SAFETY DATA SHEET (SDS)

SDS Date: 10/26/2017 **Reviewed: Initial**

SECTION 1: Identification of the substance/mixture and of the company

PRODUCT NAME: VINYLON LIME GREEN BUOY PAINT

PRODUCT CODES: HUM-LGG
HUM-LGQ
USES: Coating for marking all types of PVC buoys
Do Not Use on Polystyrene or Styrofoam buoys.

This Safety Data Sheet has been updated in accordance with the Global Harmonized System (GHS).

MANUFACTURER: Flexabar Corporation
DIVISION:
ADDRESS:
1969 Rutgers Blvd.
Lakewood, New Jersey USA 08701
Tel (732) 901-6500

DISTRIBUTOR: Englund Marine
ADDRESS:
PO Box 296
95 Hamburg St.
Astoria, OR 97103
Tel (503) 325-4341

EMERGENCY PHONE: 1-800-424-9300
CHEMTREC 24 Hour Emergency Response: 1-800-424-9300
Information: SDS Coordinator: 1-732-901-6500
FAX PHONE: 1-732-901-6504

PREPARED BY: **Flexabar Information Services**

SECTION 2: HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW: Green opaque liquid, typical aromatic odor
Causes irritation to the skin, eyes, mucous membranes and respiratory tract.
Can be absorbed through the skin causing systemic effects.

GHS Classification:

H226 Flamable liquid and vapor
H313 May be harmful in contact with skin
H305 May be harmful if swallowed and enters airways
H315 Causes skin irritation
H319 Causes serious eye irritation
H332 Harmful if inhaled
H336 May cause drowsiness or dizziness
H373 May cause damage to organs through prolonged or repeated exposure

GHS Label elements:
Pictograms:

Signal Word: **Danger**

Hazard Statements: **Description**

H226 Flammable liquid and vapor
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Precautionary Statements: **Description**

P210 Keep away from heat /sparks/open flames/hot surfaces-No Smoking
P260 Do not breathe mist/vapors/spray
P262 Do not get in eyes, on skin or on clothing
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment
P280 Wear protective gloves/eye protection/face protection
P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+352 IF ON SKIN: Wash with soap and water
P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do-continue rinsing
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth
P331 DO NOT induce vomiting
P333+313 If skin irritation or a rash occurs: Get medical advice/attention
P337 If eye irritation persists
P362 Take off contaminated clothing and wash before reuse
P391 Control spillage
P403+233Store in a well ventilated place. Keep container tightly closed
P501 Dispose of contents/container in accordance with local/national regulations

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Vinylchloride-Vinylacetate-Copolymer **CAS No. 9003-22-9**	**11.0 – 19.0**	Not Classified as Hazardous	**1**
Methyl Ethyl Ketone **CAS No. 78-93-3**	**7.0 – 10.0**	FLAMMBLE LIQUID – Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) Category 3 [Narcotic effects]	**1, 2**
Toluene **CAS No. 108-88-3**	**30.0 – 40.0**	FLAMABLE LIQUID – Category 2 SKIN CORROSION/IRRITATION – Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION – Category 2A TOXIC TO REPRODUCTION (unborn child) – Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] – Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) – Category 2 ASPIRATION HAZARD – Category 1	**1, 2**
Cyclohexanone **CAS No. 108-94-1**	**7.0 – 12.0**	FLAMMABLE LIQUIDS – Category 3 ACUTE TOXICITY, ORAL – Category 4 ACUTE TOXICITY, INHALATION – Category 4 ACUTE TOXICITY, DERMAL – Category 4 SKIN IRRITATION – Category 2 SERIOUS EYE DAMMAGE – Category 1	**1, 2**

Methyl Isobutyl Ketone **CAS Mo. 108-10-1**	**5.0 – 10.0**	FLAMMBLE LIQUID – Category 2 ACUTE TOXICITY (inhalation) – category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) – Category 3 (Resp. irritation) CARCINOGENITY – Category 2	**1, 2**
Titanium Dioxide **CAS No. 13463-64-7**	**0.5 - 1.0**	Carcinogenicity – IARC listed; Group 2B (possibly carcinogenic to humans) through inhalation not ingestion. Not listed as carcinogen by NTP, ACGIH, OSHA or the European Union	**1, 2**

[1] Substance classified with a health or environmental hazard.
[2] Substance with a workplace exposure limit
[3] PBT substance or vPvb substance

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean contaminated shoes.

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

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

Skin In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.

Ingestion If swallowed, immediately contact Poison Control Center. DO NOT induce vomiting unless instructed to do by Medical personnel. Never give anything by mouth to an unconscious person.

4.2 Important symptoms and effects, acute and delayed

Overview Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or Fatal. Avoid contact with eyes, skin and clothing.

Inhalation Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing Dizziness, headache or nausea.

Eyes Causes severe eye irritation. Avoid contact with eyes.

Skin Causes skin irritation. May be harmful if absorbed through skin.

Ingestion Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea or drowsiness.

Chronic effects Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data. Risk of cancer duration And level of exposure.

SECTION 5: FIRE-FIGHTING MEASURES

Conditions of flammability Flammable in the presence of an ignition source when temperature is above the flash point

Extinguishing media Use dry chemical powder, CO2 or alcohol resistant foam
DO **NOT** use water jet.

Special protective equip. Wear a self-contained breathing apparatus MSHA/NIOSH (approved or equivalent), and full protective gear.

Hazardous combustion products Carbon oxides

Special information Vapor id heavier than air and may travel long distances to a source of ignition and flash back

Use water spray to disperse vapors and to protect personnel attempting to stop leak.

Can react vigorously with oxidizing materials.

Do not allow fire water contaminated with this product to enter any waterway or storm drain.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions Wear adequate/appropriate personal protection equipment.

Emergency procedures Eliminate all potential sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains or soil.
Discharge into the environment must be avoided.

Methods of containment/cleanup Contain liquid with dirt, sand, vermiculite or other noncombustible solids.
Transfer to a metal container for disposal.

SECTION 7: HANDLING AND STORAGE

Handling Wear adequate personal protective equipment.
Keep containers tightly closed.
Avoid breathing vapors.
Avoid contact with skin or eyes.
Keep away from heat, spark and open flames.
Ground all equipment and comply with National Electric Code.

Storage Store in a cool, dry, well-ventilated area away from sources of ignition.

Incompatibilities Oxidizing agents, including nitric acid and peroxides.

Suitable Packing Materials Steel, Stainless steel (tanks/containers)
Do **NOT** store in lead or synthetic containers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS No.	Ingredient	Source	Value
9003-22-9	Vinylchloride-Vinyl-acetate copolymer	ACGIH	None established
	Particles not otherwise specified (PNOS)	ACGIH	Time weighted average = 10 mg/m3
108-88-3	Toluene	OSHA	TWA 200ppm 8hours; CEIL 300 ppm; AMP 500PPM 10 minutes
		ACGIH TLV	TWA 20 ppm 8 hours
108-10-1	Methyl Isobutyl Ketone	OSHA	PEL 100 ppm 410 mg/m3

		ACGIH	TLV (8 hour) 20 ppm; STEL 75 ppm
78-93-3	Methyl Ethyl Ketone	OSHA	PEL 200 ppm 590 mg/m3
		ACGIH	TLV (8 hour) 200 ppm 590 mg/m3 STEL 300 ppm 885 mg/m3
108-94-1	Cyclohexanone	Supplier	TWA 10 ppm SKIN (8 hour) STEL 20 ppm SKIN (15 minutes)
13463-64-7	Titanium Dioxide	OSHA	PEL long term valie 15mg/m3 (total dust 8 hr TWA)
		ACGIH	TLV long term value 10 mg/m3 TWA (inhalable fraction 1mf/m3 TWA)

PEL = Permissible Exposure Limits
TLV = Threshold Limit Value
EL = Excursion Limit

TWA = Time Weighted Average (8 hr.)
STEL = Short Term Exposure Limit (15 min.)
WEEL = Workplace Environmental Exposure Level

Exposure Controls:

Respiratory Select equipment to provide protection from the ingredients listed in section 3 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor or mist levels above the applicable limits, wear appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use.

Eyes Avoid contact with eyes. Protective equipment should be selected to provide protection from the ingredients Listed in section 3 of this document. Depending on site and application method specific conditions, safety glasses, chemical goggles, and or head and face protection may be required. All equipment must be thoroughly cleaned or discarded after use.

Skin Select equipment to provide protection from the ingredients listed in section 3 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection May be required to prevent contact. All equipment must be thoroughly cleaned or discarded after each use.

Engineering Controls Ensure adequate ventilation to keep exposure levels at a minimum under the specific conditions.

Other Work Practices Emergency eye wash stations and safety showers should be available in the immediate work area. Use good Personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove exposed/spoiled clothing and wash separately before reuse. Shower after work using plenty of soap and water.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Bright Green Viscous Liquid

ODOR: Typical Aromatic

PHYSICAL STATE: liquid

PH AS SUPPLIED: Not Measured

BOILING POINT: (MEK)
F: 175.6^{O}
C: 79.6^{O}
MELTING POINT:
F: Not Measured
C: Not measured
FREEZING POINT:
F: Not measured
C: Not Measured
FLASH POINT: (MEK)
F: -6^{O}
C: 21^{O}

MIXTURE

VAPOR PRESSURE (mmHg): Not Measured
@
F:
C:
VAPOR DENSITY (AIR = 1): Heavier than air
@
F:
C:
SPECIFIC GRAVITY (H2O = 1):
@ .9617 - .9619
F: 77
C:
EVAPORATION RATE: Not Measured MIXTURE

BASIS (=1):

SOLUBILITY IN WATER: Insoluble

SECTION 10: STABILITY AND REACTIVITY

Reactivity	No data available
10.2. Chemical stability	This product is stable and hazardous polymerization will not occur. Not sensitive to mechanical impact. Excessive heat and fumes generation can occur if improperly handled.
10.3. Possibility of hazardous reactions	No data available
10.4. Conditions to avoid	No data available
10.5. Incompatible materials	Strong oxidizing agents.
10.6. Hazardous decomposition products	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Breathing large amounts of hydrocarbon/ketone solvents for short periods of time adversely effects the human nervous system, the kidneys, liver, and the heart. Repeatedly breathing large amounts of toluene as when "sniffing glue" or paint can cause permanent brain damage. Human exposure studies and animal studies suggest that exposure to large amounts of solvents during pregnancy can adversely affect the developing fetus.

Ingredient	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation Vapor mg/l (4hr)	Eye Damage/irritation
Vinylchloride-Vinylacatate copolymer 9003-22-9	No Data Available	No Data Available	No Data Available	No Data Available
Toluene 108-88-3	5580 mg/kg Rat (male)	12267 mg/kg Rabbit	>20 Rat	Irritating Rabbit
Methyl Isobutyl Ketone 108-10-1	2000 ng/kg Rat	2000 mg/kg Rabbit	10 – 20 Rat	Irritating Rabbit
Methyl Ethyl Ketone 78-93-3	2000 ng/kg Rat	2000 mg/kg Rabbit	No Data Available	Irritating Rabbit
Cyclohexanone 108-94-1	1890mg/kg Rat	1100 mg/kg Rabbit	11	Serious Damage
Titanium Dioxide 13463-67-7	>5000 Rat	>5000 Rabbit	>6.8	No senticizing effects known

All ingredient values, literature values

Item	Category	Hazard
Acute Toxicity (mouth)	Not Classified	Not Applicable
Acute Toxicity (skin)	Not Classified	Not Applicable
Acute Toxicity (inhalation)	Not Classified	Not Applicable
Skin corrosion/irritation	3	Causes mild skin irritation.
Eye damage/irritation	Not Classified	Not Applicable
Sensitization (respiratory)	Not Classified	Not Applicable
Sensitization (skin)	Not Classified	Not Applicable
Germ toxicity	Not Classified	Not Applicable
Carcinogenicity	Not Classified	Not Applicable
Reproductive Toxicity	Not Classified	Not Applicable
Specific target organ systemic toxicity (single exposure)	Not Classified	Not Applicable
Specific target organ systemic Toxicity (repeated exposure)	Not Classified	Not Applicable
Aspiration hazard	Not Classified	Not Applicable

SECTION 12: ECOLOGICAL INFORMATION

Ingredient	Toxicity to fish LC50	Toxicity to invertebrates EC50	Toxicity to algae EC50	Biodegradation	Bioaccumulation	Mobility in soil
Vinylchloride-Vinylacatate copolymer 9003-22-9	No Data Available	No Data Available	No Data Available	No Data Available	No Data Available	No Data Available
Toluene 108-88-3	5500ug/l Oncorhynchus kisutch-Fry 96 hr.	6000 ug/l Daphnia Magna Juvenile 48 hr.	12500 ug/l Pseudokirchneriella subcapitata	Readily	Low	No Data Available
Methyl Isobutyl Ketone 108-10-1	>100 mg/l Dania rerio 96 hrs. static test	>100 mg/l Daphnia Magna Juvenile 48 hr. static test	No Data Available	Readily	None Expected	No Data Available
Methyl Ethyl Ketone 78-93-3	Pimephales Promelas >100mg/l 96 hr.	>100 mg/l Daphnia Magna Juvenile 48 hr. static test	>100 mg/l Pseudokirchneriella subcapitata 96 hr	Readily	None Expected	No Data Available
Cyclohexanone 108-94-1	Pimephales Promelas 20.2 mm – 0.127 gr. 96 hr	No Data Available	No Data Available	Readily	Low	No Data Available

All ingredient Values, literature values

Persistence and degradability	No data available
Bio accumulative potential	Not Measured
Mobility in soil	No data available
Results of PBT and vPvB assessment	This product contains no PBT/vPvB chemicals.
Other adverse effects	No data available

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with federal, state and local environmental control regulations. This product contains components that are RCRA hazardous waste. Do not flush material to drain or storm sewer. Contract to authorized disposal service. Empty containers must be handled with care due to product residue.

SECTION 14: TRANSPORT INFORMATION

UN number UN 1263
UN proper shipping name Paint
Transport hazard class (es)

DOT (Domestic Surface Transportation)

DOT Proper Shipping Name: CONSUMER COMMODITY, ORM-D

DOT Hazard Class: Not Regulated

UN / NA Number: UN 1263

DOT Packing Group: Not Regulated

CERCLA/DOT RQ: 696 gal. / 5395 lb.

IMO / IMDG (Ocean Transportation)

IMDG Proper Shipping Name: Paint

IMDG Hazard Class: Flammable Liquid, 3
Sub Class: Not applicable

IMDG Packing Group I I

System Reference Code: 181

Packing group II
Environmental hazards
IMDG Marine Pollutant: No

Special precautions for user
Not Applicable

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not Applicable

SECTION 15: REGULATORY INFORMATION

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

DOT Marine Pollutants (10%):
(No Product Ingredients Listed) DOT

Severe Marine Pollutants (1%)

EPCRA 311/312 Chemicals and RQs (>.1%) :
Benzene, ethyl- (1000 lb final RQ; 454 kg final RQ)
Xylenes (o-, m-, p- isomers) (100 lb final RQ; 45.4 kg final RQ)
1,2,4 Trimethylbenzine (500 lbs)

EPCRA 302 Extremely Hazardous (>.1%) :
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%) :
1,2,4 Trimethylbenzine
Benzene, ethyl-
Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%) :
Xylenes (o-, m-, p isomers)
1,2,4 Trimethylbenzine
Titanium dioxide

Penn RTK Substances (>1%) :

1,2,4 Trimethylbenzine
Benzene, ethyl-
Xylenes (o-, m-, p- isomers)
Titanium dioxide

Penn Special Hazardous Substances (>.01%) : (No Product Ingredients Listed)

RCRA Status:
(No Product Ingredients Listed)

N.J RTK Substances.

Benzene, ethyl-
Xylenes (o-, m-, p- isomers)
1,2,4 Trimethylbenzine
Titanium dioxide

N.J. Special Hazardous Substances (>.01%) :

Benzene, ethyl-
Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances (>.1%) :

Benzene, ethyl-
Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens (>0%):
Benzene, ethyl-

SECTION 16: OTHER INFORMATION

ABREVIATIONS:

ACGIH = American Conference of Governmental Industrial Hygienists
OSHA = Occupational Safety and Health Administration
TLV = Threshold Limit Value
TWA = Time Weighted Average
PEL = Permissible Exposure Limit
STEL = Short Term Exposure Limit
NA = Not Applicable
NE = Not Established

PREPARATION INFORMATION: HMIS Hazard Ratings Scale 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Extreme

Check with supervisor for appropriate personal protection in accordance with rating.

DISCLAIMER:

The information contained herein is based on data provided by our suppliers and relates only to the specific material identified. Flexabar Corporation believes that the information is accurate and reliable as of the preparation date of this material safety data sheet and reflects our best judgement, but no representation, guarantee or warranty expressed or implied is made as to the accuracy, reliability or completeness of the information. Flexabar Corporation urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.

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