



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	317DB1NL	Revision Date:	05/04/2026
Product Name:	PH-2C HARDENER	Supersedes Date:	New SDS
1.2 Relevant identified uses of the substance or mixture and uses advised against	Component of multicomponent industrial coatings - Industrial use.		
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		
Supplier:	supplier		
Datasheet Produced by:	Brombach, Jennifer - regulatoryeurope@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 4
Organic Peroxide, categories E, F
Reproductive Toxicity, category 2
Skin Corrosion, category 1

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

MEK PEROXIDES, DIISOBUTYRATE, HYDROGEN PEROXIDE

HAZARD STATEMENTS

Organic Peroxide, categories E, F	H242-EF	Heating may cause a fire.
Skin Corrosion, category 1	H314-1	Causes severe skin burns and eye damage.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
Reproductive Toxicity, category 2	H361	Suspected of damaging fertility or the unborn child.

PRECAUTION PHRASES

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.
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.
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.
P363	Wash contaminated clothing before reuse.
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>	
MEK PEROXIDES	215-661-2	1338-23-4	30 - <60	H302-314-332	Acute Tox. 4 Inhalation, Acute Tox. 4 Oral, Skin Corr. 1
DIISOBUTYRATE	229-934-9	6846-50-0	10 - <30	H361-412	Aquatic Chronic 3, Repr. 2

METHYL ETHYL KETONE	201-159-0	78-93-3	1.0 - <5.0	H225-319-336	Eye Irrit. 2, Flam. Liq. 2, STOT SE 3 NE
HYDROGEN PEROXIDE	231-765-0 231-765-0	7722-84-1	1.0 - <5.0	H302-312-314-332-335-412	Acute Tox. 4 Dermal, Acute Tox. 4 Inhalation, Acute Tox. 4 Oral, Aquatic Chronic 3, Skin Corr. 1, STOT SE 3 RTI

CAS-No.

1338-23-4
6846-50-0
78-93-3
7722-84-1

M-Factors

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. Irritating to eyes and skin. May be harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

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: Combustible Liquid. Provide adequate ventilation. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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. Combustible material. Cool containers / tanks with water spray. Fight fire with normal precautions from a reasonable distance.

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

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. 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>
MEK PEROXIDES	1338-23-4	0.2 PPM	N/E	N/E
DIISOBUTYRATE	6846-50-0	N/E	N/E	N/E
METHYL ETHYL KETONE	78-93-3	200 PPM	300 PPM	N/E
HYDROGEN PEROXIDE	7722-84-1	1 PPM	N/E	N/E

<u>Name</u>	<u>CAS-No.</u>	<u>OSHA PEL</u>	<u>OSHA STEL</u>
MEK PEROXIDES	1338-23-4	0.7 PPM	N/E
DIISOBUTYRATE	6846-50-0	N/E	N/E
METHYL ETHYL KETONE	78-93-3	590 MGM3, 200 PPM	885 MGM3, 300 PPM
HYDROGEN PEROXIDE	7722-84-1	1.4 MGM3, 1 PPM	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)	173 F (78 C) - 540 F (282 C)
Flash Point (°C)	169°F (76°C)
Evaporation rate	Slower Than Ether
Flammability (solid, gas)	Not Determined
Upper/lower flammability or explosive limits	1.8 - 10.1
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
Particle characteristics	Not applicable to liquids

9.2 Other information

VOC Content g/l:	Refer to Part A SDS
Specific Gravity (g/cm³)	1.10

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: Reproductive Toxicity, category 2

STOT-single exposure: Unknown

STOT-repeated exposure: Unknown

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>
1338-23-4	MEK PEROXIDES	1017 mg/kg, oral, rat	4000 mg/kg, dermal, rabbit	17 mg/l / 4h, Inh, mouse	0.000	0.000
6846-50-0	DIISOBUTYRATE	3200 mg/kg, oral, rat	>2000 mg/kg, dermal, rabbit	Not Available	0.000	0.000
78-93-3	METHYL ETHYL KETONE	2194 mg/kg rat, oral	Not Available	34.5 mg/L/ 4 hour rat, inhalation	0.000	0.000
7722-84-1	HYDROGEN PEROXIDE	805 mg/kg, oral, rat	2000 mg/kg, (Rabbit)	2000 mg/m3 inh, 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>
1338-23-4	MEK PEROXIDES	39 mg/l	No information	No information
6846-50-0	DIISOBUTYRATE	No information	No information	No information
78-93-3	METHYL ETHYL KETONE	308 mg/l (Daphnia magna)	No information	2993 mg/l (Pimephales promelas)
7722-84-1	HYDROGEN PEROXIDE	18 - 32 mg/l (Daphnia Magna)	No information	16.4 mg/L (Pimephales promelas)

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	UN3105
14.2	UN proper shipping name	Organic Peroxide Type D, Liquid
	Technical name	(Methyl ethyl ketone peroxide(s))
14.3	Transport hazard class(es)	5.2
	Subsidiary shipping hazard	No Information
14.4	Packing group	N/A
14.5	Environmental hazards	No Information
14.6	Special precautions for user	No information available.
	EmS-No.:	No Information
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, Acute Toxicity (any route of exposure), Reproductive toxicity, Skin Corrosion or Irritation

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:

DIMETHYLPHTHALATE	131-11-3	40
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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.

<u>Chemical Name</u>	<u>CAS-No.</u>
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DIMETHYLPHTHALATE

131-11-3

Pennsylvania Right-To-Know

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

<u>Chemical Name</u>	<u>CAS-No.</u>
DIMETHYLPHTHALATE	131-11-3

CALIFORNIA PROPOSITION 65

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

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

No Information

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:**

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H412	Harmful 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.

