

Safety Data Sheet

Duro-Last®, Inc.

Duro-Last® Liquid-Applied Flashing Catalyst

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Duro-Last® Liquid-Applied Flashing Catalyst Version: 3

Identifier 1: DL LAF Catalyst

Chemical Family: Mixture

Product Use: Reactive agent used to induce curing of Duro-Last® Liquid-Applied Flashing Field

Company Information: Duro-Last[®], Inc.

525 W Morley Dr. Saginaw, MI 48601 Phone: (800) 248-0280

Internet Address: www.duro-last.com

Emergency Phone (24

hours):

INFOTRAC

1-800-535-5053 (US & Canada) 1-352-323-3500 (International)

SECTION 2 HAZARD(S) IDENTIFICATION

Hazard Classification: Health Hazards

Organic Peroxides, Type D

Serious Eye Damage/Irritation, Category 2

Skin Sensitization, Category 1

Toxic to Reproduction (Fertility), Category 2

Pictogram(s):



Signal Word: DANGER

Hazard Statements: H242 - Heating may cause a fire.

H317 - May cause an allergic skin reaction.
 H319 - Causes serious eye irritation.
 H361 - Suspected of damaging fertility.

Precautionary Statements: Prevention

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.

P220 - Keep/Store away from clothing/incompatible materials/combustible

materials.

P234 - Keep only in original container.

P261 - Avoid breathing dust.

P264 - Wash hands thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves, eye/face protection: Safety glasses with side

shields are recommended.

P281 - Use personal protective equipment as required.

Response

P308+P313 - IF exposed or concerned: Get medical attention. P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P363 - Wash contaminated clothing before reuse.

P332+P313 - If skin irritation or rash occurs: Get medical attention.

P305+P351+P338 - IF IN EYES: Rinse continuously with water for several minutes.

Remove contact lenses, if present, and easy to do. Continue rinsing.

P337+P313 - If eye irritation persists: Get medical advice/attention.

Storage

P405 - Store locked up. P410 - Protect from sunlight.

P411+P235 - Store at temperatures not exceeding 30°C/86°F. Keep cool.

P420 - Store away from other materials.

Disposal

P501 - Dispose of contents and container in accordance with all local,

regional, national, and international regulations.

Hazards Not Otherwise Classified: - Temperature control may be required.

- Hazardous decomposition may occur.

SECTION 3

COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients

Chemical Name	CAS Number	Concentration (%)
Dibenzoyl Peroxide	94-36-0	49.00 - 51.00%
Dicyclohexyl Phthalate	84-61-7	49.00 - 51.00%

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4 FIRST-AID MEASURES

Inhalation: Move victim to fresh air and keep at rest in a position comfortable for breathing.

If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial

respiration of oxygen by trained personnel.

It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Get medical attention.

If unconscious, place in recovery position and get medical attention immediately.

Maintain an open airway.

Loosen tight clothing such as a collar, tie, belt, or waistband.

Eye Contact: Immediately flush eye(s) with plenty of water, occasionally lifting the upper and lower

evelids.

Check for and remove any contact lenses. Continue to rinse for at least 10 minutes.

Get medical attention.

Skin Contact:

Wash off with plenty of soap and water.

Wash contaminated clothing and shoes thoroughly with water before removing them, or

wear gloves.

Continue to rinse for at least 10 minutes. Remove contaminated clothing and shoes.

Get medical attention.

In the event of any complaints or symptoms, avoid further exposure.

Wash clothing before reuse.

Clean shoes thoroughly before reuse.

Ingestion:

Wash out mouth with water.

Remove dentures if any.

Move victim to fresh air and keep at rest in a position comfortable for breathing.

If material has been swallowed and the exposed person is conscious, give small quantities

of water to drink.

Stop if the exposed person feels sick, as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel.

If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

Get medical attention.

Never give anything by mouth to an unconscious person.

If unconscious, place in recovery positon and get medical attention immediately.

Maintain an open airway.

Loosen tight clothing such as a collar, tie, belt, or waistband.

Most Important Symptoms and Effects, Both Acute and Delayed:

Eye Contact: Pain or irritation, watering or redness.

Inhalation: Reduced fetal weight, increase in fetal deaths and skeletal malformations.

Skin Contact: Irritation, redness, reduced fetal weight, and increase in fetal deaths and

skeletal malformations.

Ingestions: Reduced fetal weight, increase in fetal deaths, and skeletal malformations.

Protection of First-Aiders:

No action shall be taken involving any personal risk or without suitable training.

It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing and shoes thoroughly with water before removing them, or

wear gloves.

Show this Safety Data Sheet to the doctor in attendance.

Notes to Physician:

Treat symptomatically.

Contact a poison treatment specialist immediately if large quantities have been ingested or

inhaled.

SECTION 5

FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use dry chemical, Carbon Dioxide, water spray (fog), or foam.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards Arising

This material increases the risk of fire and may aid in combustion.

from the Substance or

Heating may cause a fire.

Mixture:

May re-ignite itself after fire is extinguished. Hazardous decomposition may occur.

Runoff to sewer may create fire or explosion hazard.

Hazardous Thermal Decomposition Products:

Decomposition products may include Carbon Dioxide and Carbon Monoxide.

Firefighting Instructions:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there

is a fire.

No action shall be taken involving any personal risk or without suitable training.

Move containers from the fire area if this can be done without risk.

Use water spray to keep fire-exposed containers cool.

Special Protective

Equipment for Firefighters:

Firefighters should wear appropriate protective equipment and self-contained breathing

apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remarks for Firefighters: Benzoyl Peroxide will explode at temperatures above 392°F (200°C).

Do not allow Benzoyl Peroxide to dry out, as the material will become shock and friction

sensitive.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Handling Precautions: Remove ignition sources.

No open flames. No smoking.

Observe exposure controls and personal protection equipment guidelines in Section 8.

Non-Emergency Personnel: No action shall be taken involving any personal risk or without suitable training.

Evacuate surrounding areas.

Keep unnecessary and unprotected personnel from entering.

Do not touch or walk through spilled material.

Shut off all ignition sources.

No flares, smoking, or flames in hazard area.

Provide adequate ventilation.

Wear appropriate respirator when ventilation is inadequate.

Put on appropriate personal protective equipment.

Emergency Responders: If specialized clothing is required to deal with the spillage, take note of any information in

Section 8 on suitable and unsuitable materials.

See also the information in "Non-Emergency Personnel."

Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and

sewers.

Inform the relevant authorities if the product has caused environmental pollution (sewers,

waterways, soil, or air).

Small Spill Cleanup: Move containers from spill area.

Use spark-proof tools and explosion-proof equipment.

Avoid containment with reactive substances.

Avoid dust generation. Do not dry sweep.

Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste

container.

Dispose of via a licensed waste disposal contractor.

Large Spill Cleanup: Move containers from spill area.

Use spark-proof tools and explosion-proof equipment.

Approach release from upwind.

Prevent entry into sewers, water courses, basements, or confined areas.

Avoid contamination with reactive substances.

Avoid dust generation. Do not dry sweep.

Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste

container.

Dispose of via a licensed waste disposal contractor.

Note: See Section 1 for emergency contact information and Section 13 for waste disposal.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1940.120).

SECTION 7 HANDLING AND STORAGE

Handling Precautions: Protective Measures

Do not get in eyes, on skin, or on clothing.

Put on appropriate personal protective equipment (see Section 8).

Persons with a history of skin sensitization should not be employed in any process in which this mixture is being used.

Avoid exposure - obtain special instructions before use.

Avoid exposure during pregnancy.

Do not handle until all safety precautions have been read and understood.

Do not ingest.

Use only with adequate ventilation.

Wear appropriate respirator when ventilation is inadequate.

Do not enter storage areas and confined spaces unless adequately ventilated.

Keep in original container or an approved alternative made from a compatible material,

kept tightly closed when not in use.

Store and use away from hear, sparks, open flame, or any others ignition source.

Use only non-sparking tools.

Keep away from clothing, incompatible materials, and combustible materials.

Temperature control may be required.

Empty containers retain product residue and can be hazardous.

Do not reuse container.

Hygiene Measures

Eating, drinking, and smoking should be prohibited in areas where this material is handled,

stored, and processed.

Workers should wash hands and face before eating, drinking, and smoking.

Remove contaminated clothing and protective equipment before entering eating areas.

See also Section 8 for additional information on hygiene measures.

Storage Requirements: Keep only in original container in a cool, well ventilated place away from sparks, open

flames, and ignition sources.

Keep container tightly closed when not in use. Store at temperatures not exceeding 30°C/86°F

Incompatible Products: Strong bases.

Strong acids.

Incompatible Materials: Sources of ignition, direct sunlight, heat sources, combustible materials.

Special Rules for

Packaging:

Keep only in original container.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Component	CAS Number	Basis **	Value	Exposure Limit(s)* / Form of Exposure
Dibenzoyl Peroxide	94-36-0	ACGIH	TLV	5mg/m³ 8 hours
		OSHA	TWA	5 mg/m ³ 8 hours

^{*}The above mentioned values are in accordance with the legislation in effect at the date of the release of this Safety Data Sheet.

**Basis

ACGIH. Threshold Limit Values (TLV)

OSHA Po. Table Z-1, Limit for Air Contaminants (1989 Vacated Values)

OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant

OSHA P2. Permissible Exposure Limits (PEL), Table Z-2

OSHA Z3. Table Z-3, Mineral Dust

Engineering Measures:

Use only with adequate ventilation. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental Exposure Controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal Protective Equipment:

Respiratory Protection

Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Dust respirator.

Hand Protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated; greater than 8 hours (breakthrough time): Butyl Rubber.

Eye and Face Protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: safety glasses with side-shields.

Skin and Body Protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat.

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Hygiene Measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing thoroughly before reuse.

Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Solid (Granules)

Color: White

Density: $\approx 778 \text{ kg/m}^3$ Odor: Odorless

Heating may cause an explosion. **Explosive Properties:**

60°C (140°F) SADT: VOC: $0 \, g/L$

SECTION 10

STABILITY AND REACTIVITY

Reactivity: This product, in laboratory testing, either detonates partially, deflagrates slowly or shows a

medium effect when heated under confinement.

Chemical Stability: The product is chemically stable.

Possibility of Hazardous **Reactions:**

Hazardous reactions or instability may occur under certain conditions of storage or use.

Conditions may include the following:

Temperature increase. High temperature.

Reactions may include the following:

Hazardous decomposition.

Risk of causing fire.

Hazardous Decomposition

Products:

Under normal conditions of storage and use, hazardous decomposition products should

not be produced.

Reactive or Incompatible

Materials:

Combustible materials. Reducing materials.

Copper. Iron. Rust.

Conditions to Avoid: Avoid all possible sources of ignition (spark or flame), increased storage temperature, and

direct sunlight.

SECTION 11

TOXICOLOGICAL INFORMATION

Toxicity

Hazardous Ingredient Name	Result	Species	Exposure
Dibenzoyl Peroxide	Eyes - Mild Irritant	Rabbit	500 milligrams, 24 hours

Conclusion/Summary:

Dibenzoyl Peroxide showed no skin irritation when tested on rabbits according to OECD Test Guideline 404. Dicyclohexyl Phthalate showed no skin irritation when tested on reconstructed human epidermis (RhE) according to OECD Test Guideline 439.

Dicyclohexyl Phthalate showed no eye irritation according to OECD Test Guideline 437.

Hazardous Ingredient Name	Test and Route of Exposure	Species/Subject	Result
Dibenzoyl Peroxide	Sensitization - Skin	Mouse	Sensitizing
Dicyclohexyl Phthalate	Sensitization - Skin	Mouse	Sensitizing
Dibenzoyl Peroxide	Mutagenicity - OECD 471	Bacteria	Negative
Dicyclohexyl Phthalate	Mutagenicity - OECD 471	Bacteria	Negative

Irritation: Skin irritation.

Eye irritation.

Sensitization: This product contains one or more known sensitizers. Once sensitized, a severe allergic

reaction may occur when subsequently exposed to very low levels.

Reproductive Toxicity: Dicyclohexyl Phthalate: Suspected of damaging fertility based on some evidence of adverse

effects on sexual function.

Likely Routes of Exposure: Oral.

Inhalation.

Symptoms Related to the Physical, Chemical, and

Toxicological Characteristics:

Eye Contact

Pain or Irritation.

Watering. Redness.

Inhalation

Reduced fetal weight. Increase in fetal deaths. Skeletal malformations.

Skin Contact

Irritation. Redness.

Reduced fetal weight. Increase in fetal deaths. Skeletal malformations.

Ingestion

Reduced fetal weight. Increase in fetal deaths. Skeletal malformations.

ECOLOGICAL INFORMATION

Environmental Data

Components	Species	Test Results
Dibenzoyl Peroxide Algae		Acute EC50 0.07 mg/L; Exposure time: 72 h
	Daphnia	Acute EC50 0.11 mg/L; Exposure time: 48 h
	Micro-Organism	Acute EC50 35 mg/L; Exposure time: 30 min
	Fish	Acute LC50 0.06 mg/L; Exposure time: 96 h
Dicyclohexyl Phthalate	Algae	NOEC >2 mg/L; Exposure time: 72 h
	Micro-Organism	NOEC >100 mg/L; Exposure time: 3 h
	Algae	Acute EC50 >2 mg/L; No toxicity at limit of solubility; Exposure
		time: 72 h
Fish		Acute LC50 >2 mg/L; No toxicity at limit of solubility; Exposure
		time: 96 h
	Daphnia	Chronic NOEC 0.181 mg/L; Exposure time: 21 days

Persistence and Degradability

Components	Statistic and Test	Test Results
Dibenzoyl Peroxide	Persistence - OECD 301D	68.00% - 28 days
	Biodegradability	Readily
Dicyclohexyl Phthalate	Persistence - OECD 301D	68.50% - 28 days
	Biodegradability	Readily

Bioaccumulative Potential

Components	Log Pow	Potential
Dibenzoyl Peroxide	3.2	Low
Dicyclohexyl Phthalate	5.6	High

SECTION 13

DISPOSAL CONSIDERATIONS

Disposal Methods:

The generation of waste should be avoided or minimized wherever possible.

Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Waste packaging should be recycled.

Incineration or landfill should only be considered when recycling is not feasible.

This material and its container must be disposed of in a safe way.

Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

Empty containers or liners may retain some product residues.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and

sewers.

RCRA Classification: D001, D003

Regulations: Disposal should be in accordance with applicable federal, state, and local regulations.

SECTION 14

TRANSPORT INFORMATION

Transport Information for DOT, TDG, ADR/RID, IMDG, IATA-DGR

UN number	Proper Shipping Name	Class	PG*	Label	Remarks
3106	Organic Peroxide type D, solid (Dibenzoyl Peroxide, 50% in Phthalate)	5.2	II	ORGANIC PEROXIDE 5.2	Marine Pollutant

^{*}PG: Packing Group

In Accordance with DOT

Transport Document Description:	UN3106 Organic Peroxide Type D, Solid, 5.2, II
1	<u> </u>
UN-No.(DOT):	3106
DOT NA no.:	UN3106
DOT Proper Shipping Name:	Organic Peroxide Type D, Solid
Department of Transportation (DOT) Hazard	5.2 - Class 5.2 - Organic Peroxide 49 CFR 173.128
Classes:	
DOT Symbols:	G - Identifies PSN requiring a technical name.
Packing Group (DOT):	II - Medium Danger
DOT Packaging Exceptions (49 CFR 173.xxx):	152
DOT Packaging Non-Bulk (49 CFR 173.xxx):	225
DOT Packaging Bulk (49 CFR 173.xxx):	None
DOT Quantity Limitations Passenger	5 kg
Aircraft/Rail (49 CFR 175.75):	
DOT Quantity Limitations Cargo Aircraft	10 kg
Only (49 CFR 175.75):	
DOT Vessel Stowage Location:	D - The material must be stowed "on deck only" on a cargo vessel and on
	a passenger vessel carrying a number of passengers limited to not more
	than the larger of 25 passengers or one passenger per each 3 m of overall
	vessel length, but the material is prohibited on passenger vessels in which
	the limiting number of passengers is exceeded.
DOT Vessel Stowage Other:	12 - Keep as cool as reasonably practicable.
	40 - Stow "clear of living quarters."
	52 - Stow "separated from" acids.
	53 - Stow "separated from" alkaline compounds.

SECTION 15	REGULATORY INFORMATION
TSCA list:	All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
SARA304 Reportable Quantity:	This material does not contain any components with a section 304 EHS RQ.
SARA 302:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 311/312:	This product contains one or more chemicals classified as "Reactive" under SARA 311/312.

SARA 313:

This material contains Dibenzoyl Peroxide with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. **Form R - Reporting Requirements:** Dibenzoyl Peroxide, 94-36-0, 49.00 - 51.00% **Supplier Notification:** Dibenzoyl Peroxide, 94-36-0, 49.00 - 51.00%

NOTE: SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

Clean Air Act:

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S.

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

Ozone-Depletion Potential:

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

California Prop 65:

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

State Regulations Listed Components	
Massachusetts	Benzoyl Peroxide
New Jersey	Benzoyl Peroxide, Dibenzoyl Peroxide
Pennsylvania	Benzoyl Peroxide, Dibenzoyl, Phthalate Esters

Clean Air Act Section 12 (40 CFR 61).

Composition/Information on Ingredients

					Immediate	Delayed
		Fire	Sudden Release		(Acute)	(Chronic)
Name	%	Hazard	of Pressure	Reactive	Health Hazard	Health Hazard
Dibenzoyl Peroxide	49.00 -	No	No	Yes	Yes	No
	51.00%					
Dicyclohexyl Phthalate	49.00 -	Yes	No	No	Yes	Yes
	51.00%					

SECTION 16

OTHER INFORMATION

HMIS (USA):		NFPA (USA)	
Health	2	Health	2
Flammability	2	Flammability	2
Physical Hazard	2	Instability	2
Protective Equipment	G	Specific Hazard	OX

Key to Abbreviations: ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labeling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

 $Log P_{ow} = Logarithm of the octanol/water partition coefficient$

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol"= marine pollution)

UN = United Nations

Previous Editions: First Edition: 01/11/18

Revision Dates: 03/29/2018 05/02/2019

Further Information:

This SDS was prepared in accordance with OSHA regulatory standards for Toxic and

Hazardous Substances: 29 CFR 1910.1200.

Disclaimer: To the best of our knowledge, the information contained herein is accurate. However

Duro-Last[®], Inc. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be handled with care. Although Duro-Last[®], Inc. has described herein all of the hazards to which we are currently aware, we cannot guarantee that these are the only hazards which

exist.