1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Inc.
900 First Avenue
King of Prussia, Pennsylvania 19406

Functional Additives

Customer Service Telephone Number: (800) 331-7654
(Monday through Friday, 8:00 AM to 5:00 PM EST)

Emergency Information

Transportation: CHEMTREC: (800) 424-9300
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

Product Information

Product name: LUPEROX® 313
Synonyms: Mixture of organic peroxides on a silane modified clay carrier
Molecular formula: Complex Mixture
Chemical family: Organic Peroxide
Product use: Initiator

2. HAZARDS IDENTIFICATION

Emergency Overview
Color: off-white
Physical state: solid
Form: powder
Odor: pungent, unpleasant

***Classification of the substance or mixture:**
Organic peroxides, Type G
Chronic aquatic toxicity, Category 3, H412

*For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labelling

Hazard statements:
H412 : Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements:
Organic peroxide. May form combustible dust concentrations in air.

Precautionary statements:

Prevention:
P273 : Avoid release to the environment.

Disposal:
P501 : Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects:
Prolonged or repeated exposure may cause: irritation, nosebleeds, appearance of visible blood vessels in the nose, (severity of effects depends on extent of exposure).

Other:
Dust and/or vapor are reported to cause irritation when proper industrial hygiene controls/procedures are not used.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
Kaolin, calcined	92704-41-1	>= 55 - <= 65 %	Not classified
Peroxide A	Proprietary*	>= 20 - < 30 %	H242, H413
Proprietary Ingredient	Proprietary*	< 10 %	Not classified
Peroxide, 1,1-dimethylethyl 1-methyl-1-phenylethyl	3457-61-2	< 15 %	H315, H242, H411
Silica gel, pptd., cryst.-free	112926-00-8	>= 1 - < 5 %	Not classified
Peroxide C	Proprietary*	< 8 %	H242, H411, H315, H320
Peroxide D	Proprietary*	< 2 %	H315, H242, H411

*The specific chemical identity is withheld because it is trade secret information of Arkema Inc.

**For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

Inhalation:
If inhaled, remove victim to fresh air.

Skin:
In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:
Immediately flush eye(s) with plenty of water.

Ingestion:
If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

5. FIREFIGHTING MEASURES

Extinguishing media (suitable):
Water spray, Carbon dioxide (CO2), Foam, Dry chemical

Extinguishing media (unsuitable):
High volume water jet

Protective equipment:
Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:
Do not use a solid stream of water.
A solid stream of water can cause a dust explosion.
Fight fire with large amounts of water from a safe distance.
Cool closed containers exposed to fire with water spray.
Closed containers of this material may explode when subjected to heat from surrounding fire.
After a fire, wait until the material has cooled to room temperature before initiating clean-up activities.
Do not allow run-off from fire fighting to enter drains or water courses.
Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:

Dust clouds generated during handling and/or storage can form explosive mixtures with air. Dust explosion characteristics vary with the particle size, particle shape, moisture content, contaminants, and other variables.
Note: Check that all equipment is properly grounded and installed to satisfy electrical classification requirements. As with any dry material, pouring this material or allowing it to free-fall or to be conveyed through chutes or pipes can accumulate and generate electrostatic sparks, potentially causing ignition of the material itself, or of any flammable materials which may come into contact with the material or its container.
Contact with incompatible materials or exposure to temperatures exceeding the SADT may result in a self accelerating decomposition reaction with release of flammable vapors which may autoignite.
When burned, the following hazardous products of combustion can occur:
Carbon oxides
Hazardous organic compounds

6. ACCIDENTAL RELEASE MEASURES

In case of spill or leak:
Prevent further leakage or spillage if you can do so without risk. Evacuate area of all unnecessary personnel. Ventilate the area. Eliminate all ignition sources. Avoid dust formation and dispersal of dust in the air. Wet down (dampen) the spilled material with water. Sweep or scoop up using non-sparking tools and place into suitable properly labeled containers for prompt disposal. The sweepings should be wetted down further with water. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Implement workplace practices such that dusts are not allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7. HANDLING AND STORAGE

Handling

General information on handling:
Contact with materials to avoid or exposure to temperatures exceeding the SADT may result in a self-accelerating decomposition reaction with release of flammable vapors which may autoignite.
Avoid breathing dust.
Keep away from heat, sparks and flames.
Keep container closed.
Use only with adequate ventilation.
Prevent product contamination.
Keep container tightly closed and away from combustible materials.
Avoid creating dust in handling, transfer or clean up.
Prevent dust accumulation.
Implement routine housekeeping practices to ensure that dusts do not accumulate on surfaces.
Container hazardous when empty.
Check that all equipment is properly grounded and installed to satisfy electrical classification requirements.
Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations.
Improper disposal or reuse of this container may be dangerous and/or illegal.
Follow label warnings even after container is emptied.
RESIDUAL DUSTS MAY EXPLODE ON IGNITION.
DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.
Emptied container retains product residue.
Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin, and clothing.

Storage

General information on storage conditions:
Keep in a dry, cool place.Store in closed containers, in a secure area to prevent container damage and subsequent spillage.Outside or detached storage is preferred.Store in well ventilated area away from heat and sources of ignition such as flame, sparks and static electricity.Ensure that all storage and handling equipment is properly grounded and installed to satisfy electrical classification requirements.Store out of direct sunlight in a cool well-ventilated place.Store away from combustibles and materials to avoid.Refer also to National Fire Protection Association (NFPA) Code 400, Hazardous Materials Code.Static electricity may accumulate when transferring material.All metal and groundable storage containers, including but not limited to drums, cylinders, Returnable Intermodal Bulk Containers (RIBCs) and Class C Flexible Intermodal Bulk Containers (FIBCs) must be bonded and grounded during filling and emptying operations.Observe all federal, state and local regulations and National Fire Protection Association (NFPA) Codes, which pertain to the specific local conditions of storage and use, including NFPA 654.

Storage stability – Remarks:
Follow the recommended storage temperatures provided in this Section in order to maintain stability and oxygen content.

Storage incompatibility – General:
Store away from excessive heat, sources of ignition, and reactive materials.

Store separate from:

Strong acids

Strong oxidizing agents

Reducing agents

Accelerators

Friedel - Crafts reaction catalyst

Brass

Copper

Iron

For all Organic Peroxides, compatible materials of contact are stainless steel 304 or 316 (preferred), high-density polyethylene (HDPE), polytetrafluoroethylene or glass linings.

Temperature tolerance – Do not store above:
86 °F (30 °C)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Silica gel, pptd., cryst.-free (112926-00-8)

US. OSHA Table Z-3 (29 CFR 1910.1000)

Time weighted average	20millions of particles per cubic foot of air
Time weighted average	0.8 mg/m3
Remarks:	The exposure limit is calculated from the equation, 80/(%SiO2), using a value of 100% SiO2. Lower values of % SiO2 will give higher exposure limits.

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:
Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above).If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Check that all dust control equipment such as local exhaust ventilation, material transport systems, and air-material separation devices involved in handling this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.Isolation devices may be appropriate to prevent propagation from one unit to another.Ensure that dust-handling systems are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).Consult ACGIH ventilation manual, NFPA Standard 91 and NFPA Standard 654 for design of exhaust system and safe handling.

Respiratory protection:
Avoid breathing dust. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection:
Minimize skin contamination by following good industrial hygiene practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Eye protection:
Use good industrial practice to avoid eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	off-white
Physical state:	solid
Form:	powder

Odor:	pungent, unpleasant
Odor threshold:	No data available
Flash point	No data available
Auto-ignition temperature:	No data available
Lower flammable limit (LFL):	No data available
Upper flammable limit (UFL):	No data available
pH:	Not applicable
Density:	No data available
Specific Gravity (Relative density):	Not applicable
Bulk density:	400.46 kg/m3
Vapor pressure:	not determined
Vapor density:	negligible
Boiling point/boiling range:	Decomposes on heating.
Melting point/range:	not determined
Evaporation rate:	No data available
Solubility in water:	Negligible
Oil/water partition coefficient:	No data available
Self-Accelerating Decomposition Temperature (SADT):	> 140 °F (> 60 °C) (Method: Heat Accumulation Storage Test)
Thermal decomposition	No data available
Flammability:	See GHS Classification in Section 2

10. STABILITY AND REACTIVITY

Stability:
This material is chemically unstable and should only be handled under specified conditions. See HANDLING AND STORAGE section of this MSDS for specified conditions.

Hazardous reactions:
Hazardous polymerization does not occur.

Materials to avoid:
Strong acids
Strong bases
Strong oxidizing agents
Reducing agents
Accelerators
Friedel - Crafts reaction catalyst
transition metal salts
metal ions
Brass
Copper
Iron
For all Organic Peroxides, compatible materials of contact are stainless steel 304 or 316 (preferred), high-density polyethylene (HDPE), polytetrafluoroethylene or glass linings.

Conditions / hazards to avoid:
See HANDLING AND STORAGE section of this MSDS for specified conditions. SADT - Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction. This reaction will generate flammable vapors which may autoignite. The length of time to generate a decomposition reaction, after the SADT has been reached or exceeded, is dependent upon how much the SADT has been exceeded and the length of time needed for the reaction exotherm (heat spike from increasing decomposition rate) to initiate a rapid decomposition reaction. Typically, SADT is inversely proportional to package size. Larger packages will have a lower SADT due to smaller ratio to heat transfer area to volume of product.

Hazardous decomposition products:

Temperatures at or above SADT can result in the release of hazardous decomposition products which are flammable and may autoignite.
Thermal decomposition giving flammable and toxic products:
Carbon oxides
Hazardous organic compounds

11. TOXICOLOGICAL INFORMATION

Data on this material and/or its components are summarized below.

Oral:
Acute toxicity estimate > 5,000 mg/kg.

Data for Kaolin, calcined (92704-41-1)

Acute toxicity

Dermal:
No deaths occurred. (Rat) LD0 > 5,000 mg/kg.

Inhalation:
No deaths occurred. (Rat) 4 h LC0 > 2.07 mg/l. (dust)

Skin Irritation:
Not irritating. (Rabbit) Irritation Index: 0/8. (4 h)

Eye Irritation:
Causes mild eye irritation. (Rabbit)

Skin Sensitization:
Not a sensitizer. LLNA: Local Lymph Node Assay. (Mouse) No effect is reported.

Other information
The information presented is from a representative material with a similar structure. The results vary depending on the size and composition of the test substance.

Human experience
Skin contact:
Skin: Non-irritating. No skin allergy was observed

Human experience
Eye contact:
Eye: slightly irritating.

Data for Peroxide A (Proprietary)

Acute toxicity

Dermal:
No deaths occurred. (Rat) LD0 > 2,000 mg/kg.

Skin Irritation:
Not irritating. (Rabbit) Irritation Index: 0/8. (4 h)

Eye Irritation:
Causes mild eye irritation. (Rabbit) Irritation Index: 1.6 / 110.

Skin Sensitization:
Not a sensitizer. LLNA: Local Lymph Node Assay. (Mouse) No effect is reported.

Repeated dose toxicity
Repeated oral administration to Rat / affected organ(s): kidney / signs: changes in organ structure or function, hyaline droplet nephropathy

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells, human cells

Reproductive effects

Reproductive/Developmental Effects Screening Assay. oral (Rat) / Effects on fertility / (levels produced toxic effects in the mothers and offspring, smaller litter sizes, reductions in birth weight)

Human experience
Inhalation:
Respiratory tract: irritation. Dust and/or vapor are reported to cause irritation when proper industrial hygiene controls/procedures are not used.

Human experience
Eye contact:
Eyes: irritation. (based on reports of occupational exposure to workers) Dust and/or vapor are reported to cause irritation when proper industrial hygiene controls/procedures are not used.

Data for Peroxide, 1,1-dimethylethyl 1-methyl-1-phenylethyl (3457-61-2)

Acute toxicity

Dermal:
No deaths occurred. (Rat) LD0 > 2,000 mg/kg.

Inhalation:
No deaths occurred. (Rat) 4 h LC0 = 1.2 mg/l.

Skin Irritation:
Causes skin irritation. (Rabbit) Irritation Index: 2.9 / 8. (4 h) signs: redness, swelling

Irritating to skin. (Rabbit) (24 h) Prolonged and/or repeated contacts (occluded exposure)

Eye Irritation:
Not irritating. (Rabbit) Irritation Index: 0.

Skin Sensitization:
Not a sensitizer. Guinea pig maximization test. Skin allergy was observed. (Weak response)

Repeated dose toxicity
Repeated oral administration to rat / affected organ(s): liver, kidney / signs: reduced body weight, tremors, changes in organ weights, changes in organ structure or function

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells, human cells

Reproductive effects
Reproductive/Developmental Effects Screening Assay. oral (rat) / At high dose : Effects on fertility and offspring / (toxic effects also observed in the parental animals at these doses)

Data for Silica gel, pptd., cryst.-free (112926-00-8)

Acute toxicity

Dermal:
Practically nontoxic. (Rabbit) LD50 > 5,000 mg/kg.

Inhalation:

No deaths occurred. (rat) 4 h LC0 > 2.08 mg/l.

Skin Irritation:
Practically non-irritating. (Rabbit) 0-2 / 8. (4 h)

Eye Irritation:
Causes mild eye irritation. (rabbit)

Repeated dose toxicity
Repeated inhalation administration to rat / affected organ(s): lung, lymph node / signs: inflammation /
No adverse systemic effects reported. (Local effects, reversible)

Repeated dietary administration to rat / No adverse systemic effects reported.

Carcinogenicity
Chronic dietary administration to rat and mouse / affected organ(s): lung / signs: No increase in tumor incidence was reported.
Classified by the International Agency for Research on Cancer as: Group 3: Unclassifiable as to carcinogenicity in humans.

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells, human cells, yeast

Genotoxicity

Assessment in Vivo:
No genetic changes were observed in a laboratory test using: rats

Developmental toxicity

Exposure during pregnancy. Oral (rat, rabbit, hamster, mouse) / No birth defects were observed.

Other information
Information given is based on data obtained from similar substances.

Human experience
Inhalation:
Respiratory system: No increase in tumor incidence was reported. No significant impairment of lung function. (based on reports of occupational exposure to workers)

Data for Peroxide C (Proprietary)

Acute toxicity

Dermal:
No deaths occurred. (Rat) LD0 > 2,000 mg/kg.

Inhalation:
No deaths occurred. (rat, rabbit) 6 h LC0 >= 0.224 mg/l. (40 %) (dust, maximum achieved concentration)

Skin Irritation:
Practically non-irritating. (Rabbit) Irritation Index: 0.4/8. (4 h)

Eye Irritation:
Not irritating. (Rabbit)

Skin Sensitization:
Not a sensitizer. Intradermal injection. (Guinea pig) No skin allergy was observed

Not a sensitizer. LLNA: Local Lymph Node Assay. (Mouse) No skin allergy was observed

Repeated dose toxicity
Repeated oral administration to rat / affected organ(s): liver / signs: increased organ weight, changes in organ structure or function

Repeated inhalation administration to rat / affected organ(s): upper respiratory tract, eye / signs: irritation

Repeated inhalation administration to rabbit / affected organ(s): nose, nasal tissues / signs: irritation, changes in organ structure or function

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells

Human experience
Inhalation:
Respiratory tract: Dust and/or vapor are reported to cause irritation when proper industrial hygiene controls/procedures are not used.

Nose: irritation, nosebleeds, appearance of visible blood vessels in the nose. (repeated or prolonged exposure) (based on reports of occupational exposure to workers)

Human experience
Skin contact:
Irritant but not a sensitizer.

Human experience
Eye contact:
Dust and/or vapor are reported to cause irritation when proper industrial hygiene controls/procedures are not used. (based on reports of occupational exposure to workers)

Data for Peroxide D (Proprietary)

Acute toxicity

Dermal:
No deaths occurred. (rat) LD0 > 2,000 mg/kg.

Inhalation:
No deaths occurred. (rat) 4 h LC0 = 1.2 mg/l. (vapor)

Skin Irritation:
Causes mild skin irritation. (rabbit) Irritation Index: 2.9 / 8. (4 h)

Causes skin irritation. (rabbit) Irritation Index: 3.8/8. (24 h) (occluded exposure)

Eye Irritation:
Not irritating. (rabbit)

Skin Sensitization:
Not a sensitizer. Guinea pig maximization test. (guinea pig) Skin allergy was observed. (Weak response)

Repeated dose toxicity
Repeated oral administration to rat / affected organ(s): liver, kidney / signs: reduced body weight, changes in organ weights, changes in organ structure or function

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells, human cells

Reproductive effects
Reproductive/Developmental Effects Screening Assay. oral (rat) / At high dose : Effects on fertility and offspring / (toxic effects also observed in the parental animals at these doses)

Other information
The information presented is from a representative material with a similar structure. The results vary depending on the size and composition of the test substance.

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway
Data on this material and/or its components are summarized below.

Data for Peroxide A (Proprietary)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 0 %

Bioaccumulation:
calculated = 536

Octanol Water Partition Coefficient:
log Pow = 7.3 (calculated)

Data for Peroxide, 1,1-dimethylethyl 1-methyl-1-phenylethyl (3457-61-2)

Biodegradation:
Not readily biodegradable. (58 d) biodegradation 0 %

Octanol Water Partition Coefficient:
log Pow = 4.4

Mobility and Distribution in the Environment:
Log Koc = 3.3

Data for Peroxide C (Proprietary)

Biodegradation:
Not readily biodegradable. (Closed Bottle test, 28 d) biodegradation 0 - 18 %
Inherently biodegradable. (Closed Bottle test, 57 d) biodegradation 60 %

Bioaccumulation:
56 d 137 - 1,470 (Carp)

Octanol Water Partition Coefficient:
log Pow = 5.6

Photodegradation:
Air reaction with OH radicals Half-life direct photolysis: 23 h

Mobility and Distribution in the Environment:
Strong adsorption / Log Koc = 3.56

Data for Peroxide D (Proprietary)

Biodegradation:
Not readily biodegradable. (58 d) biodegradation 0 %

Octanol Water Partition Coefficient:
log Pow = 4.4

Mobility and Distribution in the Environment:
Log Koc = 3.3

Additional Information:
Information given is based on data obtained from similar substances.

Ecotoxicology
Data on this material and/or its components are summarized below.

Data for Kaolin, calcined (92704-41-1)

Aquatic toxicity data:
Practically nontoxic. Oncorhynchus mykiss 96 h LC0 > 100 mg/l

Aquatic invertebrates:
Immobilization / Daphnia magna (Water flea) 48 h EC0 > 1 mg/l

Algae:
Practically nontoxic. Desmodesmus subspicatus (green algae) 72 h EC0 (growth rate) > 100 mg/l

Data for Peroxide A (Proprietary)

Aquatic toxicity data:
Practically nontoxic. Poecilia reticulata (guppy) 96 h LC50 = 750 mg/l (similar material)

Aquatic invertebrates:
No effect up to the limit of solubility. Daphnia magna (Water flea) 48 h EC0 > 1 mg/l (Nominal concentration, Water accommodated fraction was tested.)

Algae:

No effect up to the limit of solubility. Pseudokirchneriella subcapitata (green algae) 72 h EC0 > 1 mg/l (Nominal concentration, Water accommodated fraction was tested.)

Microorganisms:
Respiration inhibition / Activated sludge 30 min EC50 > 1,000 mg/l (similar material)

Data for Peroxide, 1,1-dimethylethyl 1-methyl-1-phenylethyl (3457-61-2)

Aquatic invertebrates:
Toxic. Daphnia magna (Water flea) 48 h EC50 = 4.3 mg/l

Algae:
No effect up to the limit of solubility. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 > 100 mg/l (nominal concentrations reported)

Microorganisms:
No effect up to the limit of solubility. Activated sludge 58 h NOEC (Respiration inhibition) = 100 mg/l (nominal concentrations reported)

Chronic toxicity to aquatic plants:
Toxic. Pseudokirchneriella subcapitata (green algae) 72 h EC10 (growth rate) >= 0.5 mg/l

Data for Silica gel, pptd., cryst.-free (112926-00-8)

Aquatic toxicity data:
No effect up to the limit of solubility. Brachydanio rerio (zebrafish) 96 h LC0 > 10,000 mg/l (nominal concentrations reported)

Aquatic invertebrates:
No effect up to the limit of solubility. Daphnia (water flea) 24 h LC0 > 10,000 mg/l (nominal concentrations reported)

Data for Peroxide C (Proprietary)

Aquatic invertebrates:
No effect up to the limit of solubility. Immobilization / Daphnia magna (Water flea) 48 h EC0 > 0.43 mg/l

Algae:
No effect up to the limit of solubility. Selenastrum capricornutum 72 h EC0 (Growth inhibition) > 0.43 mg/l

Microorganisms:
No effect up to the limit of solubility. Respiration inhibition / Activated sludge 30 min NOEC > 1,000 mg/l (Nominal concentration, Water accommodated fraction was tested.)

Chronic toxicity to aquatic invertebrates:
Reproduction Test / Daphnia magna (Water flea) 21 d EC50 = 0.213 mg/l

Data for Peroxide D (Proprietary)

Information given is based on data obtained from similar substances.

Aquatic invertebrates:
Toxic. Daphnia magna (Water flea) 48 h EC50 = 4.3 mg/l

Algae:

No effect up to the limit of solubility. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 > 100 mg/l (nominal concentrations reported)

Microorganisms:
No effect up to the limit of solubility. Activated sludge 58 h NOEC (Respiration inhibition) = 100 mg/l (nominal concentrations reported)

13. DISPOSAL CONSIDERATIONS

Waste disposal:
Disposal via incineration is recommended. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

Take appropriate measures to prevent release to the environment.

14. TRANSPORT INFORMATION

US Department of Transportation (DOT): not regulated

Special Shipping Information: DOT Competent Authority # CA-2009070037

International Maritime Dangerous Goods Code (IMDG): not regulated

15. REGULATORY INFORMATION

Chemical Inventory Status

EU. EINECS	EINECS	Conforms to
United States TSCA Inventory	TSCA	The components of this product are all on the TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	This product contains one or several components listed in the Canadian NDSL list. All other components are on the DSL list.
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	Conforms to
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Does not conform
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Does not conform

Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	Conforms to
Australia Inventory of Chemical Substances (AICS)	AICS	Does not conform

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:

The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Categories:
Fire Hazard, Reactivity Hazard

SARA Title III – Section 313 Toxic Chemicals:
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

United States – State Regulations

New Jersey Right to Know

Chemical Name	CAS-No.
Silica gel, pptd., cryst.-free	112926-00-8

Pennsylvania Right to Know

Chemical Name	CAS-No.
Kaolin, calcined	92704-41-1
Peroxide A	Proprietary
Proprietary Ingredient	Proprietary
Peroxide, 1,1-dimethylethyl 1-methyl-1-phenylethyl	3457-61-2
Silica gel, pptd., cryst.-free	112926-00-8

California Prop. 65
WARNING! This product contains a chemical known to the State of California to cause cancer.

Chemical Name	CAS-No.
Benzene, (1-methylethenyl)-	98-83-9

California Prop. 65
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Chemical Name	CAS-No.
Benzene, (1-methylethenyl)-	98-83-9

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H242 Heating may cause a fire.
H315 Causes skin irritation.
H320 Causes eye irritation.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

Miscellaneous:

Other information: Refer to National Fire Protection Association (NFPA) Code 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Latest Revision(s):

Reference number: 000000060497
Date of Revision: 04/09/2015
Date Printed: 04/09/2015

LUPEROX® is a registered trademark of Arkema Inc.

Arkema Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Arkema Inc., Arkema Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.