

FOREST GREEN

Version Number 1.0 Revision Date 05/10/2018 Page 1 of 16 Print Date 11/20/2018

SAFETY DATA SHEET

FOREST GREEN

Section 1. Identification

GHS product identifier : FOREST GREEN

Chemical name: MixtureCAS number: MixtureOther means of identification: CC10279430

Product type : solid

Relevant identified uses of the substance or mixture and uses advised against

Product use : Industrial applications. Plastics.

Supplier's details : POLYONE CORPORATION

33587 Walker Road, Avon Lake, OH 44012

1 (440) 930-1000 or 1 (866) POLYONE

Emergency telephone number

(with hours of operation)

CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or

accident).

Section 2. Hazards identification

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. After handling, always wash hands thoroughly with soap and water.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard

Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and

other users of this product.

Classification of the substance or

mixture

Not classified.

GHS label elements

Signal word : No signal word.



FOREST GREEN

Version Number 1.0 Page 2 of 16 Revision Date 05/10/2018 Print Date 11/20/2018

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Not applicable.
Prevention : Not applicable.
Response : Not applicable.
Storage : Not applicable.
Disposal : Not applicable.
Supplemental label elements : None known.
Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture: MixtureChemical name: MixtureOther means of identification: CC10279430

CAS number/other identifiers

Ingredient name	%	CAS number
Caprolactam	1 - 3	105-60-2
Carbon black	0.3 - 1	1333-86-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the

upper and lower eyelids. Check for and remove any contact lenses.



FOREST GREEN

Version Number 1.0 Page 3 of 16 Revision Date 05/10/2018 Print Date 11/20/2018

Get medical attention if irritation occurs.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable

for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical

surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated

clothing and shoes. Get medical attention if symptoms occur.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at

rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by

medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: No known significant effects or critical hazards.Inhalation: No known significant effects or critical hazards.Skin contact: No known significant effects or critical hazards.Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: No specific data.Inhalation: No specific data.Skin contact: No specific data.Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms

may be delayed. The exposed person may need to be kept under

medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without

suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures



FOREST GREEN

Version Number 1.0 Page 4 of 16 Revision Date 05/10/2018 Print Date 11/20/2018

Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media In case of fire, use water spray (fog), foam, dry chemical or CO_2 .

: None known.

Specific hazards arising from the chemical

: No specific fire or explosion hazard.

Hazardous thermal decomposition products

: Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides

Special protective actions for firefighters Promptly isolate the scene by removing all persons from the vicinity

of the incident if there is a fire. No action shall be taken involving any

personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and selfcontained breathing apparatus (SCBA) with a full face-piece operated

in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without

suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil,

waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil

or air).

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and

place in a designated, labeled waste container. Dispose of via a

licensed waste disposal contractor.

Large spill : Move containers from spill area. Prevent entry into sewers, water

courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency



FOREST GREEN

Version Number 1.0 Revision Date 05/10/2018 Page 5 of 16 Print Date 11/20/2018

contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Advice on general occupational hygiene

- Put on appropriate personal protective equipment (see Section 8).
 - Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits		
Carbon black	OSHA PEL 1989 (1989-03-01)		
	PEL: Permissible Exposure Level 3.5 mg/m3		
	OSHA PEL (1993-06-30)		
	PEL: Permissible Exposure Level 3.5 mg/m3		
	NIOSH REL (1994-06-01)		
	Time Weighted Average (TWA) 3.5 mg/m3		
	Time Weighted Average (TWA)		
	ACGIH TLV (2010-12-06)		
	TLV-TWA: Threshold Limit Value - Time weighted average PEL:		
	Permissible Exposure Level 3 mg/m3 Form: Inhalable fraction		
Caprolactam	OSHA PEL 1989 (1989-03-01)		
	PEL: Permissible Exposure Level 1 mg/m3 Form: Dust		
	Short-term exposure limit (STEL). A limit value beyond which		
	there should be no exposure and which refers to a period of fifteen		



FOREST GREEN

Version Number 1.0 Revision Date 05/10/2018 Page 6 of 16 Print Date 11/20/2018

minutes, unless otherwise stated. 3 mg/m3 Form: Dust **PEL: Permissible Exposure Level** 20 mg/m3 5 ppmForm: Vapor Short-term exposure limit (STEL). A limit value beyond which there should be no exposure and which refers to a period of fifteen minutes, unless otherwise stated. 40 mg/m3 10 ppmForm: Vapor NIOSH REL (1994-06-01) Time Weighted Average (TWA) 1 mg/m3 Form: Dust Short-term exposure limit (STEL). A limit value beyond which there should be no exposure and which refers to a period of fifteen minutes, unless otherwise stated. 3 mg/m3 Form: Dust Time Weighted Average (TWA) 1 mg/m3 0.22 ppmForm: Vapor Short-term exposure limit (STEL). A limit value beyond which there should be no exposure and which refers to a period of fifteen minutes, unless otherwise stated. 3 mg/m3 0.66 ppmForm: Vapor ACGIH TLV (2003-01-01) TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 5 mg/m3 Form: Inhalable fraction and vapor

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products



FOREST GREEN

Version Number 1.0 Page 7 of 16 Revision Date 05/10/2018 Print Date 11/20/2018

if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based

on the task being performed and the risks involved and should be

approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures

should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this

product.

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that

meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper

fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state solid [Pellets.] Color **GREEN** Odor Faint odor. **Odor threshold** Not available. Not available. **Melting point** Not available. **Boiling point** Not available. Flash point Not available. **Burning time** Not available. Not available. **Burning rate** Not available. **Evaporation rate** Flammability (solid, gas) Not available.

Lower and upper explosive : Lower: Not available. (flammable) limits : Upper: Not available.

Vapor pressure

Vapor density

Relative density

Solubility

Solubility in water

Soluble Soluble Soluble in water.

Partition coefficient: n-

octanol/water

Not available.

Auto-ignition temperature: Not available.Decomposition temperature: Not available.SADT: Not available.

Viscosity : Dynamic: Not available.

Kinematic: Not available.



FOREST GREEN

Version Number 1.0 Page 8 of 16 Revision Date 05/10/2018 Print Date 11/20/2018

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or

its ingredients.

Chemical stability : Stable under recommended storage and handling conditions (see

Section 7).

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will

not occur.

Conditions to avoid : Keep away from extreme heat and oxidizing agents.

Incompatible materials : Keep away from strong acids.

Oxidizer.

Hazardous decomposition : Under normal conditions of storage and use, hazardous decomposition

products should not be produced.

Section 11. Toxicological information

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Information on toxicological effects

Acute toxicity

products

Product/ingredient name	Result	Species	Dose	Exposure
Caprolactam				
	LD50 Oral	Rat	1,210 mg/kg	-
Remarks - Inhalation:	No applicable tox	icity data		
Remarks - Dermal:	No applicable toxicity data			
Carbon black				
	LD50 Oral	Rat	15,400 mg/kg	-
Remarks - Inhalation:	No applicable tox	icity data		
Remarks - Dermal:	No applicable tox	icity data		

Conclusion/Summary : Mixture.Not fully tested.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Caprolactam	Eyes - Moderate irritant	Rabbit		24 hrs	-
	Skin - Mild irritant	Rabbit		24 hrs	-

Conclusion/Summary



FOREST GREEN

Version Number 1.0 Page 9 of 16 Revision Date 05/10/2018 Print Date 11/20/2018

SkinMixture.Not fully tested.EyesMixture.Not fully tested.RespiratoryMixture.Not fully tested.

Sensitization

Conclusion/Summary

Skin: Mixture.Not fully tested.Respiratory: Mixture.Not fully tested.

Mutagenicity

Conclusion/Summary : Mixture.Not fully tested.

Carcinogenicity

Conclusion/Summary : Mixture. Not fully tested.

Classification

Classification			
Product/ingredient	OSHA	IARC	NTP
name			
Caprolactam		4	
Carbon black		2B	

Reproductive toxicity

Conclusion/Summary : Mixture.Not fully tested.

Teratogenicity

Conclusion/Summary : Mixture.Not fully tested.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of

: Not available.

exposure

Potential acute health effects

Eye contact : No known significant effects or critical hazards.



FOREST GREEN

Version Number 1.0 Page 10 of 16 Revision Date 05/10/2018 Print Date 11/20/2018

Inhalation: No known significant effects or critical hazards.Skin contact: No known significant effects or critical hazards.Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data.Inhalation: No specific data.Skin contact: No specific data.Ingestion: No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary: Mixture.Not fully tested.

General:No known significant effects or critical hazards.Carcinogenicity:No known significant effects or critical hazards.Mutagenicity:No known significant effects or critical hazards.Teratogenicity:No known significant effects or critical hazards.Developmental effects:No known significant effects or critical hazards.Fertility effects:No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity



FOREST GREEN

Version Number 1.0 Revision Date 05/10/2018 Page 11 of 16 Print Date 11/20/2018

Product/ingredient name	Result	Species	Exposure	
Caprolactam				
Remarks - Acute - Fish:	No applicable toxicity data			
	Acute EC50 2,430 Mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h	
Remarks - Acute - Aquatic invertebrates.:	Acute			
	Acute EC50 4,550 Mg/l Fresh water	Aquatic plants - Algae	72 h	
Remarks - Acute - Aquatic plants:	Acute			
	Acute NOEC 1,250 Mg/l Fresh water	Aquatic plants - Algae	72 h	
Remarks - Acute - Aquatic plants:	Chronic			
Remarks - Chronic - Fish:	No applicable toxicity data			
Remarks - Chronic - Aquatic invertebrates.:	No applicable toxicity data			
Carbon black				
Remarks - Acute - Fish:	No applicable toxicity data			
	Acute EC50 37.563 Mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h	
Remarks - Acute - Aquatic invertebrates.:	Acute			
Remarks - Acute - Aquatic plants:	No applicable toxicity data			
Remarks - Chronic - Fish:	No applicable toxicity data			
Remarks - Chronic - Aquatic invertebrates.:	No applicable toxicity data			
FOREST GREEN				
Remarks - Acute - Aquatic invertebrates.:	Chemicals are not readily available	as they are bound within the	e polymer matrix.	

Conclusion/Summary

: Chemicals are not readily available as they are bound within the polymer matrix.

Persistence and degradability

Conclusion/Summary

: Chemicals are not readily available as they are bound within the polymer matrix.

Conclusion/Summary

Chemicals are not readily available as they are bound within the polymer matrix.



FOREST GREEN

Version Number 1.0 Page 12 of 16 Revision Date 05/10/2018 Print Date 11/20/2018

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
2H-Azepin-2-one, hexahydro-	0.12	-	low

Mobility in soil

Soil/water partition coefficient

(KOC)

Not available.

Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Acute hazardous waste "P" List: Not listed

United States - RCRA Toxic hazardous waste "U" List: Not listed

Section 14. Transport information

U.S.DOT 49CFR Ground/Air/Water : Not regulated for transportation.

International Air ICAO/IATA

: Not classified as dangerous goods under transport regulations.

International Water IMO/IMDG

: Not classified as dangerous goods under transport regulations.



FOREST GREEN

Version Number 1.0 Revision Date 05/10/2018 Page 13 of 16 Print Date 11/20/2018

Section 15. Regulatory information

U.S. Federal regulations

United States - TSCA 12(b) - Chemical export notification: None

of the components are listed.

United States - TSCA 4(a) - Final Test Rules: Not listed
United States - TSCA 4(a) - ITC Priority list: Not listed
United States - TSCA 4(a) - Proposed test rules: Not listed
United States - TSCA 4(f) - Priority risk review: Not listed
United States - TSCA 5(a)2 - Final significant new use rules: Not

listed

United States - TSCA 5(a)2 - Proposed significant new use rules:

Not listed

United States - TSCA 5(e) - Substances consent order: Not listed United States - TSCA 6 - Final risk management: Not listed United States - TSCA 6 - Proposed risk management: Not listed United States - TSCA 8(a) - Chemical risk rules: Not listed United States - TSCA 8(a) - Dioxin/Furane precusor: Not listed United States - TSCA 8(a) - Chemical Data Reporting (CDR): Not determined

United States - TSCA 8(a) - Preliminary assessment report (PAIR): Not listed

United States - TSCA 8(c) - Significant adverse reaction (SAR):

United States - TSCA 8(d) - Health and safety studies: Not listed United States - EPA Clean water act (CWA) section 307 - Priority pollutants: Listed Zinc stearate

Rutile, antimony chromium buff

Phthalocyanine green

United States - EPA Clean water act (CWA) section 311 -

Hazardous substances: Not listed

United States - EPA Clean air act (CAA) section 112 - Accidental

release prevention - Flammable substances: Not listed

United States - EPA Clean air act (CAA) section 112 - Accidental

release prevention - Toxic substances: Not listed

United States - Department of commerce - Precursor chemical:

Not listed

Not listed

Not listed

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) Clean Air Act Section 602 Class I

Listed

Substances

Clean Air Act Section 602 Class II



FOREST GREEN

Version Number 1.0 Page 14 of 16 Revision Date 05/10/2018 Print Date 11/20/2018

Substances

DEA List I Chemicals (Precursor: Not listed

Chemicals)

DEA List II Chemicals (Essential: Not listed

Chemicals)

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Classification
Caprolactam	1 - 3	АН
Carbon black	0.3 - 1	СН

SARA 313

	Product name	CAS number	%
Form R - Reporting	Rutile, antimony chromium	68186-90-3	1 - 3
requirements	buff		
Supplier notification	Rutile, antimony chromium	68186-90-3	1 - 3
	buff		!

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

MassachusettsNone of the components are listed.New YorkThe following components are listed:

Caprolactam

New Jersey: The following components are listed:

Phthalocyanine green

Rutile, antimony chromium buff

Caprolactam Carbon black

Pennsylvania: The following components are listed:

Phthalocyanine green

Rutile, antimony chromium buff



FOREST GREEN

Version Number 1.0 Revision Date 05/10/2018 Page 15 of 16 Print Date 11/20/2018

Caprolactam

Carbon black

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

United States inventory (TSCA 8b) : All components are listed or exempted.

Canada inventory : Not determined.

International regulations

Inventory list

Australia Not determined. Canada Not determined. China Not determined. Not determined. **Europe inventory** Japan Not determined. **New Zealand** Not determined. **Philippines** Not determined. Republic of Korea Not determined. Taiwan Not determined. **Turkey** Not determined.

United States : All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	/	0
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.



FOREST GREEN

Version Number 1.0 Page 16 of 16 Revision Date 05/10/2018 Print Date 11/20/2018

History

Date of printing: 11/20/2018Date of issue/Date of revision: 05/10/2018Date of previous issue: 00/00/0000

Version : 1.0

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of

Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine

pollution)

UN = United Nations

References : Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Particularly this information may not be valid for such material used in conjunction with any other materials or in any process, unless specified in the text.