

PRODUCT NAME(S): DuraTite® 1150P

SECTION 1 – IDENTIFICATION

Supplier's Info:
 Rhino Linings Corporation
 9747 Businesspark Avenue
 San Diego, CA, 92131

Product name: DuraTite® 1150P
Product Category: Single Component Urethane
Recommended use: Primer

Information phone: (858) 450 0441
Emergency contact: CHEMTREC (800) 424 9300

SECTION 2 – HAZARD(S) IDENTIFICATION

OSHA Hazard Communication Standard:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

GHS-Label Elements:

Signal Word:
 DANGER

Pictogram(s):



GHS 03



GHS 08



GHS 07



GHS 09

Classification of the substance or mixture:

Hazard Class	Category	Hazard Statement Codes	Hazard Statements
Flammable liquids	3	H226	Flammable liquid and vapor
Aspiration Toxicity	1	H304	May be fatal if swallowed and enters airways
Skin corrosion / irritation	3	H315	Causes skin irritation
Sensitization – Skin	2B	H317	May cause an allergic skin reaction
Eye Damage/Irritation	2B	H319	Causes eye irritation
Acute toxicity (Inhalation)	4	H332	Harmful if inhaled
Respiratory sensitization	1	H334	May cause allergy or asthma symptoms or breathing difficulty if inhaled
Acute toxicity (Inhalation)	4	H335	May cause respiratory irritation
Acute toxicity (Inhalation)	4	H336	May cause drowsiness or dizziness
Mutagenicity	1B	H340	May cause genetic defects
Carcinogenicity	1B	H350	May cause cancer
Reproductive toxicity	2	H361	Suspected of damaging fertility or the unborn child
Target organ toxicity (Repeated Exposure)	2	H373	May cause damage to organs through prolonged or repeated exposure
Acute hazards to the aquatic environment	2	H401	Toxic to aquatic life
Chronic hazards to the aquatic environment	2	H411	Toxic 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.
	P233	Keep container tightly closed.
	P240	Ground/bond container and receiving equipment.
	P242	Use only non-sparking tools.
	P243	Take precautionary measures against static discharge.
	P260	Do not breathe dust/fumes/gas/mist/vapours/spray.
	P264	Wash hands, forearms and other exposed areas thoroughly after handling.
	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 P284	Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.
Response:	P301+310 P302+352 P04+340 P305+351+338 P308+313 P312 P314 P321 P303+353+361 P331 P332+313 P333+313 P337+313 P342+311 P362 P370+P378 P391	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice or attention. Call a POISON CENTER or doctor/physician if you feel unwell. Get medical advice/attention if you feel unwell. Specific treatment (See section 4 on this label). IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Do NOT induce vomiting. If skin irritation: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.
Storage:	P403+405+235+233	Store in well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Disposal:	P501	Dispose of contents/container in accordance with all local, regional, national, and international regulations.

Emergency Overview

Immediate Concerns:

WARNING! Combustible liquid and vapor. Contains Diphenylmethane diisocyanate (CAS No. 101-68-8). May cause respiratory tract irritation. May cause allergic respiratory reaction. Harmful if inhaled. Respiratory sensitizer. May cause lung damage. Lung damage and respiratory sensitization may be permanent. May cause skin irritation. May cause allergic skin reaction. Skin sensitizer. Animal tests and other research indicate that skin contact with MDI can cause isocyanate desensitization and respiratory reaction.

Potential Health Effects

Eyes:

Contact may cause eye irritation.

Skin:

May cause skin irritation. May cause allergic reaction in susceptible individuals. May stain the skin.

Skin absorption:

A single prolonged exposure is not likely to result in material being absorbed through the skin in harmful quantities.

Ingestion:

Single dose oral toxicity is low. Can result in irritation and corrosive action in the mouth, stomach, and digestive tract. However, it is not considered a common occupational route of exposure.

Inhalation:

MDI vapors or mist concentration at or above the TLV can irritate (burning sensation) the mucous membrane in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Persons with pre-existing non-specific bronchial hyper-reactivity can respond to concentrations well below the TLV with similar symptoms as well as asthma attacks. Exposure well above the TLV may lead to bronchitis, bronchial spasm, and pulmonary edema. These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g. fever, chills) has also been reported. These symptoms can be delayed up to several hours after exposure. As a result of previous repeated overexposure or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma), which will cause them to react to a later exposure to isocyanate levels well below the TLV. Similar to many non-specific 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.

Overexposure to isocyanates has also been reported to cause lung damage (decrease in lung function), which may be permanent. Sensitization may be either temporary or permanent.

- Routes of entry:** Eye and skin contact, inhalation and ingestion.
- Irritancy:** Eye and skin irritation
- Sensitization:** May cause allergic respiratory and skin reaction. Respiratory and skin sensitizer.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS #	CONCENTRATION %
Solvent Naphtha (petroleum), Light Aromatic	64742-95-6	30-50%
4,4'-Diphenylmethane diisocyanate	101-68-8	<30%
Polymethylene polyphenyl polyisocyanate	9016-87-9	<30%

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4 – FIRST-AID MEASURES

Description of First Aid measures:

- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
- Ingestion:** If swallowed, do not induce vomiting. Give victim two glasses (16 ounces) of water or milk. Call a POISON CENTER or doctor/physician immediately. Never give anything by mouth to an unconscious person.
- Skin:** Wash material off of the skin with plenty of soap and water for at least 15 minutes. Get medical attention if irritation develops and persists. In case of eczema or other skin disorders: Seek medical attention and bring along these instructions. Remove contaminated clothing and shoes immediately and wash them before reuse.
- Eye:** Rinse cautiously with water for several minutes, especially under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Do not rub eyes in order to prevent cornea injury. Get medical attention if irritation develops and persists.

Most important symptoms/effects, acute and delayed:

Eye: Causes eye irritation.

Skin: Contact causes skin irritation.

Skin absorption: None expected.

Ingestion: None known, not likely route of entry.

Inhalation: Review inhalation signs and symptoms of MDI under Potential Health Effects.

Note to physician: Medical supervision of all employees who handle or come into contact with isocyanates is recommended. This should include pre-employment and periodic medical examinations with respiratory function tests (FEV, FVC as minimum). Persons with asthmatic type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with MDI. Once a person is diagnosed as sensitized, no further exposure can be permitted.

SECTION 5 – FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray, alcohol-resistant foam, dry chemical or carbon dioxide fire extinguishers.

Unsuitable extinguishing media: Direct water stream may cause frothing, splattering of burning material and spreading of fire.

Specific hazards arising from the chemical: Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

Hazardous Combustion products: May include but are not limited to: Oxides of carbon, oxides of nitrogen, isocyanate vapors, and traces of HCN.

Special Protective Equipment and Precautions for fire-fighters: Wear NIOSH or OSHA approved self-contained breathing apparatus in positive pressure mode with full face piece and full protective gear. Isolate the scene by removing all persons from the incident area. No action should be taken involving any personal risk or without suitable training. Spilled product will cause very slippery walking surfaces.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training.

Keep unnecessary and unprotected personnel from entering. Eliminate all ignition sources (no smoking, flares, sparks, or flames in the immediate area). Ensure adequate ventilation/exhaust extraction. Avoid breathing vapors or mist during clean up. Use protective equipment as described in Section 8. Do not touch or walk through spilled material; spilled material may cause a slipping hazard.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Inform the relevant authorities if the product has caused environmental pollution. Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up: Remove mechanically; cover the remainder with non-combustible absorbent material (e.g. sawdust, sand, earth, vermiculite or diatomaceous earth). After approximately one hour, transfer into properly labeled chemical waste containers. Cover container, but do not seal, and remove from work area. Keep in a well ventilated area. Treat material with solution of 90% water, 8% concentrated ammonium hydroxide or sodium carbonate and 2% liquid detergent. Mix solution with isocyanate at 10 to 1 ration and let stand for 48 hours (allows CO₂ to escape).

For major spills: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or contain and collect with an absorbent material as described in the previous paragraph. If temporary control of isocyanate vapors is required, a blanket of protein foam (available at most Fire Departments) may be placed over the spill.

Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, see Section 1 for the Emergency contact; for further disposal measures, see Section 13.

SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling: Avoid prolonged exposure to heat and air. Keep away from sources of ignition (heat, sparks and open flame) Prevent electrostatic charge build-up by bonding and grounding techniques. Use non-sparking tools and explosion proof equipment. Do not reseat if contamination is suspected. Use adequate ventilation to keep airborne levels below the exposure limits. Do not breathe the vapors and mists. Wear respiratory protection if material is heated, mixed, sprayed or used in a confined space. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash hands thoroughly after handling. Hands and/or face should be washed before eating, drinking and smoking and at the end of the shift. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities: Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Vapors may form explosive mixtures with air. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Protect it against physical damage and moisture. Normal temperature and pressures do not affect the material. Keep liquid away from heat, sparks and flame. Do not cut, drill, grind, weld or perform similar operations on or near containers. Use appropriate containment to avoid environmental contamination. Avoid strong oxidizing agents. Not compatible with water.

Storage stability: Stable under normal conditions.

Storage temperature: 60 - 80°F (16 – 27°C)

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200. Employees and consumers should be warned of health risks associated with product use. See Section 8 for additional information on hygiene measures.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION
Control Parameters/Occupational exposure limit values: Not available for mixture. Results for components:

COMPONENTS		OSHA PEL		ACGIH TLV	
		ppm	mg/m ³	ppm	mg/m ³
Solvent Naphtha (petroleum), Light Aromatic	TWA	100	435	100	434
	STEL	150	651	150	651
4,4'-Diphenylmethane diisocyanate	TWA	0.02	0.2	0.005	No Data
	STEL	No Data	No Data	No Data	No Data
Polymethylene polyphenyl polyisocyanate	TWA	No Data	No Data	No Data	No Data
	STEL	No Data	No Data	No Data	No Data
Naphtha (petroleum), hydrodesulfurized heavy	TWA	No Data	No Data	No Data	No Data
	STEL	No Data	No Data	No Data	No Data

Appropriate engineering controls: Good local and general explosion-proof ventilation should be sufficient to control worker exposure to airborne contaminants below recommended exposure limits. Local exhaust may be required in some areas.

Personal protective equipment:
Eye/face protection:

When directly handling liquid product, eye protection is required. Examples of eye protection include safety glasses and goggles or full face shield when there is a greater risk of splash. Contact lenses should not be worn when working with chemicals.

Skin/body protection:

Avoid contact with skin. Impervious gloves (nitrile butyl rubber, neoprene and PVC) should be worn always when working with this product. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact. Dispose contaminated gloves after use in accordance with good laboratory practices. Body should be covered with appropriate clothing (apron, arm covers or full body suit) depending on the task being performed and the risks involved. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH. Wash contaminated clothing before reuse. Store work clothing separately. Appropriate footwear should be also selected based on the task being performed and the risks involved.

Respiratory protection:

For spray applications, a supplied-air respirator **MUST** be worn. Use local or general ventilation to control exposures below applicable exposure limits. When ventilation is inadequate, use either an atmosphere supplying respirator or NIOSH or OSHA approved air-purifying respirator for organic vapors. Respirator must be properly fitted and its selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Do not smoke.

Additional Protective Measures: Educate and train employees in safe handling of this product. Follow all label instructions. As a general hygiene practice, wash hands and face after use. Emergency eyewash fountains and safety shower should be in close proximity as a matter of good practice.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear/Amber Liquid
Odor:	Solvent-like odor
Odor threshold:	Not available.
pH:	Not Available
Melting point/ freezing point:	Not Available
Initial boiling point and boiling range:	Not Available
Flash point:	>100°F (>38°C)
Evaporation rate:	Not Available
Flammability (solid, gas):	Not available
Upper/ lower flammability or explosive limits:	Not available
Vapor pressure:	5.1 mmHg

Vapor density:	Not available
Relative density:	1.0 @ 25°C (77°F)
Density (lb/gallon):	8.3
Solubility (water):	Reacts with water
Partition coefficient n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	50 cPs @ 25°C (77°F)

*Where data are not known for mixture, they are stated for components, if available.

SECTION 10 – STABILITY AND REACTIVITY

Reactivity & Hazardous Polymerization: Product will not undergo hazardous polymerization.

Chemical stability: Stable under recommended storage conditions.

Conditions to avoid: Unintentional contact with strong oxidizers and water.

Incompatible materials: Reaction with water will generate carbon dioxide gas. Incompatible with acids, bases, hydroxyl containing compounds such as alcohols, amine containing compounds such as ammonia. May react with copper alloys or aluminum. May degrade certain elastomers.

Hazardous decomposition products: Carbon monoxide, carbon dioxide, nitrogen oxide, isocyanate vapors and mist, traces of HCN.

SECTION 11 – TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Ingestion, Skin and Eye Contact, Inhalation.

Symptoms of exposure:

Acute toxicity:

Dermal: Exposure causes skin irritation.

Serious eye damage / eye irritation: Causes eye irritation.

Chronic toxicity:

Respiratory and Skin Sensitizer:

This material is known or reported to be a respiratory and skin sensitizer.

Carcinogenicity:

This product contains an ingredient known or reported to be carcinogenic by any reference IARC, NTP, EPA, OSHA, ACGIH.

Solvent Naphtha (petroleum), Light Aromatic Xylene	IARC	Group 2B (Possibly carcinogenic to humans)
	NTP	Reasonably anticipated to be a human carcinogen

Reproductive toxicity:

Risk to humans is not expected from exposure to this product. Not known or reported to cause reproductive toxicity.

Specific target organ toxicity, single exposure:

Not expected.

Specific target organ toxicity, repeated exposure:

Not expected.

SECTION 12 – ECOLOGICAL INFORMATION

Do not discharge product into the environment.

Assessment of aquatic toxicity: Contains components that are potentially toxic to freshwater and saltwater ecosystems. This product contains components that may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment.

Assessment of terrestrial toxicity: No data available.

Persistence and degradability: Not expected to be readily biodegradable by OECD criteria.

Bioaccumulative potential: Contains components with the potential to bio-accumulate.

Mobility in soil: No data available.

Other adverse effects: No known significant effects or critical hazards.

SECTION 13 – DISPOSAL CONSIDERATIONS

Product Disposal: The generation of waste should be avoided or minimized wherever possible. If product becomes a waste, it does not meet criteria of hazardous waste as defined in 40 CFR 261, Subpart C and D. Do not discharge into sewer system. Spill cleanup residues may still be subject to RCRA storage and disposal requirements. Dispose waste in compliance with local, state and federal regulations via licensed waste disposal contractor.

Container disposal: Even after emptying, container may retain residues. Empty containers should be completely drained and safely stored until appropriately reconditioned or disposed through licensed contractor in accordance with government regulation.

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

SECTION 14 – TRANSPORT INFORMATION

GHS Classification: Aspiration Toxicity, category 1–Danger! May be fatal if swallowed and enters airways
 Flammable liquid Category 3–Danger! Flammable liquid and vapor
 Skin Corrosion/Irritation, Category 3 –Warning! Causes skin irritation.
 Serious Eye Damage/Eye Irritation, Category 2B - Warning! Causes eye irritation.
 Sensitization – Skin, Category 2B – Warning! May cause an allergic skin reaction.
 Acute hazards to the aquatic environment, Category 2 – Warning! Toxic to aquatic life.
 Chronic hazards to the aquatic environment, Category 2 – Warning! Toxic to aquatic life with long lasting effects.

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not Regulated Per 49 CFR 173.150(f)

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Flammable Liquid, N.O.S.
Technical Name: Contains Aromatic Hydrocarbon
UN/NA Number: UN1993
Primary Hazard Class/Division: 3
Packing Group: III

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Flammable Liquid, N.O.S.
Technical Name: Contains Aromatic Hydrocarbon
UN/NA Number: UN1993
Primary Hazard Class/Division: 3
Packing Group: III
ERG: 128

SECTION 15 – REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S.302 (EHS)	S. 304 RQ	S. 313 (TRI Qty)
64742-95-6	Solvent Naphtha (petroleum), Light Aromatic	No	No	Yes (1.0%)
101-68-8	4,4'-Diphenylmethane diisocyanate	No	No	Yes (1.0%)
9016-87-9	Polymethylene polyphenyl polyisocyanate	No	No	Yes (1.0%)

CAS #	Hazardous Components	Other US EPA or State Lists
64742-95-6	Solvent Naphtha (petroleum), Light Aromatic	CAA HAP, ODC: Yes; CWA NPDES: No; TSCA: Yes - Inventory, 8D TERM; CA PROP.65: Yes; CA TAC, Title 8: No; MA Oil/HazMat: Yes; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes; NY Part 597: No; PA HSL: Yes; SC TAP: No; WI Air: No
101-68-8	4,4'-Diphenylmethane diisocyanate	CAA HAP, ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes; NY Part 597: No; PA HSL: Yes; SC TAP: No; WI Air: No
9016-87-9	Polymethylene polyphenyl polyisocyanate	CAA HAP, ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No

CAS #	Hazardous Components	International Regulatory Lists
64742-95-6	Solvent Naphtha (petroleum), Light Aromatic	Canadian DSL: YES; Canadian NDSL: NO
101-68-8	4,4'-Diphenylmethane diisocyanate	Canadian DSL: YES; Canadian NDSL: NO
9016-87-9	Polymethylene polyphenyl polyisocyanate	Canadian DSL: YES; Canadian NDSL: NO

SECTION 16 – OTHER INFORMATION
NFPA rating: Health: 2 Fire: 2 Reactivity: 0 Special: 0

HMIS rating: Health: 2 Flammability: 2 Physical hazard: 0

Latest revision date: January 29, 2016 – Preparation of SDS in accordance to the GHS requirements

Date of the previous revision: June 22, 2015

Disclaimer: The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Rhino Linings Corporation makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.

LEGEND

GHS	Globally harmonized System
CAS	Chemical Abstracts Services
EPA	Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
ACGIH	American Conference of Governmental Industrial Hygienists
NIOSH	National Institute of Occupational Safety and Health
PEL	Permissible Exposure Limits
TLV	Threshold Limit Value
REL	Recommended Exposure Limit
TWA	Time-Weighted Average
STEL	Short-term exposure limit
OES	Occupational exposure standard
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
DOT	Department of Transportation
IMDG	International maritime dangerous goods code
IATA, ICAO	International Air Transport Association, International Civil Aviation Organization

EPCRA Emergency Planning and Community Right-to-Know Act
SARA State Authorization Reciprocity Agreements
WHMIS Workplace Hazardous Materials Information System
TDG Transport of Dangerous Goods
HCS Hazard Communication Standard
CEPA Center for European Policy Agreements
EINECS European Inventory of Existing Commercial Chemical Substances