



SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier

Product Form:

Substance Name: Sharkthane Hard Flex Pro 60-25 Black Side A

Product Code(s): 3004026025133

Synonyms

1.2 Details of the Supplier of the Safety Data Sheet

Distributor:

Fiberlay Inc.

1468 Northgate Blvd

Sarasota, FL 34234

T 206-782-0660

F 888-782-0662

www.Fiberlay.com

1.3 Emergency Telephone Number

Emergency Number: CHEMTREC: Domestic - 800-424-9300

International- 703-527-3887

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF SUBSTANCE OR MIXTURE:

Acute Toxicity, Inhalation:	Category 2, H330
Skin Corrosion:	Category 1, H314
Eye Damage:	Category 1, H318
Respiratory Sensitization:	Category 1, H334
Skin Sensitization:	Category 1, H317
Specific Target Organ Toxicity:	Single Exposure, Category 3, H335

GHS LABEL ELEMENTS:



SIGNAL WORDS:

Danger

HAZARD STATEMENTS:

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H330 Fatal if inhaled

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

PRECAUTIONARY STATEMENTS:

- PREVENTION:** P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P271 Only use outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the work place.
P280 Wear protective gloves, clothing, and eye/face protection.
P284 In case of inadequate ventilation wear respiratory protection.
- RESPONSE:** P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P363 Wash contaminated clothing before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P304+P340 IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor.
- STORAGE:** P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
- DISPOSAL:** P501 Dispose of contents and containers in accordance with local, regional and international regulations.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS) – Annex III

3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	CONTENT
4,4'-methylenedicyclohexyl diisocyanate	5124-30-1	10-20%
Isophorone diisocyanate	4098-71-9	1-10%

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

4. FIRST AID MEASURES

DESCRIPTION OF NESESARY FIRST-AID MEASURES:

- INHALATION:** If affected, remove to fresh air. Extreme asthmatic reactions that may occur in sensitized persons can be life threatening. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately. Asthmatic symptoms may develop and may be immediate or delayed up to several hours.
- SKIN:** Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. Get medical attention immediately.
- EYES:** Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. Get medical attention immediately.
- INGESTION:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Dilute with large quantities of water. Get medical attention immediately.

MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE AND DELAYED:

SYMPTOMS: Irritation. Sensitization. Pre-existing skin problems may be aggravated by prolonged or repeated contact. Persons with sensitive airways (e.g., asthmatics) may react to vapors. See section 11 for additional information.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY:

TREATMENT: Treat symptomatically.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

SUITABLE: Use water spray, foam, dry chemical or carbon dioxide.

UNSUITABLE: High volume water jet.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

UNUSUAL FIRE & EXPLOSION HAZARDS: Product is not considered a fire hazard, but will burn if ignited. Closed container may rupture (due to build up in pressure) when exposed to extreme heat. Use cold-water spray to cool fire-exposed containers to minimize risk of rupture.

HAZARDOUS COMBUSTION PRODUCTS: Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See Section 10 Hazardous decomposition products for additional information.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS: Wear self-contained breathing apparatus (SCBA) equipped with a full face piece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous. See section 9 for additional information.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Evacuate non-emergency personnel. See Section 8 for recommendations on the use of personal protective equipment. If spilled in an enclosed area, ventilate. Eliminate ignition sources. Personal Protective Equipment must be worn.

ENVIRONMENTAL PRECAUTIONS: Do not flush product into public sewer, water systems or surface waters.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Stop leak if without risk. Move containers from spill area. Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled container; apply lid loosely, move the container to an isolated well-ventilated area to allow release of carbon dioxide. After 72 hours, seal the container and store in a safe location to await disposal. Change contaminated clothing and launder before reuse.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Do not breathe vapors, mists, or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection if material is heated, sprayed, use in a confined space, or if the exposure limit is exceeded. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Avoid eye and skin contact. Avoid drinking, tasting, swallowing or ingesting this product. Wash contaminated clothing before reuse. Discard shoes contaminated with this product.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Keep away from heat, sparks and open flames. Store dry at 15-40°C, under well-ventilated conditions. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Empty container contains residual product which may exhibit hazards of product. Do not reuse empty container without commercial cleaning or reconditioning.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS:

CHEMICAL NAME	CAS NUMBER	DNEL-Acute ACGIH-TWA	DNEL-Chronic ACGIH-STEL
4,4'-methylenedicyclohexyl diisocyanate	5124-30-1	0.6 mg/m ³ (inhalation)	0.3 mg/m ³ (inhalation)
Isophorone diisocyanate	4098-71-9	0.005 ppm	Not available

APPOPRIATE ENGINEERING CONTROLS: Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain air concentrations below occupational exposure standards. When necessary use mechanical handling to reduce human contact with materials.

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT (PPE):

EYE/FACE PROTECTION:	Chemical safety goggles or full face shield with chemical safety goggles underneath are required.
SKIN PROTECTION:	Wear chemical resistant (impervious) gloves; PVC, neoprene, nitrile rubber, EVAL, butyl rubber. Wear chemical resistant protective clothing. Use good laboratory/ workplace procedures including personal protective clothing: lab coat and protective gloves. When there is potential for a major splash directly onto the skin, such as when breaking into lines, a full chemical suit is required. When the application results in airborne vapor or mist, a full permeation resistant suit, including head covering, face shield, gloves and overshoes, is required.
RESPIRATORY PROTECTION:	Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the applicable exposure limit(s) of any chemical substance listed in this SDS.
GENERAL PROTECTION:	Eyewash fountains and safety showers are recommended in the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid	UPPER/LOWER FLAMMABILTY OR EXPLOSIVE LIMITS:	Not available
COLOR:	Colorless	VAPOUR PRESSURE:	≤ 0.00048 mm Hg at 20°C
ODOUR:	Pungent	VAPOUR DENSITY:	Not available
ODOUR THRESHOLD:	Not available	RELATIVE DENSITY:	1.06
PH:	Not available	SOLUBILITY(IES):	Insoluble
MELTING POINT/ FREEZING POINT	Not available	PARTITION COEFFICIENT (n-octanol/water):	Not available
INITIAL BOILING POINT AND BOILING RANGE:	Not available	AUTO-IGNITION TEMPERATURE:	Not available
FLASH POINT:	>150°C	DECOMPOSITION TEMPERATURE:	Not available
EVAPORATION RATE:	Not available	VISCOSITY:	8,000 cP at 25°C
FLAMMABILITY (SOLID, GAS):	Not available		

10. STABILITY AND REACTIVITY

REACTIVITY: Exothermic reactions including polymerization may occur in contact with amines and alcohols. Exothermic reaction with acids, alkalis and strong oxidizing agents. Reacts with water, whereby carbon dioxide is produced.

CHEMICAL STABILITY: This product is stable.

POSSIBILITY OF HAZARDOUS REACTIONS: Exothermic reactions including polymerization may occur in contact with amines and alcohols. Exothermic reaction with acids, alkalis and strong oxidizing agents. Reacts with water, whereby carbon dioxide is produced. Pressure may build up in closed containers (danger of bursting).

CONDITIONS TO AVOID: Excessive heat and ignition sources.

INCOMPATIBLE MATERIALS: Avoid amines, alcohols, acids, alkalis, strong oxidizing agents and water.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, isocyanate, isocyanic acid and other products of incomplete combustion.

11. TOXICOLOGICAL INFORMATION

INFORMATION ON THE LIKELY ROUTES OF EXPOSURE: Eyes, skin, inhalation and ingestion.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:

EYES: Causes serious eye damage. May cause corneal injury. Vapor or aerosol may cause irritation with symptoms of burning or tearing.

SKIN: Causes severe skin burns. May cause an allergic skin reaction. Repeated or prolonged contact may cause skin irritation and dermatitis.

INHALATION: Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Isocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate the mucous membranes in the respiratory tract with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Persons with preexisting, nonspecific bronchial hyper-reactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms, has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

INGESTION: May cause irritation of the digestive tract; symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT AND LONG TERM

EXPOSURE: As result of previous repeated overexposure or a single large dose, certain individuals may develop sensitization to isocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to isocyanate at levels well below the exposure limits or guidelines. The symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent. Prolonged contact with skin can cause skin sensitization. Prolonged vapor contact with the eyes may cause conjunctivitis.

ACUTE TOXICITY:

CHEMICAL NAME	LC ₅₀ INHALATION (RAT)	LD ₅₀ ORAL (RAT)	LD ₅₀ DERMAL (RAT)
4,4'-methylenedicyclohexyl diisocyanate	0.33 mg/L (4 hrs)	18,200 mg/kg	>7,000 mg/kg
Isophorone diisocyanate	0.031 mg/L (4 hrs)	4,814 mg/kg	>7,000 mg/kg

CORROSION / IRRITATION / SENSITIZATION INFORMATION:

SKIN CORROSION/IRRITATION:	Skin Irritation– Category 1
SERIOUS EYE DAMAGE/IRRITATION:	Eye Irritation – Category 1
RESPIRATORY OR SKIN SENSITIZATION:	Respiratory Sensitization – Category 1 Skin Sensitization – Category 1

CARCINOGENICITY / MUTAGENICITY / REPRODUCTIVE TOXICOLOGY INFORMATION:

GERM CELL MUTAGENICITY:	Information is not available.
CARCINOGENICITY:	Information is not available.
REPRODUCTIVE TOXICITY:	Information is not available.

SPECIFIC TARGET ORGAN TOXICITY (STOT):

STOT-SINGLE EXPOSURE:	Category 3. Respiratory tract irritation.
STOT-REPEATED EXPOSURE:	Information is not available.

ASPIRATION HAZARD: Information is not available.

OTHER INFORMATION: Medical supervision of all employees who handle or come in contact with isocyanates is recommended. A history of eczema or respiratory allergies such as hay fever, are possible reasons for medical exclusion from isocyanate areas. Persons who have a history of adult asthma should be restricted from work with isocyanates. Persons with a history of prior isocyanate sensitization should be excluded from further work with isocyanates. Once a worker has been diagnosed as sensitized to any isocyanates, no further exposure can be permitted.

12. ECOLOGICAL INFORMATION**TOXICITY:**

CHEMICAL NAME	TEST	SPECIES	RESULT
4,4'-methylenedicyclohexyl diisocyanate	LC50 (96 hrs)	Brachydanio Rerio	8.1 mg/L
	EC50 (48 hrs)	Daphnia Magna	8.3 mg/L
	ErC50 (72 hrs)	Scenedesmus Subspicatus	5.0 mg/L
	EC50 (3 hrs)	Pseudomonas Putida	191 mg/L
Isophorone diisocyanate	LC50 (96 hrs)	Danio Rerio	>72 mg/L
	LC50 (96 hrs)	Cyprinus Carpio	>208 mg/L
	EC50 (48 hrs)	Daphnia Magna	27 mg/L
	ErC50 (72 hrs)	Desmodesmus Subspicatus	70 mg/L
	EC10 (6 hrs)	Pseudomonas Putida	554 mg/L
	EC50 (3 hrs)	Activated Sludge	263 mg/L

PERSISTENCE AND DEGRADABILITY:

CHEMICAL NAME	TEST	PERIOD	RESULT
4,4'-methylenedicyclohexyl diisocyanate	Aerobic (Directive 92/69/EEC)	28 days	0%
Isophorone diisocyanate	Aerobic	28 days	0%

BIOACCUMULATIVE POTENTIAL:

CHEMICAL NAME	TEST	RESULT	POTENTIAL
4,4'-methylenedicyclohexyl diisocyanate	Calculated (BCF)	10.186	Not expected
Isophorone diisocyanate	Studies of hydrolysis products.	Not available	Not expected

MOBILITY IN SOIL:

CHEMICAL NAME	SOIL/WATER PARTITION COEFFICIENT (K_{oc})
4,4'-methylenedicyclohexyl diisocyanate	110-672
Isophorone diisocyanate	Not available

OTHER ADVERSE EFFECTS: Additional information is not available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate. See section 8 for recommendations on the use of personal protective equipment.

14. TRANSPORT INFORMATION

U.S. DOT NA NUMBER: NA3082

U.S. DOT PROPER SHIPPING NAME:

Other Regulated Substances, Liquid, N.O.S. (Dicyclohexylmethane-4,4'-diisocyanate)

ICAO/IATA UN NUMBER: UN3334

ICAO/IATA UN PROPER SHIPPING NAME:

Aviation Regulated Liquid, N.O.S. (Dicyclohexylmethane-4,4'-diisocyanate)

TRANSPORT HAZARD CLASS:

U.S. DOT HAZARD CLASS:

CANADA TDG HAZARD CLASS:	9
EUROPE ADR/RID HAZARD CLASS:	Not Regulated
IMDG CODE (OCEAN) HAZARD CLASS:	Not Regulated
ICAO/IATA (AIR) HAZARD CLASS:	9

PACKING GROUP: III

ENVIRONMENTAL HAZARDS:

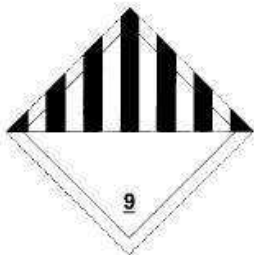
MARINE POLLUTANT:	No
HAZARDOUS SUBSTANCE (USA):	No

SPECIAL PRECAUTIONS FOR USER: Information is not available.

TRANSPORTING IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:

Information is not available.

LABEL FOR CONVEYANCE:



OTHER INFORMATION: Not available

15. REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT IN QUESTION:

U.S. Superfund Amendments and Reauthorization Act (SARA) – SARA Section 313	4,4'-methylenedicyclohexyl diisocyanate (CAS 5124-30-1) Isophorone diisocyanate (CAS 4098-71-9)
EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV – List of substances subject to authorization, Substances of very high concern	None of the components are listed.
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	None of the components are listed.

OTHER REGULATIONS: Additional information is not available.

CHEMICAL INVENTORIES:

Canadian Domestic Substances List (DSL):	Y
Canadian Non-Domestic Substances List (NDSL):	N
European Inventory of Existing Chemical Substances (EINECS):	Y
European List of Notified Chemical Substances (ENCS):	N
U.S. Toxic Substances Control Act (TSCA):	Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory; 2) no information is available; or 3) the component has not been reviewed.

16. OTHER INFORMATION

LEGEND:	ACGIH: American Conference of Governmental Industrial Hygienists ADR/RID: European dangerous goods transport road and rail regulations CAS No: Chemical Abstract Service Registry Number DOT: Department of Transportation (U.S.) GHS: Globally Harmonized System of Classification and Labeling of Chemicals IATA: International Air Transport Association ICAO: International Civil Aviation Organization IMDG: International Maritime Dangerous Goods code OEL: Occupational Exposure Limits OSHA: Occupational Safety and Health Administration (U.S.) PEL: Permissible Exposure Limit RQ: Reportable Quantity SDS: Safety Data Sheet STEL: Short Term Exposure Limit (15 minute Time Weighted Average) TDG: Canadian Transportation of Dangerous Goods Act and Regulations UN: United Nations U.S.: United States
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Sharkthane believes the law requires us to inform you that detectable amounts of any of the listed chemicals might be present in Sharkthane products. Based on a review of the list, Sharkthane products, like all synthetic and naturally occurring chemical substances, may conceivably contain trace contaminants of some of the listed substances. While not necessarily added to our products as ingredients, some of the listed chemicals may be present in the raw materials as received from suppliers over which we have no control.

“Warning: This product may contain trace amounts of some chemicals considered by the State of California to be carcinogens or reproductive Toxicants.”

Preparation Date: 10-27-15

Prepared by: Kevin Aber

Comments: This Safety Data Sheet was prepared using information provided by Sharkthane

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and Sharkthane assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.