DATE PRINTED	7/22/2020
SDS REF. No :	#PH-1

SAFETY DATA SHEET

PH-1 HARDENER

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PH-1 HARDENER

PRODUCT CODE: #PH-1
PRODUCT USE: Hardener for vinyl ester 2 component coatings

MANUFACTURER
DUDICK, INC.
1818 MILLER PARKWAY
STREETSBORO, OH, 44241
330-562-1970

24 HR. EMERGENCY TELEPHONE NUMBER
CHEM-TEL (US Transportation): (800)255-3924
CHEM-TEL (International Transportation) : +01-813-248-0585

2. HAZARDS IDENTIFICATION

CLASSIFICATION:
Acute Toxicity - Oral - Category 4
Acute Toxicity - Inhalation - Category 3
Acute toxicity - Dermal - Category 3
Organic Peroxides - Type F
Skin Corrosive - Category 1
Specific target organ toxicity - single exposure - Respiratory tract irritation - Category 3
Specific target organ toxicity - repeated exposure - Category 2
Aspiration hazard - Category 1
Hazardous to the Aquatic Environment - Long Term - Category 2
Serious Eye Damage/Eye Irritation - Category 1
Carcinogenicity - Category 2

GHS LABEL ELEMENTS:

SIGNAL WORD: Danger

HAZARD STATEMENTS:
H227 Combustible liquid
H242 Heating may cause a fire
H302 + H312 Harmful if swallowed or in contact with skin.
H304 May be fatal if swallowed and enters airways.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer .

H373 Causes damage to organs through prolonged or repeated exposure
H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS :
P202 Do not handle until all safety precautions have been read and understood.
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.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash all contacted body parts thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
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/physician.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire: Use foam, dry chemical, or carbon dioxide for extinction.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P410 Protect from sunlight.
Store at temperatures not exceeding 27°C/80°F. Keep cool.
P501 Dispose of contents/container in accordance with local, regional, and federal regulations.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Chemical Name	Weight %	CAS Number
cumene hydroperoxide	80% to 90%	80-15-9
cumene	10% to 20%	98-82-8
2-Phenyl-2-propanol	0% to 5%	617-94-7
Acetophenone	0% to 5%	98-86-2

No further information available for this product.

4. FIRST AID MEASURES

EYES: Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.
SKIN: Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.
INGESTION: Do not induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Consult physician or poison center immediately.
INHALATION: Consult a physician after significant exposure. Move person to fresh air. If unconscious place in recovery position and seek medical advice.

If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc.).
NOTES TO PHYSICIAN: No data available for this product.

5. FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Alcohol resistant foam; Carbon Dioxide (CO2); dry chemical; dry sand; use water to keep containers cool.
UNSUITABLE EXTINGUISHING MEDIA: Do not use high pressure water jet as this may spread the area of the fire.
SPECIFIC HAZARDS IN CASE OF FIRE: Burning may produce noxious and toxic fumes. Incomplete combustion may form carbon monoxide.
SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTION FOR FIRE FIGHTERS: Wear self-contained breathing apparatus (SCBA) in positive pressure mode and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Isolate area; ensure adequate ventilation; remove all sources of ignition; use appropriate personal protection equipment; avoid breathing mist, vapors, spray; avoid contact with skin, eyes and clothing; keep unnecessary and unprotected personnel from entering the involved area.
ENVIRONMENTAL PRECAUTIONS: Halt the flow of material as soon as practical using appropriate barriers; Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches, waterways by using sand, earth or appropriate barriers.
METHOD AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Eliminate all sources of ignition. All equipment used when handling this product must be grounded. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. Dike large spills and place materials in salvage containers. Water spray may reduce vapor; but may not prevent ignition in closed spaces.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. Keep away from heat and sources of ignition.
CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES: Requirements for storage areas and containers: Electrical installations / working materials must comply with the technological safety standards. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed. No smoking. Store apart from other dangerous and incompatible substances.
Storage temperature should not exceed 27° C/80° F

8. EXPOSURE CONTROLS\PERSONAL PROTECTION

EXPOSURE LIMITS

Components	CAS	Limits
cumene hydroperoxide	80-15-9	WEEL; TWA 1 ppm
cumene	98-82-8	ACGIH TLV; TWA 50 ppm
2-Phenyl-2-propanol	617-94-7	None established.
Acetophenone	98-86-2	

ENGINEERING CONTROLS: Both local exhaust and good general room ventilation must be provided not only to control exposure but also to prevent formation of flammable mixtures.
PERSONAL PROTECTIVE EQUIPMENT
RESPIRATORY PROTECTION: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
EYES PROTECTION: Full face shield with goggles underneath.
SKIN PROTECTION: Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.
Hand protection: Use chemical resistant gloves. Consult glove manufacturer for recommendations.
WORK HYGIENIC PRACTICES: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating. Wash contaminated clothing before reuse. Eye wash stations and emergency showers should be available.
OTHER USE PRECAUTIONS: The type and degree of personal protective equipment will depend on the specific work operation. Eye wash stations and emergency showers should be available. Inspect and replace personal protective equipment at regular intervals; use professional care in their selection, use and care.
COMMENTS: None.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
COLOR: Clear
FLASH POINT AND METHOD: 79 °C CC
AUTO-IGNITION TEMPERATURE: Not Determined.
BOILING POINT/RANGE: 101 C
MELTING POINT: Not Determined.
VAPOUR PRESSURE: Not determined.
VAPOUR DENSITY: Heavier than air.
SOLUBILITY: Slight in water.
ODOR/THRESHOLD: Mild, characteristic.
LOWER / UPPER FLAMMABLE LIMITS: No data available for this product. TO No data available for this product.
DENSITY: 1.0291
EVAPORATION RATE: Slower than ether.
PARTITION COEFFICIENT: Not determined.
pH: Not Applicable.
DECOMPOSITION TEMPERATURE: > 60° C/140° F, SADT (UN test H.4)
SADT possible at temperatures above approximately 60° C/140° F.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended storage conditions.
POSSIBILITY OF HAZARDOUS REACTIONS: Vapors my form explosive mixture with air.
CONDITIONS TO AVOID: Do not expose to temperatures above: 40°C
Heat, flames and sparks.
MATERIALS TO AVOID: Powdered metals, Organic materials, Heavy metal salts, metal salts, Combustible material, Acids, Alkalis, Reducing agents, Rust, charcoal, Amines, Copper, Lead, Cobalt/cobalt oxides
HAZARDOUS DECOMPOSITION PRODUCTS: Irritant, caustic, flammable, noxious/toxic gases and vapours can develop in the case of fire and decomposition

11. TOXICOLOGICAL INFORMATION

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE EFFECTS:

EYE CONTACT: Causes burns.

SKIN CONTACT: Causes burns.

INHALATION: Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system. Inhalation of aerosol may cause irritation to the upper respiratory tract. May cause nose, throat, and lung irritation. Can cause severe eye, skin and respiratory tract burns.

INGESTION: Can cause burns of mouth, throat, intestinal tract.

TARGET ORGAN: STOT - single exposure

May cause respiratory irritation.

STOT - repeated exposure

Remarks: May cause damage to organs through prolonged or repeated

exposure.

CHRONIC EFFECTS: Carcinogenicity:

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Cumene)

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

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.

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.

TOXICITY VALUES: Acute oral toxicity : LD50 rat: 382 mg/kg

Test substance: cumenehydroperoxide 73%

Acute inhalation toxicity : LC50 rat: 1,38 mg/l

Exposure time: 4 h

Test substance: cumenehydroperoxide (CUHP)

Acute dermal toxicity:

cumene hydroperoxide : LD50: > 1.000 - 2.000 mg/kg

2-Phenylpropan-2-ol : LD50 (rabbit): 4.300 mg/kg

acetophenone : LD50 (rabbit): ca. 16.000 mg/kg

12. ECOLOGICAL INFORMATION

PERSISTENCE AND DEGRADABILITY:
Not determined.
BIO-ACCUMULATIVE POTENTIAL:
Not determined.
MOBILITY IN SOIL:
Not determined.
OTHER ADVERSE EFFECTS:
Not known.
ECOTOXICOLOGICAL OTHER INFORMATION:
May be harmful to aquatic life

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of according to local, state, and federal regulations through a licensed disposal facility.

14. TRANSPORT INFORMATION

UN NUMBER: 3109
UN PROPER SHIPPING NAME: Organic peroxide type F, liquid (Cumyl hydroperoxide, <90%) (Cumene hydroperoxide)
TRANSPORT HAZARD CLASS:
5.2
TRANSPORT HAZARD SUBCLASS:
8
PACKING GROUP: N/A
MARINE POLLUTANT Y/N:
DOT - No
IATA - Yes
IMDG - Yes

SPECIAL PRE-CAUTIONS: Reportable Quantity (RQ) 12 lbs.

15. REGULATORY INFORMATION

U.S. REGULATIONS:
All components of this product are listed on or exempt from the TSCA Inventory.
U.S. SARA TITLE III (SUPERFUND AMENDMENRS AND REAUTHORIZATION ACT)
311/312 HAZARD CATEGORIES:
FIRE: Yes
PRESSURE GENERATING: No
REACTIVITY: No
ACUTE: Yes
CHRONIC: Yes

313 REPORTABLE INGREDIENTS:
313 REPORTABLE INGREDIENTS

Chemical Name	Weight %	CAS
cumene hydroperoxide	70% to 100%	80-15-9

cumene	10% to 15%	98-82-8
Acetophenone	0% to 5%	98-86-2

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: No data available for this product.

STATE REGULATIONS:

The following chemicals are California Proposition 65 reportable:

Chemical Name	CAS
cumene	98-82-8

Massachusetts Right To Know Components

Chemical Name	CAS
cumene hydroperoxide	80-15-9
cumene	98-82-8
Acetophenone	98-86-2

Pennsylvania Right To Know Components

Chemical Name	CAS
cumene hydroperoxide	80-15-9
cumene	98-82-8
2-Phenyl-2-propanol	617-94-7
Acetophenone	98-86-2

New Jersey Right To Know Components

Chemical Name	CAS
cumene hydroperoxide	80-15-9
cumene	98-82-8
2-Phenyl-2-propanol	617-94-7
Acetophenone	98-86-2

OTHER GOVT. REGULATIONS: No other information available

16. OTHER INFORMATION

DATE CREATED	07-22-20

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