

Safety Data Sheet

Section 1. Identification

GHS product Identifier 650 Liquid Adhesive
Other means of identification Not available

Relevant identified used of the substance or mixtures and uses advised against

Asphaltic solvent based liquid adhesive which meets ASTM D-41. This product is used to improve adhesion between road surfaces and our membranes.

Supplier's details Polyguard Products, Inc.
 3801 South Interstate 45
 Ennis, TX 75119
 Tel: (800) 541-4994

**Emergency telephone number)
 with hours of operation)** CHEMTREC, US 1-800-424-9300 International 1-703-741-5970
 (24/7)

Section 2. Hazards Identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazardous Communications Standard (49CFR1910.1200) .

Classification of the substance or mixture Flammable liquid- Category 2
 Skin Corrosion/irritation- Category 2
 Carcinogenicity- Category 2
 Reproductive Toxicity- Category 2
 Specific target organ toxicity (single exposure) (Narcotic effects) – Category 3
 Specific target organ toxicity (repeated exposure) – Category 2
 Aspiration hazard- Category 1

GHS label elements
Hazard pictogram



Signal word Danger

Hazard statement Highly flammable liquid and vapor
 Causes serious eye irritation.
 Causes skin irritation.
 Suspected of damaging fertility or the unborn child.
 May be fatal if swallowed and enters airways.
 May cause drowsiness and dizziness.
 May cause damage to organs through prolonged or repeated exposures.

Section 2. Hazards Identification

Precautionary statements
Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands, and any exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not breathe dust/fumes/gas/mist/vapors/spray. Keep away from heat/sparks/open flames/hot surfaces- No smoking. Keep container tightly closed. Ground/bond container a receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use explosion proof equipment. Keep cool.

Section 2. Hazards Identification

Response	If exposed or concerned: Get Medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or physician. DO NOT induce vomiting. In case of fire: USE CO₂ , Dry chemical, or foam for extinguishment.
Storage	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Disposal	Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Other Hazards	Toxic to aquatic life with long lasting effects.

Section 3. Composition/Information on Ingredients

Substance/Mixture	Mixture
Other means of identification	Not available
<u>CAS number/other identifiers</u>	
CAS number	Not applicable
Product code	Not applicable

<u>Ingredient name</u>	<u>%</u>	<u>CAS Number</u>
Toluene	45-70 %	108-88-3
Asphalt	10-30 %	8052-42-4
Residues (petroleum) vacuum	3-7 %	64741-56-6
Uintaite	7-13 %	12002-43-6
Xylene	5-10 %	1330-20-7
Ethyl Benzene	1-5 %	100-41-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentration applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First Aid Measures

Description of necessary first aid measures.

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respirations. Seek medical attention if irritation develops or persists.
Skin contact	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: get medical advice/attention.
Ingestion	Get medical attention immediately. Call a poison center or physician. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach contents does not enter the lungs. Never give anything by mouth to an unconscious person.

Section 4. First Aid Measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	Causes serious eye irritation.
Inhalation	May cause drowsiness and dizziness.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Ingestion	May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include the following: Pain or irritation, watering, redness.
Inhalation	Adverse symptoms may include the following: Nausea or vomiting, headache, Drowsiness/fatigue, Dizziness/vertigo, Unconsciousness, reduced fetal weight, increase in fetal deaths, & skeletal malformations
Skin contact	Adverse symptoms may include the following: Irritation, redness, reduced fetal weight, increase in fetal deaths & skeletal malformations
Ingestion	Adverse symptoms may include the following: Nausea or vomiting, reduced fetal weight, increase in fetal deaths & skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary.

Notes to physician:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment
Protection of first aiders:	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

Section 5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media

Unsuitable extinguishing media

Specific hazards arising from the chemical

Use dry chemical, CO₂, water spray (fog) or foam.
Do not use water- jet or water-based fire extinguishers.
Highly flammable liquid and vapor. Runoff to sewer may create a fire or explosion hazard. 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 flashback. This material is toxic to aquatic life. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer, or drain.

Hazardous thermal decomposition products

Special protective actions for firefighters

Special protective equipment for fire fighters

Decomposition products may include the following materials:
Carbon Dioxide and Carbon Monoxide
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is no fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in a positive pressure mode.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures.

For non emergency personal

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in “For non-emergency personnel”.

Enviromental precautions

Avoid disposal 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). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Spill

Stop leak if without risk. Move container from spill area. Use spark proof tools and explosion proof equipment. 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). 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.

Section 7. Handling and Storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Avoid exposure – obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on the skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage area or 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 flames and any other ignition source. Use explosion-proof electrical (ventilation, lighting from material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking, and smoking should be prohibited in areas where material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. See section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in 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. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready to 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. See section 10 for incompatible materials before handling or use.

Section 8. Exposure Controls/Personal Protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Toluene	NIOSH TWA 100 ppm (375 mg/m ³) NIOSH –STEL 150 ppm (560 mg/m ³) OSHA- TWA 100 ppm (375 mg/m ³) OSHA CEIL- 300 ppm ACGIH – TWA 20 ppm
Asphalt	NIOSH CEIL: 5 mg/m ³ 15 minutes. Form: fume ACGIH TWA: 0.5 mg/m ³ , (as benzene soluble aerosol) 8 hours. Form: inhalable fraction.
Distillates(petroleum), petroleum residues vacuum	No data is available.
Untaite	OSHA PEL- 15 mg/m ³ (total) OSHA PEL- 5 mg/m ³ (Respirable) ACGIH- TWA- 10 mg/m ³ (inhalable)
Xylene	NIOSH TWA 100 ppm NIOSH –STEL 150 ppm OSHA- TWA 100 ppm (435 mg/m ³) OSHA CEIL- 150 ppm (655 mg/m ³) ACGIH TWA- 100 ppm ACGIH STEL- 150 ppm
Ethyl Benzene	NIOSH TWA 100 ppm NIOSH –STEL 125 ppm OSHA- TWA 100 ppm (435 mg/m ³) ACGIH TWA- 20 ppm

Appropriate engineering controls

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.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Hygiene measure:

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. Ensure that eyewash stations and safety showers are close to the work- station location.

Eye/face protection

Wear safety glasses with side shields(or goggles). Refer to 29CFR 1910.120 for eye and face protection regulations.

Skin Protection

Hand protection

Wear protective chemical resistant gloves and protective clothing. Flame retardant antistatic protective clothing. Refer to 29CFR 1910.120 for eye and face protection regulations.

Body protection

Wear protective chemical resistant gloves and protective clothing. Flame retardant antistatic protective clothing. Refer to 29CFR 1910.120 for eye and face protection regulations.

Respiratory protection

Use a properly fitted, air purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Refer to 29CFR 1910.120 for respiratory regulations.

Section 9. Physical and Chemical Properties

Appearance	
Physical state	Liquid
Color	Black
Odor	Hydrocarbon (strong)
Odor threshold	Not available
pH	Not applicable
Melting point	Not applicable
Boiling point	111 °C (231.8 °F)
Flash Point	Closed Cup: 7.22° C (45 °F) [Pensky- Martens]
Evaporation rate:	9.5 (ether(anhydrous)=1)
Flammability (solid, gas)	Not applicable
Lower & upper explosive (flammable) limits	Lower: 1.0 % Upper: 7.0 %
Vapor density	2.9 kPa (22 mm Hg) @ room temperature
Vapor pressure	3.6 (Air=1)
Relative density	0.922
Solubility	Partially soluble in the following materials: cold and hot water.
Partition coefficient: n- octanol/water	Not available
Auto- ignition temperature	Not available
Decomposition temperature	Not available
Kinematic Viscosity	45-50 KU
VOC	542 g/l

Section 10. Stability and Reactivity

Reactivity	No specific test data related to reactivity is available for this product or its ingredients.
Chemical stability	This product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions 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.
Incompatible materials	Reactive or incompatible with the following materials: Oxidizing materials, and acids.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Routes of exposure	Eyes, Skin, Ingestion (aspiration hazard), Inhalation
<u>Acute Symptoms of Single Overexposure</u>	
Eye contact	Causes serious eye irritation, discomfort, redness & tearing.
Inhalation	Mist, vapor or fumes may cause respiratory irritation, headache, dizziness, drowsiness, fatigue, disorientation, central nervous system depression.
Skin contact	Causes skin irritation, redness, drying and cracking.
Ingestion	May be fatal if swallowed and enters airway. Ingestion can affect the gastrointestinal tract, respiratory system and central nervous system.

Section 11. Toxicological Information

Chronic Symptoms of Single Overexposure

Eye contact

Causes serious eye irritation, discomfort, redness, pain & tearing.

Inhalation

Mist, vapor or fumes may cause respiratory irritation, headaches, loss of coordination, dizziness, drowsiness, fatigue, disorientation, central nervous system depression, auditory system effects, cardiac depression, impaired brain function and unconsciousness.

Skin contact

Causes skin irritation and defatting of the skin which may lead to dermatitis. Skin absorption may affect liver, kidneys and central nervous system.

Ingestion

May be fatal if swallowed and enters airway. Ingestion can affect motor functions, gastrointestinal tract, respiratory system, and central nervous system. Symptoms may include gastrointestinal irritation, dizziness, drowsiness, headaches, nausea, vomiting and abdominal pain.

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LD50 Oral	Rat	5,580 mg/kg	
	LC50 Inhalation Vapor	Rat	28.1 g/l	4 hours
	LC50 Dermal	Rabbit	12,196 mg/kg	-
Asphalt	LD 50 Oral	Rat	> 5,000 mg/kg	-
Xylene	LD50 Oral	Rat	4,300 mg/kg	
	LC50 Inhalation Vapor	Rat	21.7 g/l	4 hours
	LC50 Dermal	Rabbit	1,700 mg/kg	
Ethylbenzene	LD50 Oral	Rat	3,500 mg/kg	
	LC50 Inhalation Vapor	Rat	17.2 g/l	4 hours
	LC50 Dermal	Rabbit	15,433 mg/kg	

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes- Mild irritant	Rabbit	-	870 µg	-
	Eyes- Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin- Mild irritant	Pig	-	24 hours 250 µL	-
	Skin- Mild irritant	Rabbit	-	435 mg	-
	Skin- Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin- Moderate irritant	Rabbit	-	500 mg	-

Sensitization

There is no data available

Carcinogenicity

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Asphalt		2 B	
Xylene	-	3	-

Mutagenic and reproductive effects

Chemical name	Germ Cell Mutagenicity	Toxic to Reproduction
Toluene		2 suspected of damaging fertility or the unborn child)

Section 11. Toxicological Information

Acute Tox Calculated

Chemical name	Oral	Dermal	Inhaled
Toluene	> 2,000 mg/kg	> 2,000 mg/kg	49.0 mg/l
Xylene	4,300 mg/kg	2,615 mg/kg	19.8 mg/l

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Toluene	LC 50 10 to 100 mg/l	Gambusia affinis	96 hours
	LC 50 538 mg/l	Oncorhynchus mykiss	96 hours
Asphalt	EC 50 6.56 mg/l	Daphnia magna	48 hours
	LL50 > 1000 mg/L	Oncorhynchus mykiss	96 hrs.
	EC50 -1000 mg/l	Daphnia- magna	48 hrs.
Uintaite	EL50 > 1000 mg/l	Pseudokirchnerella subcapita	72 hrs.
	LC 50 > 1000 mg/l	Cyprinodon variegatus (sheepshead minnow)	96 hours
	NOEC > 1000 mg/l	Cyprinodon variegatus (sheepshead minnow)	21 days
	EC 50 > 1000 mg/l	Daphnia (Acartia tonsa)	48 hours
	NOEC > 20102 mg/l	Daphnia (Acartia tonsa)	21 days
	EC 50 > 1500 mg/l	Algae(Skeletonema pseudocstatim)	96 hours
	NOEC > 1500 mg/l	Algae(Skeletonema pseudocstatim)	96 hours
Xylene	EC 50- 8.2 mg/l	Daphnia magna	96 hours
	LC 50- 1.8 mg/l	Oncorhynchus mykiss	96 hours
Ethyl Benzene	EC 50- 1.8 mg/l	Daphnia magna	48 hours

Persistence and degradability

There is no data available.

Bio accumulative potential

No data available.

Product/ingredient name	LogPow	BCF	Potential
Toluene	2.73	90	low
Xylene	3.12	8.1 to 25.9	low

Mobility in soil

Soil/water partition coefficient (Koc)

No data available

Other adverse effects

Toxic to aquatic life with long lasting effects.

Section 13. Disposal Considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recycled products via a licensed waste disposal contractor. Waste should not be disposed of to a sewer. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, water ways, drains and sewers.

Section 14. Transportation Information

	DOT Classification	IMDG	IATA
UN Number	UN 1139	UN 1139	UN 1139
UN Proper Shipping Name	Coating Solution (Xylene, toluene)	Coating Solution (Xylene, toluene)	Coating Solution (Xylene, toluene)
Transportation hazard class(es)	3 	3 	3 
Packing Group	II	II	II
Environmental Hazard	No	No	No
Additional Information	<u>Reportable Quantities</u> 1245.3 lbs /565.38 kg (161.99 gal/613.21 L). Packages sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.	Emergency schedules (EmS) F-E, S-E	Limited quantity exemptions

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory Information

U.S. Federal regulations:

United States inventory (TSCA 8 b): all components are listed or exempted.

SARA 311/312 Classification

Refer to section 2

SARA 313- Form R – reporting requirements

Product name	CAS Number	%
Toluene	108-88-3	45-70 %
Xylene	1330-20-7	5-10 %
Ethyl Benzene	100-41-4	1-5 %

State regulations

California Right to Know

The following components are listed: Toluene

Florida Right to Know

The following components are listed: Toluene

New Jersey Right to Know

The following components are listed: Toluene, Xylene, Ethyl Benzene, Petroleum asphalt

Pennsylvania Right to Know

The following components are listed: Toluene, Xylenes, Ethyl Benzene, Petroleum asphalt

Minnesota Right to Know

The following components are listed: Toluene, Xylenes, Ethyl Benzene

Massachusetts Right to Know

The following components are listed: Toluene, Petroleum asphalt, Xylenes, Ethyl Benzene

Rhode Island Right to Know

The following components are listed: Toluene, Xylenes

Wisconsin Right to Know

The following components are listed: Toluene

California Prop.65



WARNING: This product can expose you to chemicals including Ethylbenzene which are known to the State of California to cause cancer, and Toluene, which is known to the State of California to cause Birth defects or other reproductive harm. For more information, visit www.P65Warnings.ca.gov.

16. Other Information

Date of revision:	7/20/2026
Date of previous issue	4/30/2015
Revisions:	Update to meet current SDS regulations. Change name of product from 650 RC Reflective Cracking Liquid Adhesive to 650 RC Liquid Adhesive. Update product use and Chemtrec's international phone number.
Version	2
Prepared by	C. Rogalski

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