

**Safety Data Sheet**

**Prepared in Accordance with HCS 29
C.F.R. 1910.1200**

1. Identification of the Substance/Mixture and the Company/Undertaking

- 1.1 Product Identifier** 302DB1NL **Revision Date:** 02/16/2026
Product Name: PH-1 HARDENER **Supersedes Date:** 12/06/2022
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Hardener for 2 components coatings - Industrial use.
Advised against: others than recommended
- 1.3 Details of the supplier of the safety data sheet**
- Manufacturer :** Dudick, a Division of Carboline
2150 Schuetz road
St. Louis, Mo. 63146
- Regulatory / Technical Information:
330-562-1970
- Datasheet Produced by:** Schlereth, Ken - regulatory@carboline.com
- 1.4 Emergency telephone number:** CHEMTREC 1-800-424-9300 (Inside US)
CHEMTREC +1 703 5273887 (Outside US)
HEALTH - Pittsburgh Poison Control 1-412-681-6669

2. Hazard Identification**2.1 Classification of the substance or mixture**

Acute Toxicity, Inhalation, category 3
Hazardous to the aquatic environment, Chronic, category 2
Carcinogenicity, category 1A
Organic Peroxide, categories E, F
Skin Corrosion, category 1
STOT, repeated exposure, category 2

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

CUMENE HYDROPEROXIDE, ACETOPHENONE, CUMYL ALCOHOL

HAZARD STATEMENTS

Organic Peroxide, categories E, F	H242-EF	Heating may cause a fire.
Acute Toxicity, Oral, category 4	H302	Harmful if swallowed.
Acute Toxicity, Dermal, category 4	H312	Harmful in contact with skin.
Skin Corrosion, category 1	H314-1	Causes severe skin burns and eye damage.
Acute Toxicity, Inhalation, category 3	H331	Toxic if inhaled.
Carcinogenicity, category 1A	H350-1A	May cause cancer.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment, Chronic, category 2	H411	Toxic to aquatic life with long lasting effects.

PRECAUTION PHRASES

P201	Obtain special instructions before use.
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.
P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+330+331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302	IF ON SKIN:
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P352	Wash with plenty of soap and water.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P403+235	Store in a well-ventilated place. Keep cool.

2.3 Other hazards

No Information

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

3. Composition/Information On Ingredients**3.2 Mixtures****Hazardous ingredients**

<u>Name According to EEC</u>	<u>EINEC No.</u>	<u>CAS-No.</u>	<u>%</u>	<u>Classifications</u>	
CUMENE HYDROPEROXIDE	201-254-7	80-15-9	80-100	H302-312-314-331-373-411	Acute Tox. 3 Inhalation, Acute Tox. 4 Dermal, Acute Tox. 4 Oral, Aquatic Chronic 2, Skin Corr. 1, STOT RE 2
CUMENE	202-704-5	98-82-8	10 - <30	H226-304-335-350-411	Aquatic Chronic 2, Asp. Tox. 1, Carc. 1A, Flam. Liq. 3, STOT SE 3 RTI
ACETOPHENONE	202-708-7	98-86-2	1.0 - <5.0	H302-319-330	Acute Tox. 2 Inhalation, Acute Tox. 4 Oral, Eye Irrit. 2
CUMYL ALCOHOL	210-539-5	617-94-7	1.0 - <5.0	H302-315-319	Acute Tox. 4 Oral, Eye Irrit. 2, Skin Irrit. 2

CAS-No.**M-Factors**

80-15-9
98-82-8
98-86-2
617-94-7

Additional Information:

The text for GHS Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures**4.1 Description of First Aid Measures**

AFTER INHALATION: Give oxygen or artificial respiration if needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.

AFTER SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation persists, call a physician.

AFTER EYE CONTACT: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

AFTER INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, call a poison control centre or doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Prolonged or repeated contact may dry skin and cause irritation. Harmful if swallowed. Irritating to eyes and skin. Risk of serious damage to the lungs (by aspiration). Vapours may cause drowsiness and dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention is required.

When symptoms persist or in all cases of doubt seek medical advice.

5. Fire-fighting Measures**5.1 Extinguishing Media:**

None Known

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable liquid. Vapours are heavier than air and may spread along floors.

Vapours may form explosive mixtures with air. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Provide adequate ventilation. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Electrical installations / working materials must comply with the technological safety standards. Wear shoes with conductive soles.

FOR SAFETY REASONS NOT TO BE USED: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

SPECIAL FIREFIGHTING PROCEDURES: In the event of fire, wear self-contained breathing apparatus. Cool containers / tanks with water spray. Fight fire with normal precautions from a reasonable distance. Flammable.

SPECIAL FIREFIGHTING PROTECTION EQUIPMENT: In the event of fire, wear self-contained breathing apparatus. High volume water jet.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment. For personal protection see section 8.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

No Information

7. Handling and Storage

7.1 Precautions for safe handling

INSTRUCTIONS FOR SAFE HANDLING : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Prepare the working solution as given on the label(s) and/or the user instructions. Protect from contamination. Do not breathe vapours or spray mist. Keep away from heat and sources of ignition. Ensure all equipment is electrically grounded before beginning transfer operations. Use only in an area containing explosion proof equipment. Do not use sparking tools. Use only with adequate ventilation. Do not taste or swallow. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation/personal protection. Organic peroxide. Temperature controlled. Hazardous decomposition may occur. Do not re-use empty containers. Avoid contact with skin, eyes and clothing. Keep container closed when not in use. Wash thoroughly after handling.

PROTECTION AND HYGIENE MEASURES : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Heat, flames and sparks.

STORAGE CONDITIONS: Maximum storage temperature: 100F (38C) Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

The mixing and application to be in accordance with the technical data sheets.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (US)

<u>Name</u>	<u>CAS-No.</u>	<u>ACGIH TWA</u>	<u>ACGIH STEL</u>	<u>ACGIH Ceiling</u>
CUMENE HYDROPEROXIDE	80-15-9	N/E	N/E	N/E
CUMENE	98-82-8	50 PPM	N/E	N/E
ACETOPHENONE	98-86-2	10 PPM	N/E	N/E
CUMYL ALCOHOL	617-94-7	N/E	N/E	N/E

<u>Name</u>	<u>CAS-No.</u>	<u>OSHA PEL</u>	<u>OSHA STEL</u>
CUMENE HYDROPEROXIDE	80-15-9	N/E	N/E
CUMENE	98-82-8	245 MGM3, 50 PPM	N/E
ACETOPHENONE	98-86-2	10.00 PPM	N/E
CUMYL ALCOHOL	617-94-7	N/E	N/E

FURTHER ADVICE: Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.

EYE PROTECTION: Ensure that eyewash stations and safety showers are close to the workstation location. Safety glasses with side-shields.

HAND PROTECTION: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious gloves. Request information on glove permeation properties from the glove supplier.

BODY PROTECTION: Lightweight protective clothing

OTHER PROTECTIVE EQUIPMENT: No Information

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Clear. Viscous Liquid
Physical State	Liquid
Odor	Mild
Odor threshold	Not Determined
pH	Not Determined
Melting point / freezing point (°C)	Not Determined
Boiling point/range (°C)	N/A - N/A
Flash Point (°C)	174°F (79°C)

Evaporation rate	Slower Than Ether
Flammability (solid, gas)	Not Determined
Upper/lower flammability or explosive limits	N/A - N/A
Vapour Pressure, mmHg	Not Determined
Vapour density	Heavier than Air
Relative density	Not Determined
Solubility in / Miscibility with water	Not Determined
Partition coefficient: n-octanol/water	Not Determined
Auto-ignition temperature (°C)	Not Determined
Decomposition temperature (°C)	Not Determined
Viscosity	Not Determined
Explosive properties	Not Determined
Oxidising properties	Not Determined

9.2 Other information

VOC Content g/l:	Refer to Part A SDS
Specific Gravity (g/cm3)	1.04

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Reacts violently in contact with acids, amines, driers, polymerisation accelerators and easily oxidized materials. Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke. 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 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 of heat transfer area to volume of product.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: No information on the product itself as the product is not tested

Inhalation LC50: No information on the product itself as the product is not tested

Irritation: Unknown

Corrosivity: Skin Corrosion, category 1

Sensitization: Unknown

Repeated dose toxicity: Unknown

Carcinogenicity: Unknown

Mutagenicity: Unknown

Toxicity for reproduction: Unknown

STOT-single exposure: Unknown

STOT-repeated exposure: STOT, repeated exposure, category 2

Aspiration hazard: Unknown

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested.
Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>	<u>Gas LC50</u>	<u>Dust/Mist LC50</u>
80-15-9	CUMENE HYDROPEROXIDE	382 mg/kg, oral, rat		220 ppm, / 4 hr, rat, inh	0.000	0.000
98-82-8	CUMENE	2910 mg/kg, oral, rat	12300 MG/ KG (RABBIT)	8000 ppm / 4 hours	0.000	0.000
98-86-2	ACETOPHENONE	815 - 3200 mg/kg, oral, rat		1.2 mg/L mouse, inh	0.000	0.000
617-94-7	CUMYL ALCOHOL	1300 mg/kg, oral, rat			0.000	0.000

Additional Information:

No Information

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia): No information available.

IC50 72hr (Algae): No information available.

LC50 96hr (fish): No information available.

12.2 Persistence and degradability:	No information available.
12.3 Bioaccumulative potential:	No information available.
12.4 Mobility in soil:	No information available.
12.5 Results of PBT and vPvB assessment:	The product does not meet the criteria for PBT/vPvB in accordance with Annex XIII.
12.6 Other adverse effects:	No information available.

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
80-15-9	CUMENE HYDROPEROXIDE	No information	No information	3.9 mg/l (Oncorhynchus mykiss)
98-82-8	CUMENE	No information	No information	6/32 mg/l (Fish)
98-86-2	ACETOPHENONE	No information	No information	No information
617-94-7	CUMYL ALCOHOL	No information	No information	No information

13. Disposal Considerations

- 13.1 WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1 UN number	UN3109
14.2 UN proper shipping name	Organic Peroxide Type F, Liquid
Technical name	(Cumyl hydroperoxide)
14.3 Transport hazard class(es)	5.2
Subsidiary shipping hazard	No Information
14.4 Packing group	N/A
14.5 Environmental hazards	Marine Pollutant: Yes (Cumyl hydroperoxide)
14.6 Special precautions for user	No information available.
EmS-No.:	F-J,S-R
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	No information available.
Additional Notes:	No Information

15. Regulatory Information

- 15.1 Safety, health and environmental regulations/legislation for the substance or mixture:**

CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

CERCLA - Sara Hazard Category

Organic peroxide, Carcinogenicity, Acute Toxicity (any route of exposure), Skin Corrosion or Irritation, Specific target organ toxicity (single or repeated exposure)

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>%</u>
CUMENE HYDROPEROXIDE	80-15-9	82.5
CUMENE	98-82-8	12.5
ACETOPHENONE	98-86-2	2.5

Toxic Substances Control Act:

All components of this product are either listed on the TSCA Inventory or are exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

U.S. State Regulations: As follows -**New Jersey Right-to-Know:**

The following materials are non-hazardous, but are among the top five components in this product.

No NJ Right-To-Know components exist in this product.

Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

No PA Right-To-Know components exist in this product.

CALIFORNIA PROPOSITION 65

WARNING: Cancer and Reproductive Harm -- www.P65Warnings.ca.gov

International Regulations: As follows -*** Canadian DSL:**

All chemical ingredients included on inventory (DSL)

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Reasons for revision

No Information

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.