



# MATERIAL SAFETY DATA SHEET

## 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Flexguard End Dip Mix

**Manufacturer Name:**

Federal-Mogul World Headquarters  
26555 Northwestern Highway  
Southfield, Michigan 48033  
USA

**Emergency Telephone:**

24hr EP (INFOTRAC): 1-800-535-5053  
International: (001) 352-323-3500

**Non-emergency Telephone:**

1-248-354-9844

**Intended Use:** Fray Resistant End Dip Mix

**Contact Person:**

MSDS Request (voicemail) 1-248-354-9844

## 2 HAZARDS IDENTIFICATION

**Emergency Overview**

**Physical State:** Liquid

**Color:** Black

**Odor:** None

WARNING! May cause eye, skin and respiratory tract irritation. May cause allergic skin reaction.  
Cancer hazard - can cause cancer.

**Potential Health Effects**

**Inhalation:** May cause irritation to mucous membrane and respiratory system. May cause sensitization by inhalation.

**Eye Contact:** May cause eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

**Skin Contact:** May cause skin irritation. May cause allergic skin reaction.

**Ingestion:** May irritate and cause stomach pain, vomiting and diarrhea.

**Chronic Health Effects:** Cancer hazard - can cause cancer. Exposure to formaldehyde may cause respiratory sensitization in some individuals or aggravate pre-existing asthmatic conditions.

**Potential Physical / Chemical Effects:** This product is not flammable.

**OSHA Regulatory Status:** This product is hazardous according to OSHA 29CFR 1910.1200.

**Environment:** The product is not expected to be hazardous to the environment.

<b>3</b>	<b>COMPOSITION / INFORMATION ON INGREDIENTS</b>
----------	---

Chemical Name	CAS-No.	Concentration*
†Carbon black	1333-86-4	1 - 2%
†Formaldehyde	50-00-0	1 - 2%

\* All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

† This chemical is hazardous according to OSHA/WHMIS criteria.

<b>4</b>	<b>FIRST AID MEASURES</b>
----------	---------------------------

**Inhalation:** Move injured person into fresh air and keep person calm under observation. Get medical attention.

**Eye Contact:** Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if irritation develops and persists.

**Skin Contact:** Rinse immediately with plenty of water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

**Ingestion:** Rinse mouth thoroughly with water and give large amounts of milk or water, if person is conscious. Get medical attention if any discomfort continues.

<b>5</b>	<b>FIRE-FIGHTING MEASURES</b>
----------	-------------------------------

**Extinguishing Media:** This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable Extinguishing Media:** None.

**Special Fire Fighting Procedures:** Use standard firefighting procedures and consider the hazards of other involved materials.

**Unusual Fire & Explosion Hazards:** By heating and fire, irritating vapors/gases may be formed.

**Hazardous Combustion Products:** Carbon Dioxide, Carbon Monoxide

**Protective Measures:** Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

<b>6</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
----------	------------------------------------

**Personal Precautions:** Avoid inhalation of vapors and contact with skin and eyes. See Section 8 of the MSDS for Personal Protective Equipment.

**Spill Cleanup Methods:** Absorb spillage with suitable absorbent material. Flush area with plenty of water. Collect in containers and seal securely. Containers must be labeled.

**Environmental Precautions:** Do not allow to enter drains, sewers or watercourses.

**Notification Procedures:** Inform authorities if large amounts are involved.

## 7 HANDLING AND STORAGE

**Handling:** Should be handled in closed systems, if possible. Avoid inhalation of vapors and contact with skin and eyes. Do not taste or swallow. Persons susceptible for allergic reactions should not handle this product. Wash thoroughly after handling. Observe good industrial hygiene practices.

**Storage:** Store in closed original container in a dry place. Store away from incompatible materials.

## 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Limits:

Chemical Name	Source	Type	Exposure Limits	Notes
Carbon black (Inhalable fraction.)	US. ACGIH TLV	TWA	3 mg/m <sup>3</sup>	
Carbon black	US. NIOSH Guide	IDLH	1750 mg/m <sup>3</sup>	
Carbon black	US. OSHA Z-1 PEL	TWA	3.5 mg/m <sup>3</sup>	
Formaldehyde	US. ACGIH TLV	Ceiling	0.3 ppm	
Formaldehyde	US. NIOSH Guide	IDLH	20 ppm	
Formaldehyde	US. OSHA Spec. Reg.	OSHA Action level	0.5 ppm	
Formaldehyde	US. OSHA Spec. Reg.	STEL	2 ppm	
Formaldehyde	US. OSHA Spec. Reg.	TWA	0.75 ppm	

Consult Canadian Provincial Regulations and/or Mexican Regulations on exposure limits, if applicable.

**Engineering Controls:** Should be handled in closed systems, if possible. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998.

**Eye Protection:** Wear approved chemical safety goggles.

**Hand Protection:** Wear chemical resistant gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

**Skin Protection:** Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Hygiene Measures:** Always observe national occupational health and hygiene requirements including requirements for medical surveillance. Cleaning of personal protective equipment should be done with appropriate special equipment. Avoid smoking, eating, or drinking and storage of tobacco, food and

drinks in work areas and areas where there is a risk of contamination from the substances and product.

<b>9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
----------	---

**Color:** Black  
**Odor:** None  
**Odor Threshold:** No data available.  
**Physical State:** Liquid  
**pH:** No data available  
**Melting Point:** No data available.  
**Freezing Point:** No data available.  
**Boiling Point:** No data available.  
**Flash Point:** No data available.  
**Evaporation Rate:** No data available.  
**Flammability Limit - Upper (%):** No data available.  
**Flammability Limit - Lower (%):** No data available.  
**Vapor Pressure:** No data available.  
**Vapor Density (Air=1):** No data available.  
**Specific Gravity:** 1.1 - 1.4 (23°C)  
**Solubility in Water:** Soluble  
**Solubility (Other):** No data available.  
**Partition Coefficient (n-Octanol/water):** No data available.  
**Autoignition Temperature:** No data available.  
**Decomposition Temperature:** No data available.  
**Volatile Organic Compounds (VOC):** No data available.  
**Viscosity:** 10.000 mPa.s  
**Explosive Properties:** No data available

<b>10</b>	<b>STABILITY AND REACTIVITY</b>
-----------	---------------------------------

**Stability:** Stable under normal temperature conditions and recommended use.

**Conditions to Avoid:** Freezing.

**Incompatible Materials:** Strong oxidizing agents. Strong bases.

**Hazardous Decomposition Products:**

At Elevated Temperatures:	Carbon Dioxide, Carbon Monoxide
---------------------------	---------------------------------

**Possibility of Hazardous Reactions:** Will not occur.

<b>11</b>	<b>TOXICOLOGICAL INFORMATION</b>
-----------	----------------------------------

**Specified Substance(s)**

**Acute Toxicity:**

Chemical Name	Test Results
Formaldehyde	Dermal LD50 (Rabbit): 270 mg/kg
Formaldehyde	Inhalation LC50 (Rat): 203 mg/m <sup>3</sup>
Formaldehyde	Oral LD50 (Rat): 100 mg/kg

**Other Acute:** Exposure to airborne concentrations of formaldehyde in excess of 0.1 ppm may cause discomfort in the stomach and pharynx and irritation of the eyes, nose and throat of some individuals. Sensitization may also occur in some individuals.

#### Listed Carcinogens:

Chemical Name	IARC	NTP	OSHA	ACGIH
Formaldehyde	1	Listed	Listed	A2
Carbon black	2B	Not Listed	Not Listed	A3

IARC: 1 = Carcinogenic to Humans; 2A = Probably Carcinogenic to Humans; 2B = Possibly Carcinogenic to Humans; 3 = Not classifiable as to carcinogenicity to humans; 4 = Probably not carcinogenic to humans; Not listed = Not evaluated by IARC.

ACGIH: A1 = Confirmed Human Carcinogen; A2 = Suspected Human Carcinogen; A3 = Confirmed Animal Carcinogen; A4 = Not classifiable as a human carcinogen; A5 = Not suspected to be a human carcinogen; Not listed = Not evaluated by ACGIH.

#### Product Information

##### Acute Toxicity:

**Test Results:** No test data available for the product.

**Other Acute:** May cause eye, skin and respiratory tract irritation. May cause allergic skin reaction.

**Chronic Toxicity:** Cancer hazard - can cause cancer. May cause allergic respiratory reaction.

<b>12</b>	<b>ECOLOGICAL INFORMATION</b>
-----------	-------------------------------

**Ecotoxicity:** The product is not expected to be hazardous to the environment.

**Mobility:** The product is soluble in water.

**Persistence and Degradability:** No data available.

**Bioaccumulation Potential:** No data available.

**Other Adverse Effects:** The product contains volatile organic compounds which have a photochemical ozone creation potential.

<b>13</b>	<b>DISPOSAL CONSIDERATIONS</b>
-----------	--------------------------------

**General Information:** Dispose of waste and residues in accordance with local authority requirements.

**Disposal Methods:** Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

<b>14</b>	<b>TRANSPORT INFORMATION</b>
-----------	------------------------------

**DOT** Not regulated.

**TDG** Not regulated.

**IATA** Not regulated.

**IMDG** Not regulated.

<b>15</b>	<b>REGULATORY INFORMATION</b>
-----------	-------------------------------

**Canadian Controlled Products Regulations:** This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

**WHMIS Classification:** D2A

**Mexican Dangerous Statement:** This product is dangerous according to Mexican regulations.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-.1052):**

Chemical Name	CAS-No.
Formaldehyde	50-00-0

**US Regulations**

**CERCLA Hazardous Substance List (40 CFR 302.4):** Not regulated.

**SARA Title III**

**Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A):** Not regulated.

**Section 311/312 (40 CFR 370):**

Acute (Immediate)     Chronic (Delayed)     Fire     Reactive     Pressure Generating

**Section 313 Toxic Release Inventory (40 CFR 372):**

Chemical Name	CAS-No.	Reporting threshold for other users	Reporting threshold for manufacturing and processing
Formaldehyde	50-00-0	10000 lbs	25000 lbs

For reporting purposes: the De Minimis Concentration for a toxic chemical in a mixture is 0.1% for carcinogens as defined in 29 CFR 1910.1200(d)(4) or 1% for others.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

Not regulated.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):** Not regulated.

**Drug Enforcement Act:** Not regulated.

**TSCA**

**TSCA Section 4(a) Final Test Rules & Testing Consent Orders:** Not regulated.

**TSCA Section 5(a)(2) Final Significant New Use Rules (SNURs) (40CFR 721, Subpt. E):** Not regulated.

**TSCA Section 5(e) PMN-Substance Consent Orders:** Not regulated.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):** Not regulated.

### State Regulations

**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):** Carbon black; Formaldehyde

**Massachusetts Right-To-Know List:** Carbon black; Formaldehyde

**Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)):** Not regulated.

**Minnesota Hazardous Substances List:** Carbon black; Formaldehyde

**New Jersey Right-To-Know List:** Carbon black; Formaldehyde

**Pennsylvania Right-To-Know List:** Carbon black; Formaldehyde

**Rhode Island Right-To-Know List:** Carbon black; Formaldehyde

<b>16</b>	<b>OTHER INFORMATION</b>
-----------	--------------------------

### HAZARD RATINGS

	Health Hazard	Fire Hazard	Instability	Special Hazard
<b>NFPA</b>	1	0	0	0

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

NFPA Label colored diamond code: Blue - Health; Red - Flammability; Yellow - Instability; White - Special Hazards

	Health Hazard	Flammability	Physical Hazard	Personal Protection
<b>HMIS</b>	1*	0	0	B

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe \*- Chronic Health Effect

HMIS Label colored bar code: Blue - Health; Red - Flammability; Orange - Physical Hazards; White - Special

**Issued by:** Federal-Mogul Corporation

**Issue Date:** 04-Dec-2012

**Supersedes Date:**

**SDS No.:** FlexGuard End Dip Mix\_NA

**Disclaimer:** The information provided on this data sheet was abstracted from supplier material safety data sheets and standard references in occupational health and toxicology. Federal-Mogul makes no representation or warranty with respect to the information obtained from such references. The information is however, as of the date provided, true and accurate to the best of Federal-Mogul's knowledge, and should be used to make an independent determination of the methods to safeguard workers and the environment.