

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATIONS AND OF THE COMPANY UNDERTAKING

Product Name Polyken Liquid Adhesive (1019 Series)
Use/Size Pipe Corrosion Protection
Product Numbers 1019, 1019R, 1019 SPR, 1019SY
Manufacturer/Supplier Berry Plastics Corporation, Tapes and Coatings Division
Address 2320 Bowling Green Road
Franklin, Kentucky
Phone Number (270) 586-3261 (Monday – Friday 8:00 am to 5:00 pm)
Chemtrec Number (800) 424-9300
Revision Date: May 8, 2009
MSDS Date: August 9, 2007

Safety Data Sheet according to EC directive 2001/59/EC and OSHA's Hazcom Standard (29 CFR 1910.1200)

2. HAZARDS IDENTIFICATION

EU Main Hazards

R11 Highly flammable.
R36/38 Irritating to eyes and skin.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63 Possible risk of harm to the unborn child.
R65 Harmful: may cause lung damage if swallowed.
R67 Vapours may cause drowsiness and dizziness.
R68/20/21/22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

Routes of Entry

- Absorption - Eye contact - Ingestion - Inhalation - Skin contact

Carcinogenic Status

Not considered carcinogenic by NTP, IARC, and OSHA.

Target Organs

Central Nervous System - Skin - Eye - Liver - Kidney - Respiratory System - Reproductive - Optic Nerve - Heart

Health Effects - Eyes

Liquid, mist or vapor may cause pain, transient irritation and superficial corneal effects.

Health Effects - Skin

Material may cause irritation and allergic sensitization. Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis. Material can be absorbed through the skin and cause effects similar to those resulting from inhalation.

Health Effects - Ingestion

Swallowing may have the following effects:

- abdominal pain - vomiting - central nervous system depression - kidney damage - liver damage – testis damage – aspiration into the lungs may occur during ingestion or vomiting causing lung damage - visual impairment and blindness

A large dose may have the following effects:

- systemic effects similar to those resulting from inhalation

2. HAZARDS IDENTIFICATION

Health Effects - Inhalation

Exposure to vapor may have the following effects:

- irritation of nose, throat and respiratory tract - central nervous system depression - dizziness - drowsiness - headache - mental confusion - allergic sensitization

Exposure to vapor at high concentrations may have the following effects:

- nerve damage leading to numbness and muscle weakness - lung damage - liver damage - kidney damage - testis damage - adverse reproductive effects - cardiac arrhythmias - visual impairment and blindness

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS#/Codes	Concentration	R Phrases	Classification
Toluene	108-88-3 203-625-9	3-5%	R11, R38, R48/20, R63, R65, R67	F, Xn
Heptane	142-85-5 205-563-8	65-80%	R11, R38, R50/53, R65, R67	F, Xn, N
Carbon Black	1333-86-4 215-609-9	<5%	None	None
Methanol	67-56-1 200-659-6	3-5%	R20/21/22, R68/20/21/22	F, Xn
Polymers and Resins	N.A.	<25%	None	None

4. FIRST AID MEASURES

Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Immediately flood the skin with large quantities of water for at least 15 minutes, preferably under a shower. Remove contaminated clothing and continue washing. Contaminated clothing should be washed or dry-cleaned before re-use. Obtain medical attention if blistering occurs or redness persists.

Ingestion

Do not induce vomiting, unless directed to do so by a physician. Have victim drink 1-3 glasses of water to dilute stomach contents. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

Advice to Physicians

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Extinguishing Media

Use foam, dry chemical or carbon dioxide. Be aware of the possibility of re-ignition. Keep containers and surroundings cool with water spray.

Unusual Fire and Explosion Hazards

Vapors can travel a considerable distance to a source of ignition and flashback. Flashback can occur if air temperature exceeds flash point. Be aware of possibility of re-ignition.

5. FIRE FIGHTING MEASURES

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Wear appropriate protective clothing. Eliminate all sources of ignition. Use non-sparking scoops for flammable materials. Vapors can accumulate in low areas. Consider need for evacuation. Prevent the material from entering drains or watercourses. Notify authorities if spill has entered watercourse or sewer or has contaminated soil or vegetation.

7. HANDLING AND STORAGE

Keep from reach of children. Use in well ventilated area. Use local exhaust ventilation. Avoid inhaling vapor. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use.

Store away from sources of heat or ignition. Storage area should be: - cool - dry - well ventilated - out of direct sunlight - away from sources of ignition (heat, sparks, flames, pilot lights) - away from incompatible materials (see Section 10)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards

Exposure limits are listed below, if they exist.

Toluene

ACGIH: TLV 20ppm (75 mg/m³) 8h TWA

OSHA: PEL 200ppm 8h TWA. 300 ppm CEILING, 500 ppm 10-min peak per shift.

Heptane

ACGIH: TLV 400 ppm (1640 mg/m³) 8h TWA. 500 ppm (2050 mg/m³) STEL.

OSHA: PEL 500 ppm (2000 mg/m³) 8h TWA.

Methanol

ACGIH TLV: 200 ppm (262 mg/m³) 8h TWA, 250 ppm (328 mg/m³) STEL (15 min.)

Skin Designation: air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.

OSHA PEL: 200 ppm (260mg/m³) 8h TWA

Polymers and Resins

None assigned.

Engineering Control Measures

Use engineering methods to prevent or control exposure. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

Respiratory Protection

Wear respiratory protection if there is a risk of exposure to high vapor concentrations, aerosols or if applied to hot surfaces. A NIOSH approved full face respirator may be worn. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

Hand Protection

Butyl gloves are recommended.

Eye Protection

Chemical goggles or safety glasses with side shields

Body Protection

If there is danger of splashing, wear: - overall or apron

9. **PHYSICAL AND CHEMICAL PROPERTIES**

Physical State	Liquid
Color	Black
Odor	Hydrocarbon solvent
pH	Neutral
Density (lbs/gal)	1019: 6.5 1019R: 6.5 1019SPR: 5.89 1019SY: 5.89
Boiling Range/Point (°C/F)	~93/199
Melting Point (°C/F)	Not determined
Flash Point (PMCC) (°C/F)	-12/10
Vapor Pressure	64 mm Hg (75F) (heptane)
Evaporation Rate (BuAc=1)	>2 (heptane)
Solubility in Water	Negligible
Vapor Density (Air = 1)	3.5 (heptane)
VOC (g/l)	1019: 620 1019R: 581 1019SPR: 610 1019SY: 615

10. **STABILITY AND REACTIVITY**

Stability

Stable under normal conditions.

Conditions to Avoid

- Heat, sparks, flames - High temperatures - sources of ignition - welding arcs - pilot lights - static electricity - contact with incompatible materials

Materials to Avoid

- Strong oxidizing agents - acids – bases - reducing agents

Hazardous Polymerization

Will not occur.

Hazardous Decomposition Products

- oxides of carbon - hydrocarbons - phenolic vapors - aldehydes - sodium oxide - phosphorous oxides

11. **TOXICOLOGICAL INFORMATION**

Acute Toxicity

Toluene: Oral LD50 rat 636 mg/kg
Dermal LD50 rabbit 12124 mg/kg
Inhalation LC50 rat 28.1 mg/l 4h
Heptane: Oral LD50 rat 5,000 mg/kg.
Dermal LD50 rabbit 3,160 mg/kg
Methanol: Oral LD50 (rat) 5300 mg/kg
Dermal LD50 (rabbit) 15,800 mg/kg
Inhalation LC50 (rat) 64 mg/l, 4h

Chronic Toxicity/Carcinogenicity

This product contains carbon black which is classified by IARC as a Group 2B possible human carcinogen. When encapsulated in the liquid matrix the risk of exposure is reduced.

11. TOXICOLOGICAL INFORMATION

Genotoxicity

Methanol: Negative Ames test with and without metabolic activation.

Toluene: Negative Ames Test with and without metabolic activation.

Heptane: Negative Ames Test with and without metabolic activation.

Reproductive/Developmental Toxicity

Toluene: In laboratory studies, birth defects, increased fetal lethality and delayed fetal development have been observed in offspring of female animals exposed during pregnancy. Toluene has been demonstrated to be embryofetotoxic and teratogenic in laboratory animals.

Methanol: There are conflicting laboratory animal studies as to whether methanol causes adverse reproductive effects. Some studies results show methanol has produced fetotoxicity in rats and teratogenicity in mice exposed by inhalation to high concentrations that did not produce significant maternal toxicity.

12. ECOLOGICAL INFORMATION

Mobility

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bio-accumulation

No relevant studies identified.

Ecotoxicity

Toluene: EC50 Fathead minnow 96hr 34mg/l

EC50 Daphnia magna 48hr 11.5 mg/l

EC50 Algae (Selenastrum capricornutum) 433 mg/l 96 hr

Heptane: LC50 Carassius auratus (goldfish) 4.00 mg/l 24 h

Methanol: Bluegill sunfish LC50:15,400 mg/l 96hr

Daphnia Magna EC50: >100 mg/l 96 hr

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable local and national regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near to the container. Use non-sparking tools. Do not incinerate closed containers. Empty containers may contain hazardous residues. Dispose of containers with care.

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data	Coating Solution (3) UN1139, II
UN Proper Shipping Name	Coating Solution
UN Class	(3)
UN Number	UN1139
UN Packaging Group	II
Classification for AIR Transportation (IATA)	Consult current IATA Regulations prior to shipping by air.

15. REGULATORY INFORMATION

EU Label Information

Classification and labelling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments(2001/60/EC and 2006/8/EC)

EU Hazard Symbol and Indication of Danger

Xn - Harmful

N- Dangerous for the environment

F- Flammable

15. REGULATORY INFORMATION

R phrases

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R67 Vapours may cause drowsiness and dizziness.

R68/20/21/22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

S phrases

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37 Wear suitable protective clothing and gloves.

S57 Use appropriate containment to avoid environmental contamination.

S60 This material and its container must be disposed of as hazardous waste.

S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

TSCA Listing

All ingredients have been verified for inclusion on the EPA Toxic Substance Control Act Chemical Substance Inventory.

EINECS Listing

All ingredients in this product have not been verified for inclusion on the European Inventory of Existing Commercial Chemical Substances (EINECS) or specifically exempted.

DSL (Canadian) Listing

All ingredients in this product have not been verified for inclusion on the Domestic Substance List (DSL).

California Proposition 65

This product contains the following materials which the State of California has found to cause cancer, birth defects or other reproductive harm: Toluene (108-88-3) - Quartz (14808-60-7) <0.01% - Ethylbenzene (100-41-4) <0.1% - Formaldehyde (50-00-0) trace - Benzene (71-43-2) <0.01%

SARA Title III Sect. 302 (EHS)

This product does not contain any chemicals subject to SARA Title III Section 302.

SARA Title III Sect. 304

The following chemicals have reportable quantities: - Toluene 1000# - Methanol 5000#

SARA Title III Sect. 311/312 Categorization

Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard, Fire Hazard

SARA Title III Sect. 313

This product contains a chemical that is listed in Section 313 at or above de minimis concentrations. The following listed chemicals are present: Toluene (108-88-3) - Methanol (67-56-1)

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Flammability - 4

NFPA Code for Health - 2

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

HMIS Ratings

HMIS Code for Flammability - 4

HMIS Code for Health - 2

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

16. OTHER INFORMATION

Abbreviations

N/A: Denotes no applicable information found or available
CAS#: Chemical Abstracts Service Number
ACGIH: American Conference of Governmental Industrial Hygienists
OSHA: Occupational Safety and Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
NTP: National Toxicology Program
IARC: International Agency for Research on Cancer
R: Risk
S: Safety

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