25%
 - max. thickness - no restrictions
- b. fatty foods
 - the percentage concentration of IRGANOX 1076 multiplied by the thickness in inches of the finished olefin polymer shall not exceed a factor of 0.0025, except that concentrations of 0.05 percent or less may be used without limitation on thickness.

B. Polystyrene and rubber-modified polystyrene (121.2566/121.2510)

- max. conc. - 0.25%
- max. thickness - no restrictions
- food limitations - none, except when used in rubber-modified polystyrene with fatty foods, the polymer must contain at least 85% styrene.

C. Adhesives (121.2520)

- max. conc. - no restrictions
- max. thickness - no restrictions
- food limitations - no restrictions

*3. IRGANOX 1035

Adhesives (121.2520)

- max. conc. - no restrictions
- max. thickness - no restrictions
- food limitations - no restrictions

4. TINUVIN P

A. Acrylics, rigid, semirigid and modified (121.2566/121.2591)

- max. conc. - no restrictions
- max. thickness - no restrictions
- food limitations - no restrictions

B. Rigid vinyl and vinyl chloride copolymers (121.2566/121.2521)

- max. conc. - 0.25%
- max. thickness - no restrictions
- food limitations - no restrictions

* New Addition

C. Polystyrene (121.2566/2510)

max. conc. - no restrictions
max. thickness - no restrictions
food limitations - dry foods with the
surface having no free fat or oil and

Polystyrene and modified polystyrene containing less than
10% rubber (121.2566/2510)

max. conc. - 0.25%
max. thickness - no restrictions
food limitations - nonalcoholic food only

5. TINUVIN 326

Olefin polymers, including EPDM (121.2566/2501)

max. conc. - 0.5%
max. thickness - no restrictions
food limitations - non-fatty foods, food
with less than 8% alcohol

6. TINUVIN 328

Adhesives (121.2520)

max. conc. - no restrictions
max. thickness - no restrictions
food limitations - no restrictions

II. FDA Opinions in Effect

TINUVIN 327 may be used at levels up to 0.5% in polypropylene slit
film and related materials in applications involving contact with
dry foods containing no free fat or oil.

IRGASTAB 2002 may be used at a maximum level of 1.0% in polyolefin
films used for holding or transporting dry foodstuffs.

Note:

In addition to the use of these stabilizers in the Sections cited
above, their use is also permitted in other Sections where the above
polymers have further sanctioning. For example, IRGANOX 1010 may
be used as a component of polymers under 121.2514 - "Resinous and
Polymeric Coatings" and in 121.2526 - "Components of Paper and
Paperboard in Contact with Aqueous and Fatty Foods", as long as
(1) the polymer is approved, (2) IRGANOX 1010 is approved for use
in that polymer and (3) IRGANOX 1010 is used in accordance with
121.2566.

WHB:lcj
7/18/73