

Hot Stamping Foil Type E

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 01/05/2016 Date of issue: 01/05/2016

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: PFU - All Colors without special exceptions.

1.2. Intended Use of the Product

Use of the substance/mixture: Hot stamping foil

1.3. Name, Address, and Telephone of the Responsible Party

Company:

Crown Roll Leaf, Inc.

91 Illinois Ave

Paterson, NJ 07503

T: 973-742-4000

1.4. Emergency Telephone Number

Emergency Number 24 Hrs.: Chemtrec 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US classification

Comb. Dust

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Signal Word (GHS-US) : Warning

Hazard Statements (GHS-US) : May form combustible dust concentrations in air.

2.3. Other Hazards

Before processing for end use, this product is inert and poses no combustible dust hazard. When processed, machined, cut, or ground, and dust, ribbons, fines, or flakes are generated it has the potential to create a dust explosion hazard in the air. Under normal conditions of use this product has the potential to cause thermal burns. Exposure may aggravate pre-existing eye, skin, or respiratory conditions. The product involves the use of polyethylene terephthalate (PET) carrier film, on which are carried polymerized functional layers. Product has undergone polymerization, is cured and inert, and contains no unreacted monomers in the final product. This product contains components which are hazardous but are bound in a polymer matrix and are therefore not biologically available. If proper use is not followed, product has the potential to release toxic or harmful fumes/vapors. Use only as directed. Exposure to uncured diisocyanates may be harmful or cause adverse effects including but not limited to: skin, eye, and respiratory tract irritation, respiratory and skin sensitization. Uncured diisocyanates are a suspected human carcinogen, and may cause occupational asthma with repeated or prolonged exposure.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%
Polyester Film (polyethylene terephthalate)	(CAS No) 25038-59-9	65 - 75
Polymeric Resins and Additives	(CAS No) Proprietary	6 - 34.5
Pigments and Dyes	(CAS No) Proprietary	<= 15.5
Titanium dioxide	(CAS No) 13463-67-7	<= 15
Carbon black	(CAS No) 1333-86-4	<= 15
Mica	(CAS No) 12001-26-2	<= 10
Talc	(CAS No) 14807-96-6	<= 2
Barium sulfate	(CAS No) 7727-43-7	< 1
Chromium oxide (Cr2O3)	(CAS No) 1308-38-9	< 1
Silica, amorphous	(CAS No) 7631-86-9	<= 0.5

Full text of H-phrases: see section 16

Hot Stamping Foil Type E

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

The specific chemical identity and/or exact percentage of composition has been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200]. In the event of an emergency, chemical identities and exact percentages of the proprietary ingredients may need to be disclosed to emergency personnel upon request.

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: Using proper respiratory protection, move the exposed person to fresh air at once. Encourage exposed person to cough, spit out, and blow nose to remove dust. Immediately call a poison center, physician, or emergency medical service.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists. Cool skin rapidly with cold water after contact with molten product. Do not attempt to forcibly remove material from skin after cooling. Seek medical attention for thermal burns.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention. Removal of solidified molten material from the eyes requires medical assistance. Obtain medical attention for thermal burns.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Not expected to present a significant hazard under anticipated conditions of normal use. Risk of thermal burns on contact with molten product.

Symptoms/Injuries After Inhalation: Dust may be harmful or cause irritation. Prolonged contact with large amounts of dust may cause mechanical irritation. May cause an allergic reaction in sensitive individuals.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation. Under normal conditions of use may cause slight mechanical irritation. Dust particles generated from processing may cause an allergic reaction in sensitive individuals.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes. Eye contact with dust may cause mechanical irritation.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects. Gastrointestinal irritation.

Chronic Symptoms: None known.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Combustible dust. Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire. Application of water stream to hot product may cause frothing and increase fire intensity.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but will burn at high temperatures. Dust generated from processing may present a dust explosion hazard.

Explosion Hazard: Dust explosion hazard in air.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. Do not get water inside containers. Do not breathe fumes from fires or vapors from decomposition.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other Information: Risk of dust explosion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing dust. Avoid generating dust. Remove ignition sources. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Hot Stamping Foil Type E

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. Avoid generation of dust during clean-up of spills.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Use explosion proof vacuum during cleanup, with appropriate filter. Do not mix with other materials. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Use only non-sparking tools. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Dust generated from processing may present a dust explosion hazard. Accumulation and dispersion of dust with an ignition source can cause a combustible dust explosion. Keep dust levels to a minimum and follow applicable regulations.

Precautions for Safe Handling: Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing dust. Avoid creating or spreading dust. Keep away from heat, sparks, open flames, hot surfaces. No smoking.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Avoid creating or spreading dust. Use explosion-proof electrical, ventilating, lighting equipment. Proper grounding procedures to avoid static electricity should be followed.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool and well-ventilated place. Store away from heat. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Products: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

Hot stamping foil

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Titanium dioxide (13463-67-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA IDLH	US IDLH (mg/m ³)	5000 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust)
Carbon black (1333-86-4)		
USA ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³ (inhalable fraction)
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	3.5 mg/m ³ 0.1 mg/m ³ (Carbon black in presence of Polycyclic aromatic hydrocarbons)
USA IDLH	US IDLH (mg/m ³)	1750 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	3.5 mg/m ³
Mica (12001-26-2)		
USA ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³ (respirable fraction)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	3 mg/m ³ (containing <1% Quartz-respirable dust)
USA IDLH	US IDLH (mg/m ³)	1500 mg/m ³ (containing <1% quartz)
Talc (14807-96-6)		
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)

Hot Stamping Foil Type E

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen containing no asbestos fibers
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	2 mg/m ³ (containing no Asbestos and <1% Quartz-respirable dust)
USA IDLH	US IDLH (mg/m ³)	1000 mg/m ³ (containing no asbestos and <1% quartz)
Silica, amorphous (7631-86-9)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	6 mg/m ³
USA IDLH	US IDLH (mg/m ³)	3000 mg/m ³
Barium sulfate (7727-43-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ (inhalable fraction, particulate matter containing no asbestos and <1% crystalline silica)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	10 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
Chromium oxide (Cr2O3) (1308-38-9)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.05 mg/m ³ 0.5 (Cr II & Cr III Compounds) 0.05 (Cr VI Water Soluble)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³ (metal) 0.5 (Cr II & Cr III Compounds) 0.005 (Cr VI Compounds)

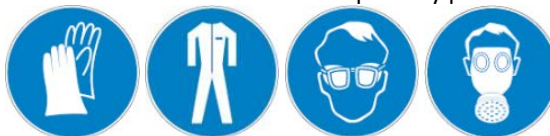
8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. Power equipment should be equipped with proper dust collection devices. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure all national/local regulations are observed.

Personal Protective Equipment

: Not generally required. The use of personal protective equipment may be necessary as conditions warrant. Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

Hand Protection

Eye Protection

Skin and Body Protection

Respiratory Protection

: Chemically resistant materials and fabrics.

: Wear protective gloves.

: Chemical goggles or safety glasses.

: Wear suitable protective clothing.

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Thermal Hazard Protection

: When working with hot material, use suitable thermally protective clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Solid - coated film
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available

Hot Stamping Foil Type E

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20 °C	: No data available
Relative Density	: No data available
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available
Explosive Properties	: Dust generated from processing may present a dust explosion hazard.

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials. Sparks, heat, open flame and other sources of ignition.
- 10.5. Incompatible Materials:** Strong acids, strong bases, strong oxidizers.
- 10.6. Hazardous Decomposition Products:** Thermal decomposition generates : Acrid smoke and irritating fumes. Toxic fumes. Carbon oxides (CO, CO₂). Hydrocarbons. Nitrogen oxides. Amines. Barium oxides. Chromium oxides. Hydrogen chloride. Chlorine. Ketones. Aldehydes. Formaldehyde. Formaldehyde is a potential carcinogen and can act as a potential skin and respiratory sensitizer. Formaldehyde can also cause respiratory and eye irritation. May release isocyanate vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

Titanium dioxide (13463-67-7)	
LD50 Oral Rat	> 10000 mg/kg
Carbon black (1333-86-4)	
LD50 Oral Rat	> 8000 mg/kg
Silica, amorphous (7631-86-9)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat	> 2.2 mg/l (Exposure time: 1 h)
Barium sulfate (7727-43-7)	
LD50 Oral Rat	> 5000 mg/kg

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified.

Titanium dioxide (13463-67-7)	
IARC group	2B
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Carbon black (1333-86-4)	
IARC group	2B
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Talc (14807-96-6)	
IARC group	3
National Toxicology Program (NTP) Status	Evidence of Carcinogenicity, Twelfth Report - Items under consideration.

Hot Stamping Foil Type E

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Silica, amorphous (7631-86-9)	
IARC group	3
Chromium oxide (Cr2O3) (1308-38-9)	
IARC group	3

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Dust may be harmful or cause irritation. Prolonged contact with large amounts of dust may cause mechanical irritation. May cause an allergic reaction in sensitive individuals.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation. Under normal conditions of use may cause slight mechanical irritation. Dust particles generated from processing may cause an allergic reaction in sensitive individuals.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes. Eye contact with dust may cause mechanical irritation.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects. Gastrointestinal irritation.

Chronic Symptoms: None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Carbon black (1333-86-4)	
EC50 Daphnia 1	5600 mg/l (Exposure time: 24 h - Species: Daphnia magna)
Talc (14807-96-6)	
LC50 Fish 1	> 100 g/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static])
Silica, amorphous (7631-86-9)	
LC50 Fish 1	5000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	7600 mg/l (Exposure time: 48 h - Species: Ceriodaphnia dubia)
Chromium oxide (Cr2O3) (1308-38-9)	
EC50 Daphnia 1	0.162 mg/l
NOEC chronic fish	1000 mg/l (Species: Brachydanio rerio - Duration: 30 d)

12.2. Persistence and Degradability No additional information available

12.3. Bioaccumulative Potential

Talc (14807-96-6)	
BCF fish 1	(no known bioaccumulation)
Silica, amorphous (7631-86-9)	
BCF fish 1	(no bioaccumulation expected)

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

No additional information available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology – Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

Polyester Film (polyethylene terephthalate) (25038-59-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Titanium dioxide (13463-67-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard

Hot Stamping Foil Type E

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Carbon black (1333-86-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Talc (14807-96-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Silica, amorphous (7631-86-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Barium sulfate (7727-43-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Chromium oxide (Cr2O3) (1308-38-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations

Titanium dioxide (13463-67-7)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Carbon black (1333-86-4)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

Polymeric Resins and Additives
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Titanium dioxide (13463-67-7)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Carbon black (1333-86-4)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances U.S. - Pennsylvania - RTK (Right to Know) List

Mica (12001-26-2)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Talc (14807-96-6)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Silica, amorphous (7631-86-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Barium sulfate (7727-43-7)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Chromium oxide (Cr2O3) (1308-38-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date	: 01/05/2016
Other Information	: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Hot Stamping Foil Type E

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

GHS Full Text Phrases:

Comb. Dust	Combustible Dust
Comb. Dust	May form combustible dust concentrations in air

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)