Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Common Name	**Lokweld(R)600 Adhesive**
Supplier	Ralph Wilson Plastics Company P.O. Box 6110 - 2400 Wilson Place Temple, TX 76503-6110 Telephone: 254-207-7000 or 800-433-3222
Synonym	Also known as: LW 600
Trade name	Lokweld(R) 600 Adhesive
Material Uses	Adhesive for laminate.
Manufacturer	Ralph Wilson Plastics Company P.O. Box 6110 - 2400 Wilson Place Temple, TX 76503-6110 Telephone: 254-207-7000 or 800-433-3222

Code	Mexico MSDS - 17293
MSDS#	17293
Revision Date	**04/09/02**
Responsible Name	**Ralph Wilson Plastics Company**

In Case of Emergency
CHEMTREC:
800-424-9300 (USA)
703-527-3887 (International)

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits
Toluene	108-88-3	15-40	TWA: 100 ppm STEL: 150 ppm OSHA (PEL) TWA: 50 ppm ACGIH (TLV)
VM & P Naphtha (Stoddard Solvent)	8032-32-4	40-60	Not available.
Methyl ethyl ketone	78-93-3	5-15	TWA: 590 mg/m3 ACGIH

Section 3. Hazards Identification

Physical State and Appearance
Liquid.

Emergency Overview
DANGER!
FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF INHALED. HARMFUL OR FATAL IF SWALLOWED. MAY BE HARMFUL BY SKIN CONTACT.
May be irritating to eyes, skin, respiratory tract and mucous membranes; possible narcotic / central nervous system effects.

Routes of Entry
Absorbed through skin. Skin contact. Eye contact. Inhalation.

Potential Acute Health Effects

Eyes This product may irritate eyes upon contact.

Skin May cause skin irritation. Permeator (absorbed through the intact skin).

Inhalation Inhalation of vapors may cause dizziness, light-headedness, nausea, headache, loss of consciousness and death. Material is irritating to mucous membranes and upper respiratory tract. Can be fatal if inhaled or ingested. Narcotic effect; may cause nervous system disturbances. (Central nervous system depression and peripheral neuropathy (numbness in limbs).

Ingestion Not an expected route of entry. May be fatal if swallowed.

Potential Chronic Health Effects
CARCINOGENIC EFFECTS: None.
MUTAGENIC EFFECTS: None.
TERATOGENIC EFFECTS: Classified PROVEN for human [Toluene].
The substance is toxic to the blood, the nervous system, the kidneys and liver.
Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation.
TARGET ORGANS: Chronic overexposure may effect the central nervous system, kidneys, and/or liver or cause irregular heartbeat. Peripheral nervous system effects.

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Medical Conditions Aggravated by Overexposure:	Persons with preexisting skin disorders may be more susceptible to the effects of solvents.
Overexposure /Signs/Symptoms	Skin inflammation is characterized by itching, scaling, reddening. Inflammation of the eye is characterized by redness, watering, and itching.

See Toxicological Information (section 11)

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention.
Skin Contact	Wash contaminated skin with soap and water. If the product got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible. Place the victim under a deluge shower. If irritation occurs, seek medical attention. Wash contaminated clothing before reusing.
Inhalation	Allow the victim to rest in a well ventilated area. Oxygen may be administered if breathing is difficult. If irritation (or difficult breathing) persists, seek immediate medical attention.
Ingestion	Do not induce vomiting. Have conscious person drink several glasses of water or milk. NEVER give an unconscious person anything to ingest. Seek medical attention.
Notes to Physician	Sudden death due to ventricular fibrillation has been reported from acute inhalation in chronic solvent abusers. Treat patient supportively. Life support measures should be provided because CNS depression, cardiopulmonary failure, and metabolic acidosis have been reported in massive overexposures.

Section 5. Fire Fighting Measures

Flammability of the Product	Flammable.
Auto-ignition Temperature	The lowest known value is 404°C (759.2°F) (Methyl ethyl ketone).
Flash Points	CLOSED CUP: -6.1°C (21°F). (Setaflash.)
Flammable Limits	LOWER: 2% UPPER: 13%
Products of Combustion	These products are carbon oxides (CO, CO2).
Fire Hazards in Presence of Various Substances	Highly flammable in presence of open flames and sparks. Flammable in presence of heat, oxidizing materials.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Static may serve as an ignition source to closed containers.
Fire Fighting Media and Instructions	Flammable liquid, insoluble in water. SMALL SPILL: Use DRY chemicals, CO2, alcohol foam or water spray. LARGE SPILL: Use DRY chemicals, CO2, water spray or foam. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Protective Clothing (Fire)	Fire fighting requires the use of a self contained breathing apparatus with a full face piece and pressure-demand or other positive-pressure mode.
Special Remarks on Fire Hazards	Container explosion may occur under fire conditions or when heated.
Special Remarks on Explosion Hazards	All electrical equipment in the area must be rated for flammable liquids. [Dispensing - Class I, Division 1; Storage - Class 1, Division 2] Ground all equipment containing material.

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Section 6. Accidental Release Measures

Small Spill and Leak Absorb with an inert material and place in an appropriate waste disposal container.

Large Spill and Leak Flammable liquid, insoluble in water.
Eliminate all ignition sources. Stop leak if without risk. Prevent entry into sewers, basements or confined areas; dike if needed. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Do not use metal tools or equipment.

Section 7. Handling and Storage

Handling To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Avoid breathing vapors of this product. After handling, always wash hands thoroughly with soap and water. Avoid contact with skin and eyes. When using do not eat, drink or smoke.

Storage Flammable materials should be stored in a separate safety storage cabinet or room. Store and use away from heat, sparks, open flame, or any other ignition source. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Eyes Splash goggles or safety glasses with side shields.

Body Synthetic apron.

Respiratory In case of insufficient ventilation, wear an approved (NIOSH) respirator with organic vapor cartridges with dust/mist pre-filter.

Hands Gloves (neoprene or rubber).

Feet No special precautions are necessary if used as intended.

Protective Clothing (Pictograms)

Personal Protection in Case of a Large Spill A self contained breathing apparatus should be used to avoid inhalation of the product. Boots. Full suit. Splash goggles. Gloves (neoprene or rubber).

Product Name	Exposure Limits
Toluene	TWA: 100 ppm STEL: 150 ppm OSHA (PEL) TWA: 50 ppm ACGIH (TLV)
VM & P Naphtha (Stoddard Solvent)	Not available.
Methyl ethyl ketone	TWA: 590 mg/m3 ACGIH

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance Liquid.

Molecular Weight Not applicable.

Molecular Formula Not applicable.

pH (1% Soln/Water) Not available.

Odor	Solvent-like. (Strong.)
Taste	Not available.
Color	Colorless to light yellow.

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Boiling/Condensation Point	78.889°C (174°F)
Melting/Freezing Point	May start to solidify at 8.63°C (47.5°F) based on data for: Methyl ethyl ketone. Weighted average: -57.47°C (-71.4°F)
Critical Temperature	The lowest known value is 318.6°C (605.5°F) (Toluene).
Specific Gravity	0.841 (Water = 1)
Vapor Pressure	185 mm of Hg (@ 20°C)
Vapor Density	The highest known value is 3.14 (Air = 1) (Toluene). Weighted average: 2.85 (Air = 1)
Volatility	79%
Odor Threshold	The highest known value is 2.9 ppm (Toluene) Weighted average: 1.95 ppm
Evaporation Rate	2.7 (Methyl ethyl ketone) compared to Ether (anhydrous).
VOC	V.O.C. Content (less water and exempt compounds): 5.62 lbs/gal; 674 g/L (SCAQMD) VHAP CONTENT: 1.93 lbs. VHAP/lbs. solid.
Viscosity	1200 cps (Brookfield Viscometer) 33.0 sec (Stormer Viscometer)
$LogK_{ow}$	Not available.
Ionicity (in Water)	Not available.
Dispersion Properties	Not available.
Solubility	Insoluble in water.
Physical Chemical Comments	Not available.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	No additional information.
Incompatibility with Various Substances	Reactive with acids, alkalis, combustible materials, oxidizing agents, reducing agents.
Hazardous Decomposition Products	Products of Combustion include: carbon oxides (CO, CO2)
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Toxicity to Animals	**WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.** Acute oral toxicity (LD50): 2600 mg/kg [Rat]. (Toluene). Acute dermal toxicity (LD50): 6480 mg/kg [Rabbit]. (Methyl ethyl ketone). Acute toxicity of the vapor (LC50): 1400 ppm 4 hour(s) [Rat.]. (VM & P Naphtha (Stoddard Solvent)).
Chronic Effects on Humans	**CARCINOGENIC EFFECTS**: Not classifiable for human or animal. **MUTAGENIC EFFECTS**: Classified None for human. **TERATOGENIC EFFECTS**: Classified PROVEN for human [Toluene]. **DEVELOPMENTAL TOXICITY**: Classified Development toxin [PROVEN] [Toluene]. Causes damage to the following organs: kidneys, the nervous system, liver, upper respiratory tract. Peripheral neuropathy (numbness in limbs). Can cause CNS depression. N-hexane is a neurotoxin. Toluene has been reported to have caused spontaneous abortion in women that intentionally concentrated and inhaled its vapors.
Other Toxic Effects on Humans	

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	Very hazardous in case of ingestion. Hazardous in case of skin contact [irritant, Permeator (absorbed through the intact skin).], or in case of inhalation.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on Chronic Effects on Humans	No additional information.
Special Remarks on Other Toxic Effects on Humans	Persons with pre-existing skin disorders may be more susceptible to the effects of solvents.

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Biodegradable/OECD	Not available.
Mobility	Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Information	Spilled, contaminated, or waste material should be put into a suitable container and handled according to local, state/provincial, and federal regulations. Contact a qualified waste management company in your area for assistance. EMPTY CONTAINERS: Empty containers should be either reconditioned by CERTIFIED firms or properly disposed of by APPROVED firms. Disposal of containers should be in accordance with applicable laws and regulations. "Empty" drums should not be given to individuals. Serious accidents have resulted from the misuse of "emptied" containers. Residual vapors may in the container(s) may be explosive. Do not cut, weld, or braze these containers.
Waste Stream	Not available.

Consult your local or regional authorities.

Section 14. Transport Information

DOT Classification	DOT CLASS: 3 (Flammable liquid). DOT PROPER SHIPPING NAME: Adhesives

Consumer Commodity, ORM-D (quarts and gallons); Adhesives, 3, UN1133, PG II (containers larger than one gallon)

Marine Pollutant	Not a marine pollutant.
Special Provisions for Transport	Ninguno.
ADR/RID Classification	Class 3: Flammable liquid A.
IMO/IMDG Classification	Class 3.2: Flammable liquid (Intermediate flashpoint group of liquids having a flashpoint of -18°C (0°F) up to, but not including, 23°C (73°F) c.c.).

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ICAO/IATA Classification	Class 3: Flammable liquid.

Section 15. Regulatory Information

HCS Classification

HCS CLASS: Flammable liquid having a flash point lower than 37.8°C (100°F).

U.S. Federal Regulations

TSCA 8(b) inventory: All ingredients are listed.
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
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
SARA 313 toxic chemical notification and release reporting: Toluene; Methyl ethyl ketone
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.

International Regulations

EINECS

Not available.

DSCL (EEC)

R12- Extremely flammable.
R28- Very toxic if swallowed.
R36/38- Irritating to eyes and skin.

International Lists

Australia: Toluene; Methyl ethyl ketone

China: Toluene

Germany water class: Toluene

VCI WGK: Toluene; Methyl ethyl ketone

Japan (MITI): Methyl ethyl ketone

State Regulations

Connecticut carcinogen reporting list.: Toluene
Pennsylvania RTK: Toluene; Methyl ethyl ketone
Florida: Toluene; Methyl ethyl ketone
Minnesota: Toluene; Methyl ethyl ketone
Massachusetts RTK: Toluene; Methyl ethyl ketone
New Jersey: Toluene; Methyl ethyl ketone
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Toluene

Section 16. Other Information

Label Requirements

FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF INHALED. HARMFUL OR FATAL IF SWALLOWED. MAY BE HARMFUL BY SKIN CONTACT.

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

Health	*	2
Fire Hazard		3
Reactivity		0
Personal Protection		C

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

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References

-SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984.
-Manufacturer's Material Safety Data Sheet.

GLOSSARY:

ACGIH - American Conference of Governmental Industrial Hygienists
ASTM - American Society for Testing and Materials
ADR - Agreement on Dangerous Goods by Road (Europe)
BOD5 - Biological Oxygen Demand in 5 days
CAS - Chemical Abstract Services
CEPA - Canadian Environmental Protection Act
CERCLA - Comprehensive Environmental Response, Compensation and Liability Act
CFR - Code of Federal Regulations
DOT - Department of Transportation
DSCL - Dangerous Substances Classification and Labeling (Europe)
DSL - Domestic Substance List (Canada)
EEC/EU - European Economic Community/European Union
EINECS - European Inventory of Existing Commercial Chemical Substances
HCS - Hazard Communication System
HMIS - Hazardous Material Information System
IARC - International Agency for Research on Cancer
LD50/LC50 - Lethal Dose/Concentration kill 50%
LDLo/LCLo - Lowest Published Lethal Dose/Concentration
NFPA - National Fire Prevention Association
NIOSH - National Institute for Occupational Safety & Health
NTP - National Toxicology Program
OSHA - Occupational Safety & Health Administration
PEL - Permissible Exposure Limit
RCRA - Resource Conservation and Recovery Act
SARA - Superfund Amendments and Reorganization Act
STEL - Short Term Exposure Limit (15 minutes)
TDG - Transportation of Dangerous Goods (Canada)
TLV-TWA - Threshold Limit Value-Time Weighted Average
TSCA - Toxic Substances Control Act
WHMIS - Workplace Hazardous Material Information System

Other Special Considerations

TSCA (Toxic Substance Control Act): All components of this product are listed on the TSCA Inventory.
EINECS: All components of this product are on the European Inventory of Existing Commercial Chemical Substances.

Last revised by Ralph Wilson Plastics Company.

04/09/02

CHEMTREC:
800-424-9300 (USA)
703-527-3887 (International)

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.