

Material Safety Data Sheet

650 LT liquid adhesive

1. Product and company identification

Product name	: 650 LT liquid adhesive
Material uses	: Aromatic & aliphatic hydrocarbon adhesive.
Supplier/Manufacturer	: Polyguard Products 3801 South Business 45 Ennis, TX 75119 Tel: (800)541-4994
Responsible name	: Atrion Regulatory Services, Inc.
In case of emergency	: CHEMTREC, U.S. : +1-800-424-9300 International: +1-703-527-3887

2. Hazards identification

Physical state	: Liquid.
Odor	: Hydrocarbon. [Strong]
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview	: DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. CAUSES EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation	: No known significant effects or critical hazards.
Ingestion	: May be harmful if swallowed.
Skin	: Irritating to skin.
Eyes	: Irritating to eyes.

Potential chronic health effects

Chronic effects	: Contains material that can cause target organ damage.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Target organs	: Contains material which causes damage to the following organs: kidneys, liver, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Over-exposure signs/symptoms

Inhalation	: No specific data.
Ingestion	: No specific data.
Skin	: Adverse symptoms may include the following: irritation redness

2. Hazards identification

- Eyes** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
- Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
Toluene	108-88-3	30 - 60
n-Hexane	110-54-3	30 - 60

Canada

Name	CAS number	%
Toluene	108-88-3	30 - 60
n-Hexane	110-54-3	30 - 60

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.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Get medical attention.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
- 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.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : Extremely flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide

5 . Fire-fighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

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).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. 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 the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

United States

Product name

Toluene

Exposure limits

NIOSH REL (United States, 12/2001).

STEL: 560 mg/m³ 15 minute(s).

STEL: 150 ppm 15 minute(s).

TWA: 375 mg/m³ 10 hour(s).

TWA: 100 ppm 10 hour(s).

OSHA PEL Z2 (United States, 11/2006).

AMP: 500 ppm 10 minute(s).

CEIL: 300 ppm

TWA: 200 ppm 8 hour(s).

ACGIH TLV (United States, 1/2007).

TWA: 20 ppm 8 hour(s).

n-Hexane

ACGIH TLV (United States, 1/2007). Skin

TWA: 50 ppm 8 hour(s).

NIOSH REL (United States, 12/2001).

TWA: 180 mg/m³ 10 hour(s).

TWA: 50 ppm 10 hour(s).

OSHA PEL (United States, 11/2006).

TWA: 1800 mg/m³ 8 hour(s).

TWA: 500 ppm 8 hour(s).

Canada

Product name

Toluene

Exposure limits

CA Alberta Provincial (Canada, 10/2006). Skin

8 hrs OEL: 50 ppm 8 hour(s).

8 hrs OEL: 188 mg/m³ 8 hour(s).

CA British Columbia Provincial (Canada, 7/2007).

TWA: 20 ppm 8 hour(s).

CA Ontario Provincial (Canada, 3/2007).

TWAEV: 50 ppm 8 hour(s).

CA Quebec Provincial (Canada, 12/2006). Skin

TWAEV: 50 ppm 8 hour(s).

TWAEV: 188 mg/m³ 8 hour(s).

n-Hexane

CA Alberta Provincial (Canada, 10/2006). Skin

8 hrs OEL: 50 ppm 8 hour(s).

8 hrs OEL: 176 mg/m³ 8 hour(s).

CA British Columbia Provincial (Canada, 7/2007). Skin

TWA: 20 ppm 8 hour(s).

CA Ontario Provincial (Canada, 3/2007).

TWAEV: 50 ppm 8 hour(s).

TWAEV: 176 mg/m³ 8 hour(s).

CA Quebec Provincial (Canada, 12/2006). Skin

TWAEV: 50 ppm 8 hour(s).

TWAEV: 176 mg/m³ 8 hour(s).

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures

: Use only with adequate ventilation. 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.

8 . Exposure controls/personal protection

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses.
Skin : Overalls buttoned to the neck and wrist.
Respiratory : A respirator is not needed under normal and intended conditions of use.
Hands : Chemical resistant gloves.

Personal protective equipment (Pictograms)



HMIS Code/Personal protective equipment : B

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.

9 . Physical and chemical properties

Physical state : Liquid.
Flash point : Closed cup: -19.4°C (-2.9°F) [Tagliabue.]
Flammable limits : Lower: 1.2%
 Upper: 7.5%
Color : Red.
Odor : Hydrocarbon. [Strong]
Boiling/condensation point : 67°C (152.6°F)
Specific gravity : 0.9
Vapor pressure : 20.3 kPa (152 mm Hg)
Vapor density : 3.5 [Air = 1]
Evaporation rate : 4.5 (Ether (anhydrous). = 1)
VOC : 527 (g/l).
Solubility : Partially soluble in the following materials: cold water and hot water.

10 . Stability and reactivity

Stability : The product is stable.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Materials to avoid : Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Species	Dose	Result	Exposure
Toluene	Rabbit	14100 uL/kg	LD50 Dermal	-
	Rat	636 mg/kg	LD50 Oral	-
	Rat	6900 mg/kg	LD50 Unreported	-
	Rat	25 g/kg	LD50 Oral	-
n-Hexane				

Inhalation : No known significant effects or critical hazards.

Ingestion : May be harmful if swallowed.

Skin : Irritating to skin.

Eyes : Irritating to eyes.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Toluene	A4	3	-	-	-	-

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Species	Exposure	Result
Toluene	-	Daphnia	48 hours	Acute EC50 6000 ug/L
	-	Fish	96 hours	Acute LC50 13 to 15 mg/L
	-	Crustaceans	48 hours	Acute LC50 15500 ug/L
	-	Fish	96 hours	Acute LC50 7.3 ul/L
n-Hexane	-	Fish	96 hours	Acute LC50 113000 ug/L
	-	Fish	96 hours	Acute LC50 2500 to 2980 ug/L

13 . Disposal considerations


Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.




Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

AERG : 127

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1139	COATING SOLUTION	3	II		-

14 . Transport information

TDG Classification	UN1139	COATING SOLUTION	3	II		-
IMDG Class	UN1139	COATING SOLUTION	3	II		-
IATA-DGR Class	UN1139	COATING SOLUTION	3	II		-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Flammable liquid
Irritating material
Target organ effects

U.S. Federal regulations : TSCA 4(a) final test rules: n-Hexane
United States inventory (TSCA 8b): All components are listed or exempted.
TSCA 12(b) annual export notification: n-Hexane
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Toluene; n-Hexane
SARA 311/312 MSDS distribution - chemical inventory - hazard identification
Toluene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard;
n-Hexane: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: Toluene
Clean Water Act (CWA) 311: Toluene
Clean Air Act (CAA) 112 accidental release prevention No products were found.
Clean Air Act (CAA) 112 regulated flammable substances No products were found.
Clean Air Act (CAA) 112 regulated toxic substances No products were found.

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	: Toluene	108-88-3	30 - 60
	: n-Hexane	110-54-3	30 - 60
Supplier notification	: Toluene	108-88-3	30 - 60
	: n-Hexane	110-54-3	30 - 60

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

State regulations : **Connecticut Carcinogen Reporting**: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Massachusetts Substances: The following components are listed: Toluene;n-Hexane
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.

15 . Regulatory information

New Jersey Hazardous Substances: The following components are listed: Toluene;n-Hexane

New Jersey Spill: None of the components are listed.

New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.

New York Acutely Hazardous Substances: The following components are listed: Toluene;n-Hexane

New York Toxic Chemical Release Reporting: None of the components are listed.

Pennsylvania RTK Hazardous Substances: The following components are listed: Toluene;n-Hexane

Rhode Island Hazardous Substances: None of the components are listed.

California Prop. 65

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

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Toluene	No.	Yes.	No.	7000 µg/day (ingestion) 13000 µg/day (inhalation)

Canada

WHMIS (Canada)

- : Class B-2: Flammable liquid
- Class D-2A: Material causing other toxic effects (Very toxic).
- Class D-2B: Material causing other toxic effects (Toxic).



Canadian lists

- : **CEPA Toxic substances:** None of the components are listed.
- Canadian ARET:** None of the components are listed.
- Canadian NPRI:** The following components are listed: Toluene;n-Hexane
- Alberta Designated Substances:** None of the components are listed.
- Ontario Designated Substances:** None of the components are listed.
- Quebec Designated Substances:** None of the components are listed.

Canada inventory

- : All components are listed or exempted.

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

International regulations

International lists

- : This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

16 . Other information

Label requirements

- : EXTREMELY FLAMMABLE LIQUID AND VAPOR. FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. CAUSES EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

16 . Other information

Hazardous Material Information System (U.S.A.) :

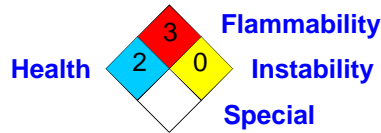
HAZARD RATINGS

Health	*	2
Fire hazard		3
Physical Hazard		0
Personal protection		B

4- Extreme
 3- Serious
 2- Moderate
 1- Slight
 0- Minimal
 See section 8 for more detailed information on personal protection.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



References

: ANSI Z400.5, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005.

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes 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 used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.