

Duro-Last® WB II Adhesive

SECTION 1	PRODUCT AND COMPANY IDENTIFICATION
------------------	---

Product Name: Duro-Last® WB II Adhesive
Version: 1
Identifier 1: FA636
Identifier 2: Water Based PVC Bonding Adhesive
Chemical Family: Mixture
Product Use: Water Based PVC Membrane Bonding Adhesive

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:

Physical Hazards
 Flammable Liquids, Category 4

Health Hazards
 Skin Irritation, Category 2
 Eye Irritation, Category 2A
 Reproductive Toxicity, Category 2
 Acute Dermal Toxicity, Category 3
 Acute Inhalation Toxicity, Category 3
 Acute Oral Toxicity, Category 3
 Specific Target Organ Toxicity – Single Exposure
 - Central Nervous System, Category 1
 - Eyes, Category 1
 - Respiratory System, Category 3
 Specific Target Organ Toxicity – Repeated Exposure
 - Kidneys, Category 2
 - Liver, Category 2
 - Spleen, Category 2
 - Blood, Category 2
 Aspiration Hazard, Category 1

Environmental Hazards
 Acute Hazard to the Aquatic Environment, Category 2
 Chronic Hazard to the Aquatic Environment, Category 3

Pictogram(s):



Signal Word:	DANGER	
Hazard Statements:	H227	- Combustible liquid.
	H301	- Toxic if swallowed.
	H304	- May be fatal if swallowed and enters airways.
	H311	- Toxic in contact with skin.
	H315	- Causes skin irritation.
	H319	- Causes serious eye irritation.
	H331	- Toxic if inhaled.
	H361	- Suspected of damaging fertility or the unborn child.
	H370	- Causes damage to organs.
	H373	- May cause damage to organs through prolonged or repeated exposure.
	H401	- Toxic to aquatic life.
	H412	- Harmful to aquatic life with long lasting effects.
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.
	P260	- Do not breathe dust/fume/gas/mist/vapors/spray.
	P264	- Wash hands, forearms, and other exposed areas thoroughly after handling.
	P270	- Do not eat, drink, or smoke when using this product.
	P271	- Use only outdoors or in a well-ventilated area.
	P272	- Contaminated work clothing should not be allowed out of the workplace.
	P273	- Avoid release to the environment.
	P280	- Wear protective gloves/protective clothing/eye protection/face protection.
	P284	- Wear respiratory protection.
	Response	
	P301+P310	- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P302+P352	- IF ON SKIN: Wash with plenty of soap and water.
	P303+P361+P353	- IF ON SKIN (or Hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.
	P304+P340	- IF INHALED: Move to fresh air and keep at rest in a position comfortable for breathing.
	P305+P351+P338	- IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present, and easy to do. Continue rinsing.
	P309+P311	- IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
	P314	- Get medical advice/attention if you feel unwell.
	P321	- Specific treatment (see Section 4).
	P330	- Rinse mouth.
	P331	- Do NOT induce vomiting.
	P332+P313	- If skin irritation occurs: Get medical advice/attention.
	P337+P313	- If eye irritation persists: Get medical advice/attention.
	P342+P311	- If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
	P362	- Take off contaminated clothing and wash before reuse.
	P370+P378	- In case of fire: Use appropriate media to extinguish.
	P391	- Collect spillage.

Storage

- P403+P233+P235 - Store in a well-ventilated place. Keep container tightly closed. Keep cool.
- P405 - Store locked up.

Disposal

- P501 - Dispose of contents/container according to local, regional, national, and international regulations.

Emergency Overview**Immediate Concerns:**

DANGER! Combustible liquid and vapor. Vapors may cause flash fire. Harmful or fatal if swallowed.

SECTION 3**COMPOSITION/INFORMATION ON INGREDIENTS****Hazardous Ingredients**

Chemical Name	CAS Number	Concentration (%)
Toluene	108-88-3	3 – 10%
Methanol	67-56-1	1 – 5%

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:**

If affected:
 Move to fresh air.
 Restore breathing.
 If not breathing, give artificial respiration or give oxygen by trained personnel.
 Seek immediate medical attention.

Skin Contact:

Wash off with soap and plenty of water.
 If symptoms develop or persist, get medical attention.

Eye Contact:

Immediately flush eye(s) with plenty of water.
 Remove contact lenses, if present, and easy to do so.
 Keep eye(s) wide open while rinsing.
 Occasionally lift upper and lower eye lids.
 Get immediate medical attention.

Ingestion:

Small amounts are not expected to produce adverse health effects.
 Larger amounts should be recovered by aspiration.
 Clean mouth with water and drink plenty of water afterwards.
 Do NOT induce vomiting.
 Never give anything by mouth to an unconscious person.
 Get medical attention.

Most Important Symptoms and Effects, Both Acute and Delayed:

Irritant Effects to Eyes, Nose, Throat, Respiratory Tract, Stomach, and Skin.
 Dermatitis (Rash).
 Pulmonary Aspiration Hazard.
 Headaches or Dizziness.
 Loss of Balance and Coordination
 Unconsciousness
 Coma or Death
 Central Nervous System Depression/Unconsciousness

Liver or Kidney Damage.
Intentional Prolonged Overexposure Can Result In:
 Abnormal Behavior
 Convulsions
 Hallucinations
 Delirium
 Nervous System Damage
 Serious Disturbances of Heart Rhythm
 Sudden Death

Protection of First-Aiders: Move out of dangerous area.
 Consult a physician.
 Show this Safety Data Sheet to the doctor in attendance.

Additional Notes to Physician: N/A

SECTION 5	FIRE-FIGHTING MEASURES
------------------	-------------------------------

Flammable Class:	Class IIIA
General Hazard:	Combustible Liquid
Suitable Extinguishing Media:	Water spray, Carbon Dioxide, Dry Chemical, or Foam.
Explosion Hazards:	Avoid contact with open flame, electric arcs, or other hot surfaces which can cause thermal decomposition.
Special Protective Equipment for Firefighters:	In the event of fire, wear self-contained breathing apparatus with pressure-demand, full face piece SCBA (MSHA/NIOSH approved or equivalent) and full protective gear.
Hazardous Decomposition Products:	Carbon Monoxide and Carbon Dioxide may form when heated to decomposition.

SECTION 6	ACCIDENTAL RELEASE MEASURES
------------------	------------------------------------

Small Spills:	Dike off the area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Soak up spills with absorbent material, such as sawdust or vermiculite, and sweep into closed containers for disposal. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth and gravel, etc. as necessary and place in closed containers for disposal. Only allow access to those who are adequately trained, authorized, and wearing the appropriate personal protective equipment (PPE) to participate in spill response and clean-up.
Large Spills:	Keep spectators away. Only allow access to those who are adequately trained, authorized, and wearing the appropriate personal protective equipment (PPE) to participate in spill response and clean-up. Block off and contain spill with inert material (e.g. sand, earth, etc.). Transfer liquids to covered and labeled containers for disposal. Use appropriate PPE. Place absorbent materials used to dike off the spill in covered containers for disposal. Prevent contamination of sewers, streams, and groundwater from spilled material using absorbent material.
Handling Precautions:	Use personal protective equipment. Deny access to unprotected persons. Avoid breathing dust/fumes/gas/mist/vapors/spray.

SECTION 7

HANDLING AND STORAGE

- General Procedures:** For professional or industrial use only.
Follow label instructions.
Keep out of the reach of children.
Not for consumption.
No smoking.
Do not breathe vapors.
Avoid contact with body.
Contact lens wearers must wear protective eye wear around chemical vapors and liquid.
Wash hands thoroughly after handling.
To prevent build-up of vapors, use adequate natural and/or mechanical ventilation (e.g. open all windows and doors to achieve cross ventilation).
Avoid exceeding the given occupational exposure limits (see Section 8).
- Handling Precautions:** Employee education and training in the safe handling of this product are required under the Federal OSHA Hazard Communication Standard.
Follow standard hygiene measures when handling chemical products.
Containers should be tightly closed to prevent contamination with foreign materials and moisture.
- Storage Requirements:** Keep container closed when not in use.
Store in a dry, well-ventilated area and out of the sun.
Store between 60°F (15.5°C) and 95°F (35°C)
This product has a shelf life of 1 year from manufacture date.
Observe label precautions.
Store in accordance with local regulations.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Component	CAS Number	Basis **	Value	Exposure Limit(s)* / Form of Exposure
Toluene	108-88-3	OSHA	TWA	200 ppm
		ACGIH	TLV	20 ppm
Methanol	67-56-1	OSHA	TWA	260mg/m ³
		ACGIH	TLV	200 ppm (ST) 250 ppm

*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 P0. Table Z-1, Limit for Air Contaminant (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:** Provide sufficient ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits. Use only in a well-ventilated area. Ground and bond all equipment.

Personal Protective Equipment:**Respiratory Protection**

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

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Hand Protection

Impervious gloves complying with an approved standard should be worn, if needed, to prevent repeated or prolonged skin contact.

Eye and Face Protection

Safety eyewear with side-shields complying with an approved standard should be used when a risk assessment indicates this is necessary. A face shield may be necessary if spraying the product.

Skin and Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace.

Hygiene Measures

Avoid contact with skin, eyes, and clothing.

Wash hands before breaks and immediately after handling the product.

Remove respiratory, and skin/eye protection only after vapors have been cleared from the area.

Remove contaminated clothing, and protective equipment before entering eating areas.

Wash thoroughly after handling.

Follow good hygiene practices when handling this material.

Other Use Precautions:

Facilities storing or utilizing this material should be equipped or have access to an eyewash facility and safety shower.

SECTION 9**PHYSICAL AND CHEMICAL PROPERTIES**

Physical State:	Liquid	Evaporation Rate:	> 1 (n-Butyl Acetate = 1)
Color:	White	Density:	8.99 lbs/Gal
Percent Volatile:	46.1%	Specific Gravity:	1.078
Flash Point:	196°F (91.1°C)	VOC:	179.000 gr/L EPA Method 24 VOC
Flammable Limits:	1.2 to 7.1 (For Toluene)	Photochemically Reactive Only VOC:	109.7 gr/L
Auto-Ignition Temperature:	725°F to 997°F	Pour Point:	N/A
Freezing Point:	N/A	Particle Size:	N/A
Melting Point:	N/A	Vapor Density:	N/A
Solubility in Water:	Soluble	Vapor Pressure:	N/A
Viscosity:	N/A	Oxidizing Properties:	N/A

Comments:

0.19 lbs. VHAP/lbs. Solid 10.1% by weight HAP

Notes:

The upper and lower flammable limits are for Toluene, not for the adhesive as a whole. The adhesive is a water based product categorized as a combustible liquid.

SECTION 10

STABILITY AND REACTIVITY

Hazardous Polymerization:	No.
Hazardous Decomposition Products:	Carbon Monoxide and Carbon Dioxide may form when heated to decomposition.
Chemical Stability:	The product is chemically stable.
Possibility of Hazardous Reactions:	None expected.
Incompatible Materials:	Oxidizing materials.
Conditions to Avoid:	Avoid fire, sparks, static electricity, and hot surfaces.

SECTION 11

TOXICOLOGICAL INFORMATION

Toxicity

Hazardous Ingredient Name	Acute or Chronic?	Oral LD ₅₀	Dermal LD ₅₀	Dermal LC ₅₀
Toluene	Chronic	5,000 mg/kg (rat)	12,000 mg/kg (rat)	NE*
Methanol	Acute	5,628 mg/kg (rat)	15,840 mg/kg (rabbit)	NE*

*NE = No Evidence

Irritation:	Eyes, Nose, Throat, Respiratory Tract, Stomach, and Skin Irritation.
Sensitization:	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity:	Toluene has an IARC status of 3.

SECTION 12

ECOLOGICAL INFORMATION

Environmental Data

Components	Species	Test Results
Toluene (108-88-3)	Psuedokirchneriella Subcapitata	EC50; Dose: 12.5 mg/L; Exposure time: 72 h
	Psuedokirchneriella Subcapitata	EC50; Dose: > 433 mg/L; Exposure time: 96 h
	Daphnia Magna	EC50; Dose: 11.5 mg/L; Exposure time: 48 h
	Daphnia Magna	EC50; Dose: 5.46 – 9.83 mg/L; Exposure time 48 h Static
	Microtox	EC50; Dose: 19.7 mg/L; Exposure time: 30 min
	Freshwater Fish	LC50; Dose: 5 – 7 mg/L; Exposure time: 96 h
	Freshwater Fish	LC50; Dose: 12 mg/L; Exposure time: 96 h
	Freshwater Fish	LC50; Dose: 15 – 19 mg/L; Exposure time: 96 h
Methanol (67-56-1)	Freshwater Fish	LC50; Dose: 28 mg/L; Exposure time: 96 h
	Freshwater Fish	LC50; Dose: 50 – 70 mg/L; Exposure time: 96 h
	Pimephales Promelas	LC50; Dose: > 100 mg/L; Exposure time: 96 h
	Daphnia Magna	EC50; Dose: > 10,000 mg/L; Exposure time: 48 h

Environmental Data:	This product contains components that may be harmful to aquatic organisms and could potentially cause long term adverse effects on the aquatic environment.
Ecotoxicity:	Contains components that are potentially toxic to aquatic ecosystems, both of fresh and salt water.
Bio-accumulation:	Contains components with the potential to bio-accumulate.

Other Information: Do not empty into drains; dispose of this material and its container in accordance with state and local regulations. Avoid dispersal of spilled material and runoff, and contact with soil, waterways, drains, and sewers.

SECTION 13

DISPOSAL CONSIDERATIONS

Disposal Methods:

Waste from Residues

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 federal, state, and local requirements.

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal in accordance with any federal, state, and local requirements.

SECTION 14

TRANSPORT INFORMATION

DOT (Department of Transportation):	Proper Shipping Name:	Combustible Liquid, N.O.S.
	UN/NA Number:	1993
	NAERG:	128
	Marine Pollutant #1:	None
	Other Shipping Information:	Contains (Toluene, Methanol)
Special Shipping Notes:	If individual container size is less than 1.3 gallons, the proper shipping name is: ORM-D Consumer Commodity Non-Regulated	

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.

CERCLA Reportable Quantity: This material contains the following materials with CERCLA RQ's:

Toluene (108-88-3): 1,000 lbs.
Methanol (67-56-1): 5,000 lbs.

SARA 304 Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.

SARA 302: This material contains the following chemicals that are subject to the reporting requirements of SARA Title III, Section 302:

Toluene (108-88-3): 1,000 lbs.
Methanol (67-56-1): 5,000 lbs.

SARA 313: This material contains the following chemical components with known CAS numbers that have threshold (De Minimis) reporting levels established by SARA Title III, Section 313:

Toluene (108-88-3): 3 – 10%
Methanol (67-56-1): 1 – 5%

Clean Air Act: This product contains the following hazardous air pollutant (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61):

Toluene (108-88-3): 3 – 10%
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: **WARNING:** This product can expose you to chemicals including Toluene and Methanol, which are known to the State of California to cause developmental or reproductive harm. For more information, go to www.P65Warnings.ca.gov.

SECTION 16	OTHER INFORMATION
-------------------	--------------------------

General Statements: Keep out of reach of children.
For professional or industrial use only.

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.