SAFETY DATA SHEET

TO COMPLY WITH OSHA HAZARD COMMUNICATION STANDARD 29 CFR.1910.1200 & THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier

Product Form:
Substance Name: FIBERLAY METHYL ETHYL KETONE PEROXIDE
Product Code(s): 081025, 08105, 0811, 0812, 0814, 0818, 081P, 081Q
Synonyms:

1.2 Details of the Supplier of the Safety Data Sheet

Fiberlay Inc.
1468 Northgate Blvd
Sarasota, FL 34234
T 206-782-0660
F 888-782-0662
www.Fiberlay.com

1.3 Emergency Telephone Number

Emergency Number: CHEMTREC: Domestic - 800-424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation 29CFR 1910.1200

Flammable liquids	Category 4	H227
Organic peroxides	Type D	H242
Skin corrosion	Category 1B	H314
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 3	H402
Chronic aquatic toxicity	Category 3	H412

2.2 Label elements

Statutory basis: Classification according to Regulation 29CFR 1910.1200

(Symbols):

Signal word: Danger

Hazard statement:	H227 – Combustible liquid H242 - Heating may cause a fire. H314 - Causes severe skin burns and eye damage. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statement Prevention:	P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 - Keep/Store away from clothing/ strong acids, bases, heavy metal salts and other reducing substances /combustible materials. P234 - Keep only in original container. P260 – Do not breathe dust or mist. P264 - Wash skin thoroughly after handling. P273 - Avoid release to the environment. P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
Precautionary statement: Reaction:	P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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/doctor. P363 - Wash contaminated clothing before reuse. P370 + P378 - In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
Precautionary statement: Storage	P403 + P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up. P411 - Store at temperatures not exceeding 38°C (100°F). P420 - Store away from other materials.
Precautionary statement Disposal	P501 - Dispose of contents/ container to an approved waste disposal plant.
2.3 Other hazards:	None known

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE	CAS NO.	Wt %	CATEGORY
Methyl ethyl ketone peroxide	CAS-No.1338-23-4	32% - 35%	
Flammable liquids			Category 4
Organic peroxides			Type D
Acute toxicity (Oral)			Category 4
Skin corrosion			Category 1B
Serious eye damage			Category 1

Phlegmatizer	Proprietary	8-25%	
Acute aquatic toxicity			Category 2
Chronic aquatic toxicity			Category 2

SUBSTANCE	CAS NO.	WT %	CATEGORY

Methyl ethyl ketone	78-93-3	0% - 2%	
Flammable liquids Eye irritation Specific target organ toxicity - single exposure (Central nervous system)			Category 2 Category 2A Category 3

Hydrogen peroxide	7722-84-1	<= 1%	
Oxidizing liquids Acute toxicity (Oral) Skin corrosion Serious eye damage Specific target organ toxicity - single exposure (Respiratory system) Chronic aquatic toxicity			Category 1 Category 4 Category 1A Category 1 Category 3 Category 3

Other information
This material is classified as hazardous under OSHA Regulations

4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation
If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

Skin contact
Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Obtain medical attention immediately if symptoms occur. Wash clothing before reuse.

Eye contact
In case of contact, immediately flush eyes with plenty of water. Obtain medical attention if irritation develops.

Ingestion
If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

4.2 Most important symptoms and effects, both acute and delayed Symptoms
None known

4.3 Indication of any immediate medical attention and special treatment needed
None known.

5. FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Dry Chemical combined with peroxide may reignite fire., Light water additives may be particularly effective at extinguishing peroxide fires.

Unsuitable extinguishing media: High volume water jet.

5.2. Special hazards arising from the substance or mixture

The heat of decomposition of the peroxides adds to the heat of the fire. Dry chemical fire extinguishing agent may catalyze the decomposition.

5.3. Advice for firefighters

If dry chemical is used to extinguish a peroxide fire, the extinguished area must be thoroughly wetted down with water to prevent re-ignition.
As in any fire, wear self-contained positive-pressure breathing apparatus and full protective gear.

Containers near the source of fire should be cooled with a water spray to prevent contents from reaching decomposition temperature.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Wear a self-contained breathing apparatus and appropriate personal protective equipment. (See Section 8 - Exposure Controls/Personal Protection.) Remove all sources of ignition. Ventilate the area.

6.2. Environmental precautions

Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

6.1. Methods and material for containment and cleaning up

Dike spill to prevent runoff from entering drains, sewers, streams, etc. Wet spilled material with water and absorb with an inert absorbent material such as perlite, vermiculite, or sand. Sweep up using non-sparking tools and place in a clean polyethylene drum or a polyethylene pail. DO NOT place into a steel container, lined or unlined, as decomposition may occur. Treat any contaminated cardboard packaging as hazardous waste. Wet container with additional water prior to sealing. Use absorbent/absorbent material to solidify liquids. Clean up promptly by sweeping or vacuum. Wear protective equipment, including eye protection, to avoid exposure (see Section 8 for specific handling precautions).

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Rotate stock using the oldest material first. Avoid contact with skin, eyes and clothing. Use PPE as specified in section 8. Keep containers closed to prevent contamination. Keep away from sources of heat, sparks, or flame. Do not add to hot solvents or monomers as a violent decomposition and/or reaction may result. When using spray equipment, never spray raw peroxide onto curing or into raw resin or flues. Keep peroxide in its original container. DO NOT USE NEAR FOOD OR DRINK. Wash thoroughly after handling. Protect from contamination. Keep tightly sealed in original packing. Risk of decomposition. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage

The stability of peroxide formulations is directly related to the shipping and storage temperature history.
Cool storage at 80° F (27°C) or below is recommended for longer shelf life and stability. Prolonged storage at elevated temperatures of 100° F (38°C) and higher will cause product degradation, gassing and potential container rupture which can result in a fire and/or explosion. Store out of direct sunlight in a well ventilated area away from combustible and incompatible material. DO NOT STORE WITH FOOD OR DRINK.
Refer to NFPA **400 Hazardous Materials Code** from the National Fire Protection Association for additional storage information.

Further information

Store apart from other dangerous and incompatible substances. Keep away from direct sunlight. Keep containers tightly closed in a cool, well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Methyl ethyl ketone peroxide CAS-No. 1338-23-4		
Control parameters	0.2 ppm	Ceiling Limit Value:(ACGIH)
Control parameters	0.2 ppm	Ceiling Limit Value:(US CA OEL)

Dimethyl phthalate CAS-No. 131-11-3		
Control parameters	5 mg/m3	Time Weighted Average (TWA):(ACGIH)
Control parameters	5 mg/m3	Permissible exposure limit:(OSHA Z1)
Control parameters	5 mg/m3	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):(US CA OEL)

Methyl ethyl ketone CAS-No. 78-93-3		
Control parameters	200 ppm	Time Weighted Average (TWA):(ACGIH)
Control parameters	300 ppm	Short Term Exposure Limit (STEL):(ACGIH)
Control parameters	200 ppm 590 mg/m3	Permissible exposure limit:(OSHA Z1)
Control parameters	200 ppm 590 mg/m3	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):(US CA OEL)
Control parameters	300 ppm 885 mg/m3	Short Term Exposure Limit (STEL):(US CA OEL)

Hydrogen peroxide CAS-No. 7722-84-1		
Control parameters	1 ppm	Time Weighted Average (TWA):(ACGIH)
Control parameters	1 ppm 1.4 mg/m3	Permissible exposure limit:(OSHA Z1)
Control parameters	1 ppm 1.4 mg/m3	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):(US CA OEL)

8.2. Exposure controls

Engineering measures

Local exhaust and mechanical ventilation recommended.

8.3 Personal protective equipment

Respiratory protection

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Hand protection

Wear protective gloves made of the following materials: solvent-resistant gloves (butyl-rubber), nitrile rubber, And Neoprene gloves.
Skin should be washed after contact.

Eye protection

Use chemical splash goggles or face shield.

Skin and body protection

A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

Hygiene measures

Do not eat, drink or smoke during use. Wash hands before breaks and immediately after handling the product.

Protective measures
Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

physical state	liquid	
Color	Water-white.	
Form	liquid	
Odor	slight	
Odor Threshold	No data available	
pH	not applicable	
Melting point/range	no data available	
Boiling point/range	not determined	
Flash point	76 °C	(Seta closed cup)
Evaporation rate	not determined	
Flammability (solid, gas)	not applicable	
Lower explosion limit	no data available	
Upper explosion limit	no data available	
Vapor pressure	no data available	
Relative vapor density	> 1	
Relative density	1.1	
Water solubility	soluble	
Solubility/qualitative	no data available	
Partition coefficient (n- octanol/water)	no data available	
Auto-ignition temperature	no data available	
Thermal decomposition	> 60 °C	
Viscosity, dynamic	no data available	
Viscosity, kinematic	not determined	

9.2. Other information

Peroxides: The substance or mixture is an organic peroxide classified as type D.
SADT SADT > 60 °C

10. STABILITY AND REACTIVITY

10.1. Reactivity
Stable under recommended storage conditions.

10.2. Chemical stability
Contact with incompatible substances can cause disintegration at or below SADT.

10.3. Possibility of hazardous reactions
Stability Stable under recommended storage conditions. Possibility of hazardous Vapors may form explosive mixtures with air.

10.4. Conditions to avoid
Keep away from heat and sources of ignition.
Exposure to sunlight.

Prolonged storage above 100°F (38°). Storage above SA DT. Storage near flammable or combustible material.

10.5. Incompatible materials

Keep away from strong acids, bases, heavy metals, salts, reducing agents and accelerators. Contaminants (e.g. rust, dust, ash). Combustible materials., risk of decomposition. Dimethylaniline, cobalt napthenate and other promoters, accelerators, reducing agents, or any hot material.

10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke)., Irritant, caustic, flammable, Noxious / toxic gases and vapors can develop in the case of fire and decomposition., Acrid smoke and irritating fumes.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

No toxicological studies are available on the mixture.

Carcinogenicity assessment:

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

Toxicological information on components

Methyl ethyl ketone peroxide

Acute oral toxicity:	LD50 Oral Rat(male):1017 mg/kg
Skin irritation:	Causes severe skin burns and eye damage. Causes burns.
Eye irritation:	Causes serious eye damage. Risk of serious damage to eyes.

Dimethyl phthalate

Acute oral toxicity:	LD50 Oral Rat: 8200 mg/kg
Acute inhalation toxicity	LC50 : 10.4 mg/l / 6 h Assessment: H332: Harmful if inhaled
Acute dermal toxicity	LD50 Dermal Rat: > 12000 mg/kg
Skin irritation	No skin irritation
Eye irritation	No eye irritation
Sensitization	Not sensitizing.

Phlegmatizer

Acute oral toxicity	LD50 Oral Rat(female): > 2000 mg/kg
Acute inhalation toxicity	LCLo Rat: > 0.12 mg/l / 6 h
Acute dermal toxicity	LD50 Dermal Rat(male/female): > 2000 mg/kg
Skin irritation	No skin irritation
Eye irritation	No eye irritation

Hydrogen peroxide

Acute oral toxicity	LD50 Oral Rat(male): 1026 mg/kg Test substance: Hydrogen peroxide >= 50% LD50 Oral Rat(female): 693.7 mg/kg Test substance: Hydrogen peroxide >= 50%
Acute inhalation toxicity Assessment:	Harmful if inhaled.
Acute dermal toxicity	LD50 Dermal Rat(male and female): > 2000 mg/kg
Skin irritation	corrosive
Eye irritation	corrosive
Sensitization	Not sensitizing.
Assessment of STOT single exposure Assessment:	May cause respiratory irritation.

Methyl ethyl ketone

Acute oral toxicity	LD50 Oral Rat: 2737 mg/kg
Acute inhalation toxicity	LC50 Rat: 23500 mg/l / 8 h
Acute dermal toxicity	LD50 Rabbit: 6480 mg/kg
Eye irritation	Irritating to eyes.
Assessment of STOT single **Target Organs**:	
Central nervous system exposure Assessment:	May cause drowsiness or dizziness.
Mutagenicity assessment	This product may cause mutagenic effects.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Toxicity to fish	There is no data available for this product.
Toxicity in aquatic invertebrates	No data is available on the product itself.
Toxicity to algae	No data is available on the product itself.

12.2. Persistence and degradability

Biodegradability	no data available

12.3. Bioaccumulative potential

Bioaccumulation	no data available

12.4. Mobility in soil

Mobility	No data available

12.5. Other adverse effects

Further Information Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product

Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method of disposal. Contact Orca Composites for additional information. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.

Uncleaned packaging

Packaging material should be recycled or disposed of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

D.O.T. Road/Rail

14.1 UN number:	UN 3105
14.2. UN proper shipping name:	Organic peroxide type D, liquid(Methyl ethyl ketone peroxide
14.3. Transport hazard class(s):	5.2
14.4. Packing group:	II
14.5. Environmental hazards (Marine pollutant):	--
14.6. Special precautions for user:	No

Air transport ICAO-TI/IATA-DGR

14.1. UN number:	UN 3105
14.2. UN proper shipping name:	Organic peroxide type D, liquid(Methyl ethyl ketone peroxide <= 45%)
14.3. Transport hazard class(es):	5.2
14.4. Packing group:	--
14.5. Environmental hazards:	--
14.6 Special precautions for user:	Yes
IATA-C:ERG Code 5L	Must be protected from direct sunlight and stored away from all sources of heat in a well- ventilated area.
IATA-P: ERG-Code 5L	Must be protected from direct sunlight and stored away from all sources of heat in a well- ventilated area.
14.1. UN number:	UN 3105
14.2. UN proper shipping name:	ORGANIC PEROXIDE TYPE D, LIQUID(Methyl ethyl ketone peroxide <= 45%)
14.3. Transport hazard class(es):	5.2
14.4. Packing group:	--
14.5. Environmental hazards (Marine pollutant):	--
14.6 Special precautions for user:	Yes
EMS:	F-J,S-R

"Separated from" acids and alkalis.
Protected from sources of heat

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code for transport approval
see regulatory information

15. REGULATORY INFORMATION

US Federal Regulations

OSHA

If listed below, chemical specific standards apply to the product or components: None listed

Clean Air Act Section (112)

If listed below, components present at or above the minimum level are hazardous air pollutants:
Dimethyl phthalate CAS-No.131-11-3

CERCLA Reportable Quantities

If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:
Methyl ethyl ketone peroxide CAS-No. 1338-23-4
Reportable Quantity 29 lbs

SARA Title III Section 311/312 Hazard Categories

The product meets the criteria only for the listed hazard classes: **Acute health hazard; Fire hazard**

SARA Title III Section 313 Reportable Substances

If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: **None listed**

Toxic Substances Control Act (TSCA)

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA: **None listed**

State Regulations

California Proposition 65

A warning under the California Drinking Water Act is required only if listed below: **None listed**

International Chemical Inventory Status

Unless otherwise noted, this product is in compliance with the inventory listing of the countries shown below. For information on listing for countries not shown, contact the Product Regulatory Services Department.

Europe (EINECS/ELINCS)	listed/registered
USA (TSCA)	listed/registered
Canada (DSL)	listed/registered
Australia (AICS)	listed/registered
Japan (MITI)	listed/registered
Korea (TCCL)	listed/registered
Philippines (PICCS)	not listed/registered
China	listed/registered
New Zealand	not listed/registered

An employer using HMIS/NFPA labeling must through training ensure that its employees are fully aware of the hazards of the chemicals used.

HMIS Ratings

Health :	3
Flammability :	2
Physical Hazard :	2

NFPA Ratings

Health :	3
Flammability :	2
Reactivity :	2

16. OTHER INFORMATION

This version replaces all previous versions.
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Legend

ACC	American Chemistry Council
ACGIH	American Conference of Governmental Industrial Hygienists

ACS	Advisory Committee on Sustainability
ADI	Acceptable Daily Intake
ASTM	American Society for Testing and Materials
ATP	Adaptation to Technical Progress
BCF	Bio-concentration factor
BOD	Biochemical oxygen demand
c.c.	closed cup
CAO	Cargo Aircraft Only
Carc	Carcinogen
CAS	Chemical Abstract Services
CDN	Canada
CEPA	Canadian Environmental Protection Act
CERCLA	Comprehensive Environmental Response – Compensation and Liability Act
CFR	Code of Federal Regulations
CMR	carcinogenic-mutagenic-toxic for reproduction
COD	Chemical oxygen demand
DIN	German Institute for Standardization
DMEL	Derived minimum effect level
DNEL	Derived no effect level
DOT	Department of Transportation
EC50	half maximal effective concentration
EPA	Environmental Protection Agency
ErC50	Reduction of Growth Rate
ERG	Emergency Response Guide Book
FDA	Food and Drug Administration
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
GLP	Good Laboratory Practice
GMO	Genetic Modified Organism
HCS	Hazard Communication Standard
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO	TI International Civil Aviation Organization- Technical Instructions
ICCA	International Council of Chemical Association
ID	Identification number
IMDG	International Maritime Dangerous Goods
IUPAC	International Union of Pure and Applied Chemistry
ISO	International Organization For Standardization
LC50	50 % Lethal Concentration
LD50	50 % Lethal Dose
L(E)C50	LC50 or EC50
LOAEL	Lowest observed adverse effect level
LOEL	Lowest observed effect level
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
NOAEL	No observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
o. c.	open cup
OECD	Organization for Economic Cooperation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PBT	Persistent, bio-accumulative, toxic
PEC	Predicted effect concentration

PNEC	Predicted no effect concentration
RQ	Reportable Quantity
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
UN	United Nations
vPvB	very persistent, very bioaccumulative
voc	volatile organic compounds
WHMIS	Workplace Hazardous Materials Information System
WHO	World Health Organization

Fiberlay Inc. believes the law requires us to inform you that detectable amounts of any of the listed chemicals might be present in Fiberlay products. Based on a review of the list, Fiberlay products, like all synthetic and naturally occurring chemical substances, may conceivably contain trace contaminants of some of the listed substances. While not necessarily added to our products as ingredients, some of the listed chemicals may be present in the raw materials as received from suppliers over which we have no control.

Preparation Date: 12-31-2018
Prepared by: Kevin Aber
Comments: This Safety Data Sheet was prepared using information provided by Fiberlay Inc.

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and Fiberlay Inc. assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.