

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 1 of 20
Print Date 04/19/2017

SAFETY DATA SHEET

FA-89**Section 1. Identification**

GHS product identifier : FA-89
Chemical name : Mixture
CAS number : Mixture
Other means of identification : CC10260783
Product type : liquid

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

Product use : Industrial applications. Plastics.

Supplier's details : **POLYONE CORPORATION**
ColorMatrix Group Inc.
680 North Rocky River Drive, Berea, Ohio, 44017-1628, USA

+1 216 622 0100

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 for health effects. Information provided on health effects of this product is based on the individual components. However, some vapors or contaminants 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. See sections 8 and 11 for special precautions. After handling, always wash hands thoroughly with soap and water.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2

SAFETY DATA SHEET

**FA-89**

Version Number 1.0
Revision Date 04/18/2017

Page 2 of 20
Print Date 04/19/2017

GHS label elements**Hazard pictograms****Signal word****Hazard statements**

- : Danger
- : Causes serious eye irritation.
- : Causes skin irritation.
- : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- : May cause an allergic skin reaction.
- : Suspected of causing genetic defects.

Precautionary statements**General****Prevention****Response****Storage****Disposal****Supplemental label elements****Hazards not otherwise classified**

- : Not applicable.
- : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Wear respiratory protection. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
- : IF exposed or concerned: Get medical attention. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- : Store locked up.
- : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- : None known.
- : None known.

Section 3. Composition/information on ingredients
--

Substance/mixture**Chemical name**

- : Mixture
- : Mixture

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 3 of 20
Print Date 04/19/2017

Other means of identification : CC10260783

CAS number/other identifiers

Ingredient name	%	CAS number
Sodium bicarbonate	30 - 60	144-55-8
Azodicarbonamide	10 - 30	123-77-3
Miscellaneous Compounds Distillates, petroleum, hydrotreated middle	10 - 30	Not available.
Calcium oxide	1 - 5	1305-78-8
Diphenyloxide-4,4'-disulfohydrazide	1 - 5	80-51-3
Zinc oxide	1 - 5	1314-13-2

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. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call

SAFETY DATA SHEET

**FA-89**

Version Number 1.0
Revision Date 04/18/2017

Page 4 of 20
Print Date 04/19/2017

- a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed**Potential acute health effects**

- Eye contact** : Causes serious eye irritation.
- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
- Skin contact** : Adverse symptoms may include the following:
irritation

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 5 of 20
Print Date 04/19/2017

Ingestion : redness
: 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO₂.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

Special protective actions for fire-fighters : 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 self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

SAFETY DATA SHEET

**FA-89**

Version Number 1.0
Revision Date 04/18/2017

Page 6 of 20
Print Date 04/19/2017

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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage**Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 7 of 20
Print Date 04/19/2017

- eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** :
- 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. Store in a well-ventilated place. 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
Calcium oxide	<p>OSHA PEL 1989 (1989-03-01) PEL: Permissible Exposure Level 5 mg/m³</p> <p>OSHA PEL (1993-06-30) PEL: Permissible Exposure Level 5 mg/m³</p> <p>NIOSH REL (1994-06-01) Time Weighted Average (TWA) 2 mg/m³</p> <p>ACGIH TLV (1994-09-01) TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 2 mg/m³</p>
Diphenyloxide-4,4'-disulfohydrazide	<p>ACGIH TLV (2000-03-01) TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 0.1 mg/m³ Form: Inhalable fraction</p>

SAFETY DATA SHEET



FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 8 of 20
Print Date 04/19/2017

Zinc oxide	<p>OSHA PEL 1989 (1989-03-01) PEL: Permissible Exposure Level 5 mg/m³ Form: Fume Maximum permissible limit of exposure in the short term (short-term exposure limit). 10 mg/m³ Form: Fume PEL: Permissible Exposure Level 10 mg/m³ Form: Total dust PEL: Permissible Exposure Level 5 mg/m³ Form: Respirable fraction</p> <p>OSHA PEL (1993-06-30) PEL: Permissible Exposure Level 15 mg/m³ Form: Total dust PEL: Permissible Exposure Level 5 mg/m³ Form: Respirable fraction</p> <p>NIOSH REL (1994-06-01) Time Weighted Average (TWA) 5 mg/m³ Form: Dust and fumes Maximum permissible limit of exposure in the short term (short-term exposure limit). 10 mg/m³ Form: Fume Ceiling-A concentration that should not be exceeded at any time during any part of the working day. 15 mg/m³ Form: Dust</p> <p>ACGIH TLV (2003-01-01) TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 2 mg/m³ Form: Respirable fraction TLV-STEL: Threshold Limit Value - Short Time Exposure Level 10 mg/m³ Form: Respirable fraction</p> <p>OSHA PEL (1993-06-30) PEL: Permissible Exposure Level 5 mg/m³ Form: Fume</p>
Azodicarbonamide	
Miscellaneous Compounds Distillates, petroleum, hydrotreated middle	
Sodium bicarbonate	

- Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- 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

SAFETY DATA SHEET

**FA-89**

Version Number 1.0
Revision Date 04/18/2017

Page 9 of 20
Print Date 04/19/2017

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. Contaminated work clothing should not be allowed out of the workplace. 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: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- 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** : liquid [liquid]

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 10 of 20
Print Date 04/19/2017

Color	:	NOT APPLICABLE
Odor	:	Faint odor.
Odor threshold	:	Not available.
pH	:	Not available.
Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Not available.
Burning time	:	Not available.
Burning rate	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Lower: Not available. Upper: Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	Not available.
Solubility	:	Not available.
Solubility in water	:	insoluble in water.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature SADT	:	Not available.
Viscosity	:	Dynamic: Not available. Kinematic: Not available.

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 products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 11 of 20
Print Date 04/19/2017

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**

Product/ingredient name	Result	Species	Dose	Exposure
Diphenyloxide-4,4'-disulfohydrazide	LD50 Oral	Rat	2,300 mg/kg	-
Zinc oxide				
Azodicarbonamide	LD50 Oral	Rat	6,400 mg/kg	-
Miscellaneous Compounds Distillates, petroleum, hydrotreated middle				
Sodium bicarbonate	LD50 Oral	Rat	4,220 mg/kg	-

Conclusion/Summary : Mixture.Not fully tested.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Zinc oxide	Eyes - Mild irritant	Rabbit		24 hrs	-
	Skin - Mild irritant	Rabbit		24 hrs	-
Sodium bicarbonate	Eyes - Mild irritant	Rabbit		0.008 hrs	-
	Skin - Mild irritant	Human		72 hrs	-

Conclusion/Summary

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

Sensitization**Conclusion/Summary**

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

Mutagenicity

Conclusion/Summary : Mixture.Not fully tested.

Carcinogenicity

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 12 of 20
Print Date 04/19/2017

Conclusion/Summary : Mixture.Not fully tested.

Reproductive toxicity

Conclusion/Summary : Mixture.Not fully tested.

Teratogenicity

Conclusion/Summary : Mixture.Not fully tested.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Calcium oxide	Category 3		Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Miscellaneous Compounds Distillates, petroleum, hydrotreated middle	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.
Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin contact : Causes skin irritation. May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness
Inhalation : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
Skin contact : Adverse symptoms may include the following:

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 13 of 20
Print Date 04/19/2017

Ingestion : irritation
redness
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 : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : Suspected of causing genetic defects.

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**

Route	ATE value
Oral	6,742.9 mg/kg
Route	ATE value
Inhalation (dusts and mists)	6.25 mg/l

Section 12. Ecological information**Toxicity**

Product/ingredient name	Result	Species	Exposure
Calcium oxide			

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 14 of 20
Print Date 04/19/2017

	Chronic NOEC 100 mg/l Fresh water	Fish - Fish	46 d
	Chronic NOEC 100 mg/l Fresh water	Fish - Fish	46 d
	Chronic NOEC 100 mg/l Fresh water	Fish - Fish	46 d
	Chronic NOEC 100 mg/l Fresh water	Fish - Fish	46 d
	Chronic NOEC 100 mg/l Fresh water	Fish - Fish	46 d
Zinc oxide			
	Acute LC50 2,246,000 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 1.1 mg/l Fresh water	Fish - Fish	96 h
	Acute LC50 2.525 mg/l Fresh water	Fish - Fish	96 h
	Acute LC50 3.969 mg/l Fresh water	Fish - Fish	96 h
	Acute LC50 98 µg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 0.622 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 1 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 1.25 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 0.481 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute IC50 46 µg/l Fresh water	Aquatic plants - Algae	72 h
	Acute IC50 63 µg/l Fresh water	Aquatic plants - Algae	72 h
	Acute IC50 1.85 mg/l Marine water	Aquatic plants - Algae	96 h
	Acute IC50 2.97 mg/l Marine water	Aquatic plants - Algae	96 h
	Acute IC50 2.36 mg/l Marine water	Aquatic plants - Algae	96 h
Sodium bicarbonate			
	Acute LC50 8,600,000 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 8,600,000 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 8,600,000 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 8,250,000 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 7,550 mg/l Fresh water	Fish - Fish	96 h
	Acute LC50 767.87 mg/l Marine	Aquatic invertebrates.	48 h

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 15 of 20
Print Date 04/19/2017

	water	Crustaceans	
	Acute LC50 1,415.51 mg/l Marine water	Aquatic invertebrates. Crustaceans	48 h
	Acute EC50 650,000 µg/l Fresh water	Aquatic plants - Algae	96 h
	Chronic NOEC 576 mg/l Fresh water	Aquatic invertebrates. Daphnia	21 d
FA-89			
Remarks - Acute - Aquatic invertebrates.:		Dangerous for the environment: May cause long term adverse effects in the aquatic environment.	

Conclusion/Summary : Dangerous for the environment: May cause long term adverse effects in the aquatic environment.

Persistence and degradability

Conclusion/Summary : Not available.

Conclusion/Summary : Dangerous for the environment: May cause long term adverse effects in the aquatic environment.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Calcium oxide		2.34	low
Diphenyloxide-4,4'-disulfohydrazide		3.00	low
Zinc oxide		60,960.00	high
Azodicarbonamide	1	-	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

SAFETY DATA SHEET

**FA-89**

Version Number 1.0
Revision Date 04/18/2017

Page 16 of 20
Print Date 04/19/2017

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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. 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	:	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zinc Oxide), 9, PGIII, Marine Pollutant
International Water IMO/IMDG	:	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zinc Oxide), 9, PGIII, Marine Pollutant

Section 15. Regulatory information

U.S. Federal regulations	:	<p>United States - TSCA 12(b) - Chemical export notification: None of the components are listed.</p> <p>United States - TSCA 4(a) - Final Test Rules: Not listed</p> <p>United States - TSCA 4(a) - ITC Priority list: Not listed</p> <p>United States - TSCA 4(a) - Proposed test rules: Not listed</p> <p>United States - TSCA 4(f) - Priority risk review: Not listed</p> <p>United States - TSCA 5(a)2 - Final significant new use rules: Not listed</p> <p>United States - TSCA 5(a)2 - Proposed significant new use rules: Not listed</p> <p>United States - TSCA 5(e) - Substances consent order: Not listed</p> <p>United States - TSCA 6 - Final risk management: Not listed</p> <p>United States - TSCA 6 - Proposed risk management: Not listed</p> <p>United States - TSCA 8(a) - Chemical risk rules: Not listed</p> <p>United States - TSCA 8(a) - Dioxin/Furane precursor: Not listed</p> <p>United States - TSCA 8(a) - Chemical Data Reporting (CDR): Not</p>
--------------------------	---	---

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 17 of 20
Print Date 04/19/2017

determined

United States - TSCA 8(a) - Preliminary assessment report (PAIR): Listed **Diphenyloxide-4,4'-disulfohydrazide**

United States - TSCA 8(c) - Significant adverse reaction (SAR):
Not listed

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

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

Clean Air Act Section 112(b) : Not listed
Hazardous Air Pollutants (HAPs)
Clean Air Act Section 602 Class I Substances : Not listed
Clean Air Act Section 602 Class II Substances : Not listed
DEA List I Chemicals (Precursor Chemicals) : Not listed
DEA List II Chemicals (Essential Chemicals) : Not listed

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Classification
Calcium oxide	1 - 5	AH
Diphenyloxide-4,4'-disulfohydrazide	1 - 5	F, AH, CH

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 18 of 20
Print Date 04/19/2017

Zinc oxide	1 - 5	AH
Azodicarbonamide	10 - 30	AH
Miscellaneous Compounds Distillates, petroleum, hydrotreated middle	10 - 30	AH
Sodium bicarbonate	30 - 60	AH

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Zinc oxide	1314-13-2	1 - 5
Supplier notification	Zinc oxide	1314-13-2	1 - 5

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

- Massachusetts** : None of the components are listed.
- New York** : None of the components are listed.
- New Jersey** : The following components are listed:
Zinc oxide
Diphenyloxide-4,4'-disulfohydrazide
Calcium oxide
- Pennsylvania** : The following components are listed:
Calcium oxide

Zinc oxide

California Prop. 65

This PolyOne product does not contain any chemical known to the State of California to cause cancer, or birth defects or other reproductive harm, in concentrations that require a warning notice under California's Proposition 65. This statement relies in part on information provided by the buyer of this PolyOne product. PolyOne does not control or have complete knowledge of the end uses to which that buyer or any other entity in the chain of distribution and marketing may put this PolyOne product. Therefore, the buyer of this PolyOne product, each entity that uses this PolyOne product in formulating another product, and each entity in the chain of distribution and marketing of any product that includes the material in this PolyOne product must make its own decision as to giving a Proposition 65 warning.

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

Canada inventory : All components are listed or exempted.

SAFETY DATA SHEET

FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 19 of 20
Print Date 04/19/2017

International regulations
Inventory list

Australia	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe inventory	:	All components are listed or exempted.
Japan	:	Not determined.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
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	*	1
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 are not required on SDSs 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 mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

History

Date of printing	:	04/19/2017
Date of issue/Date of revision	:	04/18/2017
Date 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

SAFETY DATA SHEET



FA-89

Version Number 1.0
Revision Date 04/18/2017

Page 20 of 20
Print Date 04/19/2017

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.