



SAFETY DATA SHEET

LUPEROX® F40P-SP2 B

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® F40P-SP2 B
Synonyms: Not available
Molecular formula: Complex mixture
Chemical family: Organic peroxide - dialkyl peroxides
Product use: Cross-linking agent for polymers and elastomers

SECTION 2: HAZARDS IDENTIFICATION

Emergency Overview

Color: Whitish.
Physical state: solid
Form: powder
Odor: Slightly irritating

***Classification of the substance or mixture:**

Organic peroxides, Type D, H242
Serious eye damage, Category 1, H318
Chronic aquatic toxicity, Category 4, H413

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

SAFETY DATA SHEET



LUPEROX® F40P-SP2 B

GHS-Labeling

Hazard pictograms:



Signal word:

Danger

Hazard statements:

- H242 : Heating may cause a fire.
- H318 : Causes serious eye damage.
- H413 : May cause long lasting harmful effects to aquatic life.

Supplemental Hazard Statements:

- Organic peroxide.
- Hazardous decomposition may occur.
- May form combustible dust concentrations in air.

Precautionary statements:

Prevention:

- P210 : Keep away from heat, sparks, open flames, hot surfaces. No smoking.
- P220 : Keep/Store away from clothing/ combustible materials.
- P234 : Keep only in original container.
- P273 : Avoid release to the environment.
- P280 : Wear protective gloves or eye protection or face protection.

Response:

- P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 : Immediately call a POISON CENTER or doctor.

Storage:

- P410 : Protect from sunlight.
- P411 + P235 : Maximum storage temperature is specified on label and in section 7 of SDS. Keep cool.
- P420 : Store away from other materials.

Disposal:

- P501 : Dispose of contents or container to an approved waste disposal plant.

Supplemental information:

Potential Health Effects:

Product code: 102786

Version 1.2

Issued on: 07/09/2021

Page: 2 / 20

SAFETY DATA SHEET



LUPEROX® F40P-SP2 B

Mechanical irritation effects from dust exposure are possible at ambient temperature.

Other:

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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
--

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
Carbonic acid calcium salt (1:1)	471-34-1	< 53 %	Not classified
Peroxide, [1,3(or 1,4)-phenylenebis(1-methylethylidene)]bis[(1,1-dimethylethyl)	25155-25-3	>= 38 - < 43 %	H242, H413
Silica gel, pptd., cryst.-free	112926-00-8	< 5 %	Not classified
Anti-oxidizing agent	Proprietary*	< 4 %	H302, H318
Peroxide, 1,1-dimethylethyl 1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl	96319-55-0	< 2 %	H315, H319

*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.

SECTION 4: FIRST AID MEASURES

4.1. Description of necessary first-aid measures:

Inhalation:

Product code: 102786

Version 1.2

Issued on: 07/09/2021

Page: 3 / 20

LUPEROX® F40P-SP2 B

If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

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

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information if applicable) and Section 11 (Toxicology Information) of this SDS.

4.3. Indication of any immediate medical attention and special treatment needed:

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

SECTION 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:

SAFETY DATA SHEET



LUPEROX® F40P-SP2 B

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. 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. When burned, the following hazardous products of combustion can occur:
Aromatic derivatives
Hazardous organic compounds
Carbon oxides

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:

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.

Protective equipment:

Appropriate personal protective equipment is set forth in Section 8.

LUPEROX® F40P-SP2 B

SECTION 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.

Do not taste or swallow.

Do not get in eyes, on skin, or on clothing.

Do not breathe dust.

Keep away from heat, sparks and flames.

No smoking.

Use only with adequate ventilation.

Wash thoroughly after handling.

Prevent product contamination.

Keep container tightly closed and away from combustible materials.

Keep only in the original container.

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.

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.

Container hazardous when empty.

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.

Do not reuse container as it may retain hazardous product residue.

Improper disposal or reuse of this container may be dangerous and/or illegal.

Emptied container retains product residue.

Storage**General information on storage conditions:**

Keep in a dry, cool place. Keep container closed when not in use. Store in original container. Store in upright position only. Segregated or detached storage is preferred. Store in closed containers, in a secure area to prevent container damage and subsequent spillage. 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. 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.

Refer also to National Fire Protection Association (NFPA) Code 400, Hazardous Materials Code.

Storage stability – Remarks:

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

Storage incompatibility – General:



SAFETY DATA SHEET

LUPEROX® F40P-SP2 B

Store separate from:
Strong acids
Strong oxidizing agents
Reducing agents
Accelerators
Friedel - Crafts reaction catalyst
Iron
Copper
Brass

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:
100 °F (38 °C)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Carbonic acid calcium salt (1:1) (471-34-1)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Form:	Respirable fraction.
PEL:	5 mg/m ³

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Form:	Total dust
PEL:	15 mg/m ³

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
-----------------------	---

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

Time weighted average	0.8 mg/m ³
-----------------------	-----------------------

Remarks: The exposure limit is calculated from the equation, $80/(\%SiO_2)$, using a value of 100% SiO₂. Lower values of % SiO₂ will give higher exposure limits.

SAFETY DATA SHEET



LUPEROX® F40P-SP2 B

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:

Do not breathe 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. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. 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:

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Rinse immediately if skin is contaminated. Wash contaminated clothing and clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

Eye protection:

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Color:	Whitish.
Physical state:	solid
Form:	powder
Odor:	Slightly irritating

Product code: 102786

Version 1.2

Issued on: 07/09/2021

Page: 8 / 20

SAFETY DATA SHEET



LUPEROX® F40P-SP2 B

Odor threshold:	No data available
Flash point	The flashpoint of this product is greater than the Self Acceleration Decomposition Temperature (SADT).
Auto-ignition temperature:	No data available.
Lower flammable limit (LFL):	No data available
Upper flammable limit (UFL):	No data available
pH:	Not applicable
Density:	1.630 kg/m ³ (68 °F (20 °C))
Specific Gravity (Relative density):	No data available
Bulk density:	380 kg/m ³ loose
Vapor pressure:	No data available.
Vapor density:	No data available.
Boiling point/boiling range:	Decomposes before boiling. Rate of decomposition increases with rising temperature.
Melting point/range:	Not applicable
Freezing point:	No data available.
Evaporation rate:	Not applicable
Solubility in water:	Not applicable
Solubility in other solvents: [qualitative and quantitative]	Partially soluble in organic solvents
Viscosity, dynamic:	No data available
Particle size:	< 45 µm
Oil/water partition coefficient:	No data available.
Self-Accelerating Decomposition Temperature (SADT):	176 °F (80 °C) (Method: BAM (Berlin))

Product code: 102786

Version 1.2

Issued on: 07/09/2021

Page: 9 / 20

SAFETY DATA SHEET



LUPEROX® F40P-SP2 B

Thermal decomposition: No data available.

Active oxygen content: 3.8 %

Flammability: See GHS Classification in Section 2 if applicable

SECTION 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 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.

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 :
Aromatic derivatives
Carbon oxides
Hazardous organic compounds

SECTION 11: TOXICOLOGICAL INFORMATION

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

LUPEROX® F40P-SP2 B

Oral:

Acute toxicity estimate > 5,000 mg/kg.

Data for Carbonic acid calcium salt (1:1) (471-34-1)**Acute toxicity****Oral:**

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

Dermal:

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

Inhalation:

No deaths occurred. (rat) 4 h LC0 > 3 mg/l. (dust/mist, Maximum concentration technically possible)

Skin Irritation:

Not irritating. (rabbit) (4 h)

Eye Irritation:

Causes mild eye irritation. (rabbit)

Skin Sensitization:

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

Repeated dose toxicity

Repeated oral administration to rat, mouse / No adverse systemic effects reported.

Genotoxicity**Assessment in Vitro:**

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

Developmental toxicity

Exposure during pregnancy. Oral (sheep) / bone effects in lambs (at doses that produce effects in mothers, blood chemistry changes)

Exposure during pregnancy. Oral (rat) / No birth defects were observed.

Reproductive effects

Reproductive/Developmental Effects Screening Assay. Oral (rat) / No toxicity to reproduction

Human experience**General:**

Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin.

Human experience**Inhalation:**

Upper respiratory tract: Local irritation, coughing. (dust) (severity of effects depends on extent of exposure)

Human experience**Ingestion:**

LUPEROX® F40P-SP2 B

Kidney: failure, weakness, nausea. (effects of excessive exposure)

Data for Peroxide, [1,3(or 1,4)-phenylenebis(1-methylethylidene)]bis[(1,1-dimethylethyl) (25155-25-3)**Acute toxicity****Oral:**

No deaths occurred. (rat) LD0 > 2,000 mg/kg. (98 %)

Dermal:

No deaths occurred. (rat) LD0 > 2,000 mg/kg. (97 %)

Skin Irritation:

Not irritating. (rabbit) (4 h)

Eye Irritation:

Causes mild eye irritation. (rabbit)

Skin Sensitization:

Not a sensitizer. LLNA: Local Lymph Node Assay. (mouse) No skin allergy was observed. (98 %)

Repeated dose toxicity

Subchronic 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

Developmental toxicity

Exposure during pregnancy. Oral (rat) / Birth defects were observed. at doses that produce effects in mothers

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 Silica gel, pptd., cryst.-free (112926-00-8)**Acute toxicity****Oral:**

LUPEROX® F40P-SP2 B

Practically nontoxic. (rat) LD0 > 5,000 mg/kg.

Dermal:

Practically nontoxic. (rabbit) LD0 > 5,000 mg/kg.

Inhalation:

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

Skin Irritation:

Practically non-irritating. (rabbit) (4 h)

Eye Irritation:

Causes mild eye irritation. (rabbit)

Skin Sensitization:

Not a sensitizer. Guinea pig maximization test. No skin allergy was observed.

Repeated dose toxicity

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

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

Carcinogenicity

Chronic dietary administration to rat and mouse / 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 laboratory tests using: rats

Developmental toxicity

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

Reproductive effects

Two-generation study. oral (rat) / No toxicity to reproduction.

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)

LUPEROX® F40P-SP2 B

Data for Anti-oxidizing agent (Proprietary)**Acute toxicity****Oral:**

Harmful if swallowed. (rat) LD50 = 1,053 mg/kg.

Dermal:

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

Skin Irritation:

Practically non-irritating. (rabbit)

Eye Irritation:

Causes serious eye damage. (rabbit)

Skin Sensitization:

Not a sensitizer. Buehler method. (Guinea pig) No skin allergy was observed.

Repeated dose toxicity

Repeated oral administration to rat / affected organ(s): blood, spleen, liver, kidney / signs: changes in organ structure or function

Genotoxicity**Assessment in Vitro:**

No genetic changes were observed in a laboratory test using: animal cells

Genetic changes were observed in a laboratory test using: bacteria

Genotoxicity**Assessment in Vivo:**

No genetic changes were observed in a laboratory test using: mice, rats

Developmental toxicity

Exposure during pregnancy. Oral (rat) / No birth defects were observed.

Data for Peroxide, 1,1-dimethylethyl 1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl (96319-55-0)**Acute toxicity****Oral:**

May be harmful if swallowed. (rat) LD50 = 4,700 mg/kg.

Dermal:

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

Skin Irritation:

LUPEROX® F40P-SP2 B

Causes skin irritation.

Eye Irritation:

Causes serious eye irritation.

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.

SECTION 12: ECOLOGICAL INFORMATION**Chemical Fate and Pathway**

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

Data for Peroxide, [1,3(or 1,4)-phenylenebis(1-methylethylidene)]bis[(1,1-dimethylethyl) (25155-25-3)**Biodegradation:**

Not readily biodegradable. (28 d) biodegradation 0 %

Bioaccumulation:

calculated = 536

Octanol Water Partition Coefficient:

log Pow: 7.3(Method: calculated)

Data for Anti-oxidizing agent (Proprietary)**Biodegradation:**

Not readily biodegradable. (28 d) biodegradation 9 %

Ecotoxicology

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

Data for Carbonic acid calcium salt (1:1) (471-34-1)**Aquatic toxicity data:**

No effect up to the limit of solubility. Oncorhynchus mykiss (rainbow trout) 96 h LC50 > 100 mg/l (Nominal concentration, Water accommodated fraction was tested.)

Aquatic invertebrates:

No effect up to the limit of solubility. Daphnia magna (Water flea) 48 h EC50 > 100 mg/l (Nominal concentration, Water accommodated fraction was tested.)

Algae:

No effect up to the limit of solubility. Desmodesmus subspicatus (green algae) 72 h EC50 > 14 mg/l (Water accommodated fraction was tested.)

Microorganisms:

Respiration inhibition / Activated sludge 3 h EC50 > 1,000 mg/l

Chronic toxicity to aquatic plants:

LUPEROX® F40P-SP2 B

No effect up to the limit of solubility. *Desmodesmus subspicatus* (green algae) 72 h NOEC = 14 mg/l (Water accommodated fraction was tested.)

Data for Peroxide, [1,3(or 1,4)-phenylenebis(1-methylethylidene)]bis[(1,1-dimethylethyl) (25155-25-3)**Aquatic toxicity data:**

No effect up to the limit of solubility. *Poecilia reticulata* (guppy) 96 h LC50 = 750 mg/l (Nominal concentration, Water accommodated fraction was tested.)

Aquatic invertebrates:

No effect up to the limit of solubility. *Daphnia magna* (Water flea) 48 h EC50 > 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 EC0 > 1,000 mg/l

Chronic toxicity to aquatic plants:

No effect up to the limit of solubility. *Pseudokirchneriella subcapitata* (green algae) 72 h NOEC r

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) 48 h EC50 > 5,000 mg/l (nominal concentrations reported)

Chronic toxicity to aquatic plants:

No effect up to the limit of solubility. *Desmodesmus subspicatus* (green algae) 72 h NOEC = 173 mg/l (Nominal concentration)

Data for Anti-oxidizing agent (Proprietary)**Aquatic toxicity data:**

Practically nontoxic. *Danio rerio* (zebra fish) 96 h LC50 = 545 mg/l

Aquatic invertebrates:

Harmful. *Daphnia magna* (Water flea) 48 h EC50 = 54 mg/l

Algae:

Practically nontoxic. *Desmodesmus subspicatus* (green algae) 72 h ErC50 = 1,038 mg/l

Microorganisms:

Pseudomonas putida 16 h EC50 = 890 mg/l

Chronic toxicity to aquatic invertebrates:

LUPEROX® F40P-SP2 B

Practically nontoxic. Daphnia (water flea) 21 d NOEC = 1.5 mg/l

Chronic toxicity to aquatic plants:

Practically nontoxic. Desmodesmus subspicatus (green algae) 72 h NOEC = 22 mg/l

SECTION 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.

SECTION 14: TRANSPORT INFORMATION

US Department of Transportation (DOT)

UN Number : 3106
Proper shipping name : Organic peroxide type D, solid
Technical name : (Di-(tert-butylperoxyisopropyl) benzene, >42-100%)
Class : 5.2
Marine pollutant : no

International Maritime Dangerous Goods Code (IMDG)

UN Number : 3106
Proper shipping name : ORGANIC PEROXIDE TYPE D, SOLID
Technical name : (DI-(TERT-BUTYLPEROXYISOPROPYL)BENZENE, >42-100%)
Class : 5.2
Marine pollutant : no

SECTION 15: REGULATORY INFORMATION

Chemical Inventory Status

US. Toxic Substances Control Act	TSCA	The components of this product are all on the Active TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	Conforms to

SAFETY DATA SHEET



LUPEROX® F40P-SP2 B

Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Does not conform
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Conforms to
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	Conforms to

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:

Acute Health 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**

<u>Chemical name</u>	<u>CAS-No.</u>
Carbonic acid calcium salt (1:1)	471-34-1

Product code: 102786

Version 1.2

Issued on: 07/09/2021

Page: 18 / 20

SAFETY DATA SHEET



LUPEROX® F40P-SP2 B

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

Pennsylvania Right to Know

Chemical name CAS-No.
Carbonic acid calcium salt (1:1) 471-34-1

Peroxide, [1,3(or 1,4)-phenylenebis(1-methylethylidene)]bis[(1,1-dimethylethyl) 25155-25-3

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

Anti-oxidizing agent Proprietary

California Prop. 65

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

Chemical name CAS-No.
Lead 7439-92-1

Nickel 7440-02-0

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.
Lead 7439-92-1

SECTION 16: OTHER INFORMATION

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

- H242 Heating may cause a fire.
- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H413 May cause long lasting harmful effects to aquatic life.

Miscellaneous:

Product code: 102786

Version 1.2

Issued on: 07/09/2021

Page: 19 / 20

SAFETY DATA SHEET



LUPEROX® F40P-SP2 B

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: 200016145
Date of Revision: 07/09/2021
Date Printed: 07/09/2021

LUPEROX® is a registered trademark of Arkema Inc.

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, ARKEMA expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information;

NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement. See SDS for Health & Safety Considerations.

Arkema has implemented a Medical Policy regarding the use of Arkema products in Medical Devices applications that are in contact with the body or circulating bodily fluids (<http://www.arkema.com/en/social-responsibility/responsible-product-management/medical-device-policy/index.html>) Arkema has designated Medical grades to be used for such Medical Device applications. Products that have not been designated as Medical grades are not authorized by Arkema for use in Medical Device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. The Arkema trademarks and the Arkema name shall not be used in conjunction with customers' medical devices, including without limitation, permanent or temporary implantable devices, and customers shall not represent to anyone else, that Arkema allows, endorses or permits the use of Arkema products in such medical devices.

It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.