



## Part IV Section B: ENVIRONMENTAL ASSESSMENT

1. Date:

July 24, 2000

2. Name of Notifier:

Kerr-McGee Chemical, LLC

3. Address:

Lewis & Harrison, 122 C Street, NW Suite 740, Washington, DC 20001

4. Description of the Proposed Action:

Currently, trimethylolpropane (TMP) is approved, under 21 CFR §175.300 (b)(3)(xxxiii), for use as a pigment dispersant, at levels not to exceed 0.45% by weight of the pigment. The approval is limited to resinous and polymeric coatings. This FCS notice seeks to expand the approval of TMP to pigments used as components of all food-contact articles.

The pigment containing TMP will be used under "Conditions of Use" A through H, as described in 21 CFR §176.170(c), Table 2 and will be used for both single and repeated use. All raw and processed foods identified in 21 CFR §176.170(c), Table 1 may contact TMP.

The maximum use concentration will remain at 0.45% of TMP by weight of the pigment. TMP will be used as a pigment dispersant, which facilitates the dispersibility of the pigment throughout plastics (such as polyethylene and polypropylene) and aids in the milling or micronization step of the pigment.

TMP will be used nationwide by pigment manufacturing plants.

5. Identification of the Food-Contact Substance:

Chemical Names

- 1,3-propanediol, 2-ethyl-2-(hydroxymethyl) (CAS Name)
- Propylidynetrimethanol
- 1,1,1-tris(hydroxymethyl) propane

Common/Trade Names

- Trimethylolpropane
- Exaglycerin

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CAS Registry Number

- 77-99-6

Molecular Weight

- 136.18

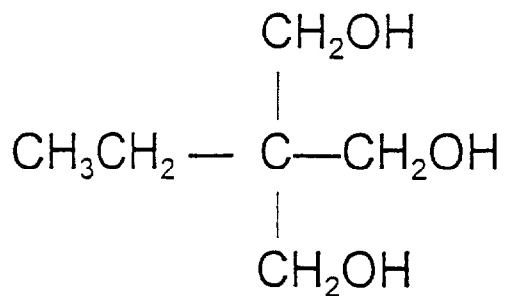
Chemical Formula

- C<sub>6</sub>H<sub>14</sub>O<sub>3</sub>

Impurities

Chemical Name	CAS Reg. No.	Typical Composition	Maximum Residual
2,2-dimethyl-1,3-propanediol	126-30-7	0.25%	0.5%
Bis(2,2-dimethylolbutyl) ether	23235-61-2	nil	0.1%
2-ethylhexanol	104-76-7	0.25%	0.5%
Water	7732-18-5	0.03%	0.05%
Formaldehyde	50-00-0	nil	0.0001%
Sodium hydroxide	1310-73-2	nil	0.00001%
2,2'[methylenbis(oxymethylen)bis[2-ethylpropan-4,3]	93983-16-3	nil	0.1%

Structure



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## Chemical/Physical Properties

Properties	Values
Purity	99% (min)
Acidity (as HCOOH)	20 mg/kg (max)
Moisture	500 mg/kg (max)
Solubility	Soluble in alcohol, Insoluble in fats
Ashes (content)	50 mg/kg (max)
Melting Point	58-60 °C
Physical State	Solid
Vapor Pressure @ 50°C	0.1 kPa
Density/relative density	1.084 g/cm <sup>3</sup>
Boiling/sublimation temperature @ 5 torr pressure	160°C

### **6. Environmental Consequences of the Proposed Action:**

#### **a. Production of the food contact substance**

This information is not being provided since there are no extraordinary circumstances that apply to the manufacture of TMP.

#### **b. Use and disposal of the food contact substance**

This action involves a component of a pigment that will be a minor component of finished food-packaging materials at 0.45% by-weight of the finished packaging material and that remains with the packaging through its use by consumers. The principal routes of environmental introduction of trimethylolpropane follow from the disposal of food packaging material containing the substance in municipal solid waste combustors or in landfills. These disposal routes are governed by the Environmental Protection Agency's (EPA) regulations in 40 CFR parts 60 (for combustors) and part 258 (for landfills). Based on the low levels of the food contact substance in the pigment and, consequently, in the food packaging material, the introduction of combustion products or introductions at landfill sites are not environmentally significant. Therefore, we do not expect that any limited increases in environmental introductions resulting from the proposed action will threaten a violation of EPA's regulations governing combustors and landfills or have any other adverse environmental effect.

### **7. Alternatives to the Proposed Action:**

Alternatives to the proposed action need not be considered because no potential adverse effects have been identified.

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**8. List of Preparers:**

This EA was prepared for Kerr-McGee Chemical, LLC by Christina Swick of Lewis & Harrison. Ms. Swick has a M.S. degree in Environmental Health Sciences from the Johns Hopkins School of Public Health.

**9. Certification:**

The undersigned official certifies that the information presented is true, accurate, and complete to the best knowledge of Kerr-McGee Chemical, LLC

Name: Eliot I. Harrison

Title: Agent for Kerr-McGee Chemical, LLC

Signature:  \_\_\_\_\_

Date: July 24, 2000

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