WILSONART INTERNATIONAL

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Common Name	**Wilsonart(R)(WA)880/881Contact Adhesive**
Supplier	WILSONART INTERNATIONAL INC. P.O. BOX 6110 - 2400 Wilson Place, Temple, TX 76503 Telephone: 800-433-3222 (U.S.A.) or 254-207-7000
Synonym	Also known as: **Lokweld (R) (LW)880/881 Contact Adhesive**
Trade name	Wilsonart (R) (WA)880/881Contact Adhesive
Material Uses	Spray grade adhesive for laminate.
Manufacturer	WILSONART INTERNATIONAL, INC. P.O. BOX 6110, Temple, TX 76503-6110 Information Phone: 254-207-7000 or 800-433-3222

Code	USA16412
MSDS#	16412
Validation Date	**06/05/2000**
Print Date	06/05/2000
Responsible Name	**Wilsonart International Inc.**

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
Acetone	67-64-1	15-40	TWA: 500 ppm STEL: 1000 ppm [1997] TWA: 750 ppm STEL: 1000 ppm CEIL: 1000 ppm ACGIH (TLV) [1989] TWA: 500 ppm DFG MAK TWA: 1000 ppm STEL: 1250 ppm [1989]
N-hexane	110-54-3	5-15	TWA: 176 mg/m^3; 50 ppm ACGIH (TLV) TWA: 200 ppm DFG MAKs
Hexane isomers	N/A	15-40	TWA: 1760 mg/m^3 CEIL: 3500 mg/m^3 ACGIH (TLV) TWA: 500 ppm STEL: 1000 ppm ACGIH (TLV) TWA: 200 ppm DFG MAKs
Toluene	108-88-3	5-15	TWA: 100 ppm STEL: 150 ppm OSHA (PEL) TWA: 50 ppm ACGIH (TLV) STEL: 150 ppm NIOSH

Section 3. Hazards Identification

Physical State and Appearance
Liquid.
880 (red); 881 (natural)

Emergency Overview
DANGER!
EXTREMELY FLAMMABLE LIQUID AND VAPOR, VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF INHALED OR SWALLOWED. MAY CAUSE EYE, SKIN AND RESPIRARTORY TRACT IRRITATION.

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

Potential Acute Health Effects

Eyes May cause severe eye irritation.

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

Inhalation Harmful if inhaled. Inhalation of the vapors may cause dizziness, headache, nausea, anaesthetic effects, loss of consciousness and death. Central nervous system depression. Peripheral neuropathy (numbness in limbs).

Ingestion Not an expected route of entry. Irritating to mouth, throat and stomach. Ingestion may cause severe gastric disturbances.

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Potential Chronic Health Effects	The substance is toxic to kidneys, liver, lungs, the nervous system. Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation. Repeated or prolonged exposure to the substance can produce target organs damage. Chronic overexposure may cause arrythmias (heart beat irregularity) and peripheral nervous system effects. Prolonged skin contact may cause dermatitis with drying and cracking of skin.
Medical Conditions Aggravated by Overexposure:	No additional information.
Overexposure /Signs/Symptoms	Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening. Inhalation of vapors may cause dizziness, an irregular heartbeat, narcosis, nausea or asphyxiation.

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. Cold water may be used. Do not use an eye ointment. 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 225°C (437°F) (N-hexane).
Flash Points	CLOSED CUP: -6.1°C (21°F). (Pensky-Martens.)
Flammable Limits	LOWER: 2% UPPER: 13%
Products of Combustion	These products are carbon oxides (CO, CO2) and water.
Fire Hazards in Presence of Various Substances	Extremely flammable in presence of open flames and sparks, of heat. Flammable in presence of reducing materials. Slightly flammable to flammable in presence of oxidizing materials. Non-flammable in presence of moisture.
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: Not available. Slightly explosive in presence of oxidizing materials.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Protective Clothing (Fire)	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Special Remarks on Fire Hazards	Vapor may travel considerable distance to source of ignition and flash back. 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 I, Division 2]

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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.
Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Be careful that the product is not present at a concentration level above TLV.

Section 7. Handling and Storage

Handling

Avoid breathing vapors of this product. Use only with adequate ventilation. Avoid contact with skin and eyes. After handling, always wash hands thoroughly with soap and water. Avoid breathing vapors or spray mists. 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. When using do not eat, drink or smoke.

Storage

Keep container tightly closed in a cool, well-ventilated place. Flammable materials should be stored in a separate safety storage cabinet or room. Keep out of the reach of children. Take precautionary measures against static discharges

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 values. 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 protective clothing is required.

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
Acetone	TWA: 500 ppm STEL: 1000 ppm [1997] TWA: 750 ppm STEL: 1000 ppm CEIL: 1000 ppm ACGIH (TLV) [1989] TWA: 500 ppm DFG MAK TWA: 1000 ppm STEL: 1250 ppm [1989]
n-Hexane	TWA: 176 mg/m^3; 50 ppm ACGIH (TLV) TWA: 200 ppm DFG MAKs
Hexane isomers	TWA: 1760 mg/m^3 CEIL: 3500 mg/m^3 ACGIH (TLV) TWA: 500 ppm STEL: 1000 ppm ACGIH (TLV) TWA: 200 ppm DFG MAKs
Toluene	TWA: 100 ppm STEL: 150 ppm OSHA (PEL) TWA: 50 ppm ACGIH (TLV) STEL: 150 ppm NIOSH

Consult local authorities for acceptable exposure limits.

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Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid. 880 (red); 881 (natural)
Molecular Weight	Not applicable.
Molecular Formula	Not applicable.
Odor	Strong.
Taste	Not available.
Color	Red (880). Colorless to light yellow (881).
pH (1% Soln/Water)	Not available.
Boiling/Condensation Point	55.556°C (132°F)
Melting/Freezing Point	May start to solidify at -94.5°C (-138.1°F) based on data for: Toluene. Weighted average: -95.09°C (-139.2°F)
Critical Temperature	The lowest known value is 234.2°C (453.6°F) (N-hexane).
Specific Gravity	0.805 (Water = 1)
Vapor Pressure	185 mm of Hg (@ 20°C)
Vapor Density	The highest known value is 3.14 (Air = 1) (Toluene). Weighted average: 2.55 (Air = 1)
Volatility	75%
Odor Threshold	The highest known value is 13 ppm (Acetone) Weighted average: 10.64 ppm
Evaporation Rate	The highest known value is 7.7 (Acetone) Weighted average: 6.46 compared to Butyl acetate.
VOC	V.O.C. Content (less water and exempt compounds): 532 g/L; 4.44 lbs/gal. MAXIMUM VOC: 337 g/Liter (SCAQMD) VHAP CONTENT (for standard product): 0.51 lbs. VHAP/lbs. solid.
Viscosity	426 cps (Brookfield Viscometer) 22 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 oxidizing agents, reducing agents, acids, alkalis,
Hazardous Decomposition Products	Products of Combustion include: carbon oxides (CO, CO2)
Hazardous Polymerization	Will not occur.

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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): 12210 mg/kg [Rabbit]. (Toluene). Acute toxicity of the vapor (LC50): 7523.6 ppm 4 hour(s) [Mouse]. (Toluene).
Chronic Effects on Humans	**CARCINOGENIC EFFECTS**: Classified None. **MUTAGENIC EFFECTS**: Classified None. **TERATOGENIC EFFECTS**: Classified PROVEN for human [Toluene]. The substance is toxic to blood, kidneys, lungs, the nervous system, liver, upper respiratory tract, skin, respiratory tract, eyes, central nervous system (CNS). 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	Skin contact (irritant, permeator), eye contact (irritant).
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	No additional information.

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	No additional information.

Consult your local or regional authorities.

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Section 14. Transport Information

DOT Classification	DOT CLASS: Flammable liquid.  Adhesives, 3, UN1133, II
Marine Pollutant	Not a marine pollutant.
Special Provisions for Transport	1 Liter or less may use Limited Quantity exceptions (49CFR 173.150)
ADR/RID Classification	Class 3: Flammable liquid A.
IMO/IMDG Classification	IMDG CLASS 3: Flammable liquid.
ICAO/IATA Classification	IATA CLASS 3: Flammable liquid.

Section 15. Regulatory Information

HCS Classification	HCS CLASS: Flammable liquid IB having a flash point lower than 22.8°C (73°F) and a boiling point higher or equal to 37.8°C (100°F).
U.S. Federal Regulations	TSCA (Toxic Substance Control Act): All components of this product are listed on the TSCA Inventory. 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: N-hexane SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found. SARA 313 Toxic Chemical Notification and Release Reporting: Acetone; N-hexane; Toluene 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 RegulatedToxic Substances: No products were found.
International Regulations	
EINECS	Toluene (203-625-9) Acetone (200-662-2) n-Hexane and its isomers (203-777-6)
DSCL (EEC)	R11- Highly flammable. R36/38- Irritating to eyes and skin. R20- Harmful by inhalation. R51/53- Toxic to aquatic organisms. Contains substances which are dangerous for the aquatic environment. R67 Vapours may cause drowsiness and dizziness.
International Lists	Australia: Acetone; N-hexane; Toluene China: Acetone; Toluene Germany water class: N-hexane; Toluene VCI WGK: Toluene Korea (TCCL): Acetone
State Regulations	

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Connecticut carcinogen reporting list: Toluene
Pennsylvania RTK: Acetone; N-hexane; Toluene
Florida: Acetone; N-hexane; Toluene
Minnesota: Acetone; N-hexane; Toluene
Massachusetts RTK: Acetone; N-hexane; Toluene
New Jersey: Acetone; N-hexane; Toluene

California Prop. 65: This product contains the following ingredients which the State of California has found to cause reproductive harm, which would require a warning under the statute: Toluene

Section 16. Other Information

Label Requirements

EXTREMELY FLAMMABLE LIQUID AND VAPOR, VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF INHALED OR SWALLOWED. MAY CAUSE EYE, SKIN AND RESPIRARTORY TRACT IRRITATION.

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

Health	*	2
Fire Hazard		3
Reactivity		0
Personal Protection		C

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

References

-SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984.

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.

Validated by Wilsonart International Inc. on 06/05/2000.

Verified by Wilsonart International Inc..

Printed 06/05/2000.

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

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Notice to Reader

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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.