

NOSB NATIONAL LIST FILE CHECKLIST

CROPS

MATERIAL NAME: #15 Plastics (mulch and cover)



NOSB Database Form



References



MSDS (or equivalent)



**TAP Reviews from: Sam Cotner
(Additional TAP Review expected from: Richard
Harwood)**

**NOSB/NATIONAL LIST
COMMENT FORM
CROPS**

Material Name: #15 Plastics (mulch & cover)

Please use this page to write down comments, questions, and your anticipated vote(s).

COMMENTS/QUESTIONS:

1. In my opinion, this material is:
 Synthetic Non-synthetic.

2. This material should be placed on the proposed National List as:
 Prohibited Natural Allowed Synthetic.

TAP REVIEWER COMMENT FORM for USDA/NOSB

Use this page or an equivalent to write down comments and summarize your evaluation regarding the data presented in the file of this potential National List material. Complete both sides of page. Attach additional sheets if you wish.

This file is due back to us by: September 11, 1995

Name of Material: Plastics (mulch + cover)

Reviewer Name: *Jim Collins*

Is this substance Synthetic or non-synthetic? Explain (if appropriate)

If synthetic, how is the material made? (please answer here if our database form is blank)

This material should be added to the National List as:

Synthetic Allowed Prohibited Natural

or, Non-synthetic (This material does not belong on National List)

Are there any use restrictions or limitations that should be placed on this material on the National List?

No

Please comment on the accuracy of the information in the file:

Any additional comments? (attachments welcomed)

Do you have a commercial interest in this material? Yes; No

Signature *Jim Collins*

Date 9/6/95

Identification

Common Name **Plastics (mulch & cover)** **Chemical Name**
Other Names
Code #: CAS **Code #: Other**
N. L. Category Synthetic Allowed **MSDS** no

Chemistry

Family
Composition Thermoplastic resin, often polyethylene
Properties varies by type of plastic

How Made

Plastic sheets are made from thermoplastic resins which are extruded in various ways. The resin pellets are melted in the extruder and is pumped or blown through a die or tube. The die forms the plastic into the shape desired and then the melt is cooled. A high melt-viscosity resin is required.

Use/Action

Type of Use Crops
Use(s) Mulch, row covers, solarization

Action Row cover: protects against frost, boosts heat in daytime, keeps insects out. Mulch: controls weeds, warms soil

Combinations

Status

OFPA

N. L. Restriction Must be removed at the end of each growing or harvest season. Must not be incorporated into the soil or left in the field to decompose.

EPA, FDA, etc

Safety Guidelines

Directions

Registration

State Differences

Historical status Allowed by the majority of certification groups.

International status

OFPA Criteria

2119(m)1: chemical interactions

2119(m)2: toxicity & persistence

Plastics of various kinds do not break down readily in the soil. The "biodegradable" plastics often have cornstarch or other starch added, which breaks down the plastic into smaller pieces but the carbon-based polymers do not readily combine with humus or other molecules in the soil.

2119(m)3: manufacture & disposal consequences

A high level of manufacturing goes into the production of plastics and each stage has its regulations for handling wastes and by-products.

2119(m)4: effect on human health

2119(m)5: agroecosystem biology

2119(m)6: alternatives to substance

Natural derived mulch, cultivation for weed control.

2119(m)7: Is it compatible?

References

Kirk-Othmer Encyclopedia of Chemical Technology, 3rd. Ed., 1982. John Wiley & Sons, NY.