



HEALTH	2
FLAMMABILITY	4
PHYSICAL HAZARD	1

MATERIAL SAFETY DATA SHEET

Prepared by Duro Dyne April 8, 2011

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade name: DURO DYNE SOLVENT BASED ADHESIVE
Product Identifier: PBA
Supplier Details: DURO DYNE CORPORATION
81 Spence Street
Bay Shore, NY 11706

Information

Phone No: 800-899-3876
Emergency Phone No: 800-424-9300 (CHEMTREC)

2. COMPOSITION / INFORMATION ON INGREDIENTS

Emergency Overview:

DANGER! EXTREMELY FLAMMABLE!!

Breathing vapors may cause drowsiness, dizziness and nausea; intentional misuse or abuse of product may be fatal. May cause respiratory tract, skin, and eye irritation. Harmful if aspirated. May cause liver, spleen, and kidney damage. May cause central nervous system effects. Possible risks of irreversible effects from acute and chronic exposures.

Target Organs:

Liver, central nervous system, kidneys, bladder, reproductive system.

Warning:

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

US / Canada Hazard Symbols:



European (GHS) Hazard Symbols:



HMIS Hazard Ratings:

0= Insignificant
1= Slight
2= Moderate
3= High
4= Extreme * Chronic Health Hazard

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REQUIRED PERSONAL PROTECTIVE EQUIPMENT:

HMIS Personal Protective Equipment

Letter: H



RISK PHRASES:

R12: Highly flammable.
R38: Irritating to skin.
R48/20 Harmful: Danger of serious damage to health by prolonged exposure through inhalation.
R62: Possible risk of impaired fertility.
R63: Possible risk of harm to the unborn child.
R65 Harmful: May cause lung damage if swallowed.
R67: Vapors may cause drowsiness and dizziness.

SAFETY PHRASES:

S2: Keep out of reach of children.
S9: Keep container in a well – ventilated place.
S16: Keep away from sources of ignition – No smoking.
S36/37: Wear suitable protective clothing and gloves.
S61: Avoid release to the environment. Refer to special instructions / Safety data sheets.
S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

POTENTIAL HEALTH EFFECTS

Acute Exposure Effects:

Inhalation: Respiratory tract irritation may occur from vapors. May cause liver, kidney, and bladder damage. Harmful if inhaled. May cause central nervous system effects. Symptoms of exposure include fatigue, irritability, headache, dizziness and/or drowsiness, gastric disturbances, and intolerance to alcohol. Aspiration of

Skin: product or vomitus and subsequent regurgitation may result in pulmonary edema and/or aspirant pneumonia. May cause moderate skin irritation. Causes redness and pain. May be harmful if absorbed through the skin.

Eyes: May cause moderate to severe mechanical and chemical irritation to eyes with redness and pain; chemical conjunctivitis may occur.

Ingestion: Causes gastrointestinal distress if ingested. May cause liver, bladder and kidney damage; nervous system effects may be seen. Aspiration of vomitus from ingestion and subsequent regurgitation may result in pulmonary edema and/or aspirant pneumonia. Other symptoms are similar to inhalation exposures; see Inhalation Exposure.

Chronic Exposure Effects: Prolonged or repeated skin contact may result in defatting of skin, and dermatitis. Multiple or prolonged exposures may cause liver, kidney, and bladder damage. Nervous system effects including peripheral neuropathy may be seen with multiple/prolonged exposures. Adverse reproductive effects have been reported in animals for components of this product; these adverse effects include possible damage to the fetus and to the reproductive system. A possible risk of irreversible effects exists for this product; this risk is greatly increased with prolonged and/or multiple exposures or with intentional misuse of product. Proper utilization of personal protection equipment is essential to mitigate risks associated with product.

Carcinogenicity: Toluene and hexane are not listed as carcinogenic by the IARC, the NTP, ESIS, OSHA, or the state of California.

3. HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	% (BY WEIGHT)	CAS#	EINECS#	HAZARD SYMBOL	RISK PHRASES (Full Legend Section 16)
Hexane	20-30	110-54-3	203-777-6	F, Xn	R11, 38 48/20, 62,65,67
Toluene (a)	10-20	108-88-3	203-625-9	F, Xn	R11, 38 48/20, 63,65,67

Note: This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Directive 1997/2006/EC (REACH). Hazard symbols and risk phases are based on maximum listed concentration of each hazardous ingredient. Unlisted ingredients are not “hazardous” per the OSHA Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS) or the European (GHS) directive 91/155/EEC and are considered trade secrets under US Federal Law (29 CFR and 40 CFR), Canadian Law (Health Canada Legislation), and European Union Directive 67/54/EEC.

Warning: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

4. FIRST AID MEASURES

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get emergency aid for cases of breathing difficulty or cessation, or where victim is not conscious and alert to surroundings. Do Not use mouth-to-mouth resuscitation.

Eyes: Remove contact lenses if present. Immediately flush eyes with plenty of potable water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get prompt medical assistance.
UEL: 6.9%

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse: severely contaminated clothing may need to be discarded.

Ingestion: **DO NOT INDUCE VOMITING!!!!!!** If victim is conscious and alert to surroundings, rinse mouth thoroughly and drink 1-2 glasses of water. Seek emergency medical attention immediately. If vomiting spontaneously occurs, place victim's head below chest level to minimize aspiration risk.

5. FIRE FIGHTING MEASURES

Flash Point: <0°F/<-18°C TCC

Auto Ignition Temperature: 234°C/453°F*

Flammable Explosive Limits:

Lower: 1.2%

Upper: 6.9%

**Sensitivity to Mechanical Impacts/
Static Charge:** None.
* References to Toluene.

General Hazards: **WARNING! EXTREMELY FLAMMABLE!!**
Product will readily burn under fire conditions with the emission of toxic and/or irritating gases and fumes. Solvent portion of product may float on water and remain ignited.

Suitable Extinguishing Media: Water fog, foam, CO₂, dry chemical – water fog for spray may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media: Water Stream – solvent portion of product may separate and float on top of water, remaining ignited and spreading fire.

Fire Fighting Procedures:

Fire fighters must wear a self-contained breathing apparatus and full chemical fire fighting gear when fighting fires involving this product. Water fog or spray may be used to cool off fire-exposed containers to prevent rupture. **DO NOT USE WATER STREAMS!**

Unusual Fire and Explosion Hazards:

Irritating and toxic gases and/or fumes may be generated from heated and/or ignited product; wear full chemical firefighting gear.

Hazardous Combustion Products:

Carbon monoxide, carbon dioxide, small amounts of metal oxides, and sulfur oxides.

6. ACCIDENTAL RELEASE MEASURES**Steps to be taken in case of material is Released or Spilled:**

REMOVE ALL IGNITION SOURCES!!! Evacuate all non-essential personnel and cordon off affected area. Clean-up personnel should wear Personal Protective Equipment. Wipe or shovel up spill; place material in container designed for flammable waste. For large spills, contact authorities; water spray may be judiciously used to reduce ignition hazard. Dispose of used absorbent in a licensed and permitted facility, preferably by incineration with exhaust scrubbers being used. Avoid contamination of waterways, sewers, etc. with this product.

7. HANDLING AND STORAGE**Precautions to be taken in Handling and Storage:**

Handle product while wearing Personal Protective Equipment and provide adequate ventilation to avoid prolonged or repeated breathing of vapors. Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Store only in original container. Avoid ignition sources and excess temperatures. Store in a cool dark place with adequate ventilation; protect product from light. Avoid moisture buildup around containers. Keep out of reach of children. Store in a tightly closed container away from compatible materials. Do Not Freeze!

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	CAS#	ACGIH Exposure Limits (mg/m3 unless otherwise noted)	OSHA Exposure Limits (mg/m3 unless otherwise noted)
Hexane	110-54-3	50 ppm 167 mg/m3 TWA	500 ppm/1800 mg/m3 TWA
Toluene	108-88-3	50 ppm TWA (skin)	200 ppm TWA, 300 ppm Ceiling, 500 ppm 10 min peak 50 ppm/192 mg/m3 OEL 100 ppm/384 mg/m3 STEL (skin)(Europe)

Personal Protection: Use approved respirator (e.g. CEN, NIOSH/OSHA, AS) as required to prevent over exposure. Use an air-supplied respirator where high concentrations are expected, or an air-purifying respirator for organic vapors (with combined particulate filter if particulate matter is present). If ventilation is insufficient, supplied-air masks may be necessary.

Protective Gloves: Wear gloves made of chemically resistant material. Viton or polyvinyl alcohol are suggested materials; DO NOT USE LATEX.

Eye Protection: Wear safety glasses with splash protective side shields or goggles.

Other Protective Clothing or Equipment: Wear protective clothing such as an apron to prevent skin contact. Wear gloves made of chemically resistant material. Viton or polyvinyl alcohol are suggested materials; DO NOT USE LATEX.

Engineering Controls: Provide general ventilation sufficient to control airborne concentration below the TLV/TWA's listed. Forced-air ventilation such as fans may be required.

Work/Hygienic Practices: Wash hands before eating, drinking, smoking and using the toilet. Launder contaminated clothing before re-use. Dispose of contaminated leather footwear. Treat unwashed contaminated clothing as flammable.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR Soft gray paste, mild odor.	VAPOR PRESSURE 180 mm Hg
ODOR THRESHOLD Not Established	SPECIFIC GRAVITY (WATER = 1) 1.02
FREEZING/MELTING POINT Not Established	BOILING POINT 150°F/65°C
SOLUBILITY IN WATER Not Soluble	COEFFICIENT OF WATER/OIL DISTRIBUTION Favors Oil
PH Not Determined	SOLUBILITY IN ORGANIC SOLVENTS Variable Solubility dependent upon solvent
FLASH POINT <0°F/<-18°C	VISCOSITY Not Determined
FLAMMABLE LIMITS LEL: 1.2% UEL: 6.9%	VAPOR DENSITY (AIR= 1) 3
AUTO IGNITION TEMPERATURE 234°C/453°F (References Toluene)	EVAPORATION RATE (BuAc = 1) 3.2
VOLATILE ORGANIC COMPOUND (VOC) INFORMATION 3.46 lbs/gallon or 415 g/L NOTES: None	

10. STABILITY AND REACTIVITY

STABILITY Stable under normal conditions	CONDITIONS TO AVOID Excess heat, ignition sources, water, moisture, light, incompatible materials.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong reducing agents	
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon monoxide, carbon dioxide, small amounts of metal oxides, nitrogen oxides, and sulfur oxides under fire conditions.	
HAZAROUS POLYMERIZATION: Will not occur	CONDITIONS TO AVOID: None related to hazardous polymerization

11. TOXICOLOGICAL INFORMATION

Complete Product			
Oral LD 50	Not known – product is harmful by ingestion.		
Dermal LD 50	Not known – product expected to be moderately irritating by contact with skin.		
Inhalation LC 50	Not known – product components are harmful by inhalation.		
Irritation / Sensitization	Chemical and mechanical irritant to eyes, skin and respiratory tract.		
Carcinogenicity	Product contains no components listed by, IARC, NTP, OSHA, ESIS, or the state of California.		
Mutagenicity	Not known.		
Reproductive Toxicity	Known reproductive toxicants (toluene and hexane).		
Teratogenicity	May possess teratogenic effects.		
Product Components			
Component	CAS #	LD50 of Ingredient (Oral, Rat – unless otherwise specified)	LC50 of Ingredient (Inhalation, Rat – unless otherwise specified)
Hexane	110-54-3	25 g / kg	48000 ppm / 4 Hours
Toluene	108-88-3	636 mg / kg	49 g / m ³ / 4 Hours

12. ECOLOGICAL INFORMATION

Ecological Hazards:

Product should be considered as harmful to aquatic environments; do not discard into bodies of water. Solid components of product may bioaccumulate; toluene and hexane are expected to volatilize fairly rapidly and undergo photolytic degradation.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods:

If this material becomes a waste, it would be a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with all local, state, and federal regulations. User is responsible for compliance with all laws and regulations.

US EPA Waste Numbers:

D001, U220

14. TRANSPORTATION INFORMATION

Proper Shipping Name: Flammable Liquid, N.O.S. (contains Hexane, Toluene), UN 1993
DOT Hazard Class/Pack Group: Class 3 / PG III
Reference: 49CFR, IATA, IMDG
UN/NA Identification Number: UN 1993
Label: Flammable Liquid, 3



Hazard Symbol:
IATA Hazard Class/Pack Group: Class 3/PG III
IMDG Hazard Class: Class 3/PG III
RID/ADR Hazard Class: Class 3/PG III
ADR Classification: F1
ADR Emergency Action Code: 3Y
Hazard Identification Number (HIN): 30
TDG Class/Pack Group: Class 3/PG III
Note: Packing Group assigned per 49CFR173.121(b).
Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100-177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TGD information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

15. REGULATORY INFORMATION

TSCA (USA – Toxic Substance Control Act): Components Listed on the TSCA inventory.
Sara Title III (USA – Superfund Amendments and Reauthorization Act): Acute Health: Yes
Fire: Yes
Reactive: No
Chronic Health: Yes
Sudden Release of Pressure: No
Sara 313 Reportable Ingredients: Hexane, Toluene
CERCLA (USA – Comprehensive Response Compensation and Liability Act): 4000lb/181 kg RQ for product as toluene.
State Right to Know Laws: Toluene and Hexane are on the right-to-know list of CA, MA, MN, NJ, and PA.

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986:

WARNING! This product contains a chemical (toluene) known to the State of California to cause birth defects or other reproductive harm.

CPR (Canadian Controlled Products Regulations):

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

WHMIS Classifications:

B2, D2A

CIDL (Canadian Ingredient Disclosure List):

Hexane (CAS # 110-54-3) and Toluene (CAS # 108-88-3) are listed on the CIDL.

DSL/NDSL (Canadian Domestic Substances List/Non-Domestic Substance List):

Components are on the DSL.

EINECS (European Inventory of Existing Commercial Chemical Substances):

Referenced

WGK Water Quality Index:

2



EU RISK PHRASES:

R11:

Highly Flammable.

R38:

Irritating to Skin.

R45/20 Harmful:

Danger of serious damage to health by prolonged exposure through inhalation.

R62:

Possible risk of impaired fertility.

R63:

Possible risk of harm to the unborn child.

R65 Harmful:

May cause lung damage if swallowed.

R67:

Vapors may cause drowsiness and dizziness.

EU SAFETY PHRASES:

S2:

Keep out of reach of children.

S9:

Keep container in a well-ventilated place.

S16:

Keep away from sources of ignition – No smoking.

S36/37:

Wear suitable protective clothing and gloves.

S61:

Avoid release to the environment. Refer to special instructions / Safety data sheets.

S62:

If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

16. OTHER INFORMATION

LEGEND:

ACGIH:	American Congress of Government Industrial Hygienists
CAS:	Chemical Abstracts Service
EINECS:	European Inventory of Existing Commercial Chemical Substances
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
NA:	Not Available
ND:	Not Determined
NE:	Not Established
NR:	Not Reported
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration

Hazard Rating:

Health: 2
Flammability: 4
Physical Hazard: 1
0= Insignificant
1= Slight
2= Moderate
3= High
4= Extreme * Chronic Health Hazard

Date MSDS Prepared:

2/1/2011

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