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Section 1: Identification

1.1 Product identifier:

Adwel® 1633

1.2 Recommended use:

Identified uses: Component in manufacture of adhesives for 3D lamination

Restrictions on use: Industrial uses only.

1.3 Supplier:

Wanhua Chemical (America) Co., Ltd.

3803 West Chester Pike, Suite 240

Newtown Square, PA 19073

Customer service telephone: 610-566-5297

www.whchem.com

Telephone in Canada: 613-796-1606

1.4 Emergency telephone number:

North America: Chemtrec 800-424-9300 (domestic)

+1-703-527-3887 (international, collect calls accepted)

Europe: +31 20 20 65132/65130 (08:30-17:30) +44 780 183 7343

Section 2: Hazard Identification

2.1 Classification:

Classified according to US Hazard Communication Standard (HCS 2012) and Canada Hazardous Products Regulations (WHMIS 2015).

Not classified in any hazard class.

2.2 Label elements:

Not applicable, not classified in any GHS hazard class.

2.3 Other hazards:

May cause eye irritation.

Section 3: Composition/Information on Ingredients

<u>Chemical Name</u>	<u>CAS RN®</u>	<u>Wt. %</u>	<u>GHS Classification</u>
Polyurethane resin	Not available	49 - 51	Not classified
Water	7723-18-5	49 - 51	Not classified
Acetone	67-64-1	< 1	Flam. Liq. 2; H225 Eye irrit. 2; H319 STOT SE 3; H336

Section 4: First-aid Measures

4.1 Description of first-aid measures:

Inhalation: Remove source of exposure or move to fresh air. Get medical advice if you feel unwell or are concerned.

Skin contact: Rinse with lukewarm, gently flowing water for 5 minutes. If skin irritation occurs get medical advice.

Eye contact: Rinse the contaminated eye(s) with lukewarm, gently flowing water for several minutes, while holding the eyelid(s) open. If eye irritation persists, get medical attention.

Ingestion: Call a Poison Centre or doctor if you feel unwell or are concerned.

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4.2 Most important symptoms and effects, both acute and delayed:

Inhalation: Symptoms of exposure to high concentrations of fumes from heating or spraying may include coughing, dry throat and irritation of the upper respiratory tract.

Skin contact: Prolonged or repeated skin contact may cause mild irritation.

Eye Contact: Direct contact with the liquid resin may cause mild, temporary eye irritation. Symptoms include redness, pain, tears.

Ingestion: Swallowing may cause nausea, vomiting and diarrhea.

4.3 Indication of any immediate medical attention and special treatment needed:

None known

Section 5: Fire-fighting Measures

5.1 Extinguishing media:

Water fog or fine spray, alcohol-resistant foam, carbon dioxide or dry chemical (BC powder).
Use water spray to cool fire-exposed containers.

Unsuitable extinguishing media: High pressure water streams may scatter hot molten polymer and spread the fire.

5.2 Special hazards arising from the chemical:

Product may burn if involved in a fire, once the water has evaporated.
Combustion products may include toxic carbon monoxide, hydrogen cyanide, nitrogen oxides and carbon dioxide.
If involved in a fire, closed containers may rupture.

5.3 Special protective equipment and precautions for firefighters:

As for any fire, evacuate the area and fight the fire from a safe distance. Firefighters must wear full protective equipment including self-contained breathing apparatus with chemical protection clothing when firefighters are exposed to decomposition products from this material.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate the area; keep all unprotected people away from the spill area. Ventilate the area.
Wear protective gloves or protective clothing and eye protection or face protection (See Section 8).
Ensure clean-up is conducted by trained personnel only.
Do not touch or walk through the spilled material. Spilled material may pose a slipping hazard.
Do not release to drains, risk of blockage from solidified polymer material.

6.2 Environmental precautions:

Avoid releases to the environment and prevent material from entering confined areas, domestic sewers, natural waterways, or storm water management systems.

6.3 Methods and material for containment and cleaning up:

Stop the spill if it is safe to do so. Contain the spill with earth, sand or other suitable non-combustible absorbent.
Clean up spills immediately.

Small spills: Cover spilled liquid with a non-combustible absorbent (eg. sand, diatomaceous earth, universal binding agent).
Scoop up spilled product and any contaminated absorbents into appropriate, labeled containers. Contaminated absorbent may pose the same hazards as the spilled product.

Large liquid spills: Pump spilled liquid into suitable containers.

Flush the area with water and collect wash-water for proper disposal.

6.4 Reference to other sections:

See Section 8 for information on selection of personal protective equipment.

See Section 13 for information on disposal of spilled product and contaminated absorbents.

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Section 7: Handling and Storage

7.1 Precautions for safe handling:

Wear eye protection, protective gloves, clothing and other equipment required for the workplace.
Wash hands and exposed skin thoroughly, immediately after exposure to product and at the end of the work-shift.
Do not breathe vapors, fumes or spray.
Do not eat, drink or smoke while handling this product.

7.2 Conditions for safe storage:

Store at temperatures between 5-35°C. Protect from freezing.
Storage below 5°C will cause product to solidify irreversibly.
Storage above 35°C may result in the formation of a non-redispersible polymer film.
Keep containers tightly closed when not in use.
Store in original container.
Store in a well-ventilated place protected from direct sunlight. Store away heat and ignition sources.

Section 8: Exposure Controls / Personal Protection

8.1 Control parameters:

Occupational Exposure Limits: Consult local authorities for acceptable exposure limits.

<u>Ingredient</u>	<u>ACGIH® TLV®</u>	<u>U.S. OSHA PEL</u>	<u>Other Exposure Limits</u>
Acetone	250 ppm 500 ppm STEL	750 ppm	NIOSH REL: 250 ppm (590 mg/m ³) NIOSH IDLH: 2500 ppm
Polyurethane resin	Not established	Not established	Not established

8.2 Exposure controls:

Exposure control measures: Facilities utilizing or storing this material should be equipped with good general ventilation or local exhaust ventilation, eyewash facilities and a safety shower. Local exhaust ventilation may be required for operations involving heating or spraying.

8.3 Individual protection measures:

Eye/Face protection: Wear safety glasses or chemical safety goggles. Wear a face-shield or full-face respirator when needed to prevent exposure to fumes.

Skin protection: Wear chemical protective gloves.

Wear clean, body-covering, protective coveralls to prevent skin exposure.

Resistance of specific materials can vary from product to product; evaluate resistance under conditions of use and maintain clothing carefully. Contact safety supplier for specifications.

Respiratory protection: If vapor or fume concentrations in air exceed any occupational exposure limits, then wear respiratory protection. Respiratory protection may be necessary if the product is heated to release fume or if a mist is created. If airborne fume or mist exposure is likely wear an approved, chemical cartridge respirator with cartridges to protect against organic vapor (e.g. NIOSH air-purifying respirator).

A respiratory protection program that meets the regulatory requirement, such as OSHA's 29 CFR 1910.134 or Canadian Standards Association (CSA) Standard Z94.4, must be followed whenever workplace conditions warrant a respirator's use.

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Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance:	Liquid. Translucent, white
Odor:	Not available. Faint odor of acetone.
Odor threshold:	Not available
pH:	6 - 9
Melting point/freezing point:	Not available
Initial boiling point and boiling range:	Not available
Flash point:	Not available
Evaporation rate:	Not available
Flammability:	Not available
Upper/lower flammability or explosive limits:	Not available
Evaporation rate:	Not available
Vapor pressure:	Not available
Vapor density:	Not available (air = 1)
Relative density:	1.04 – 1.09 @ 20°C (water = 1)
Solubility (ies):	Miscible in water
Partition coefficient (n-octanol/water):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	50 - 1500 mPa.s @ 25°C (dynamic)

Section 10: Stability and Reactivity

10.1 Reactivity:

Not reactive under recommended conditions of use.

10.2 Chemical stability:

Stable under recommended conditions of handling and storage.

10.3 Possibility of hazardous reactions:

Not available

10.4 Conditions to avoid:

Avoid high temperatures ($\geq 35^{\circ}\text{C}$) and freezing ($\leq 5^{\circ}\text{C}$).

10.5 Incompatible materials:

Not available

10.6 Hazardous decomposition products:

Thermal decomposition may produce irritating fumes and flammable gases.

Section 11: Toxicological Information

11.1 Information on toxicological effects:

Acute health hazards:

Inhalation: Data not available.

Skin: Data not available.

Ingestion: Data not available

Skin corrosion / irritation

Data not available

Serious eye damage / irritation

Data not available.

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11.1 Information on toxicological effects:

Acute Toxicity Data

<u>Ingredient</u>	<u>LD₅₀ Oral</u>	<u>LD₅₀ Dermal</u>	<u>LC₅₀ Inhalation 4-hour</u>
Polyurethane resin	>2000 mg/kg (rat)	>2000 mg/kg (rabbit)	Not available
Acetone	5800 mg/kg (rat, female)	>15800 mg/kg (rabbit)	30000 ppm (rat, male)

STOT (Specific Target Organ Toxicity) – Single exposure

Data not available. Fumes from thermal decomposition may cause irritation to the respiratory tract.

STOT (Specific Target Organ Toxicity) – Repeated exposure

Data not available.

Aspiration hazard

Data not available.

Sensitization - respiratory and/or skin

Not known to be a skin or respiratory sensitizer.

Carcinogenicity

No ingredients of this product have been evaluated for carcinogenicity by the International Agency for Research on Cancer (IARC), the American Conference of Governmental Industrial Hygienists (ACGIH®) or the US National Toxicology Program (NTP).

Reproductive toxicity

Data not available

Germ cell mutagenicity

Not known to be mutagenic.

Interactive effects

Data not available

Section 12: Ecological Information

12.1 Toxicity:

Data not available.

12.2 Persistence and degradability:

Data not available.

12.3 Bioaccumulative potential:

Data not available

12.4 Mobility in soil:

Data not available

Section 13: Disposal Considerations

13.1 Disposal methods:

Do NOT discard into any sewers, on the ground or into any body of water.

Store material for disposal as indicated in Section 7 Handling and Storage.

Dispose of waste in accordance with relevant national, regional and local environmental control provisions.

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Section 14: Transport Information

14.1 U.S. Hazardous Materials Regulation (DOT 49CFR):

Not regulated

14.2 Shipping name:

Not applicable

14.3 Transport hazard class(es):

Not applicable

14.4 Packing group:

Not applicable

14.5 Environmental hazards:

Not applicable

14.6 Special precautions for user:

Not available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not available

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**USA****TSCA Status:**

All component substances are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.

Canada**WHMIS 1988 Classification:**

Not controlled

NSNR Status:

All component substances are listed on the DSL or are not required to be listed.

European Inventories:

Not available.

International Inventories:**Australia:** Substances present on the Inventory of Chemical Substances (AICS).**China:** Substances present on the Chemical Inventory (IECSC).**European Union:** Not available**Japan:** Not available**Korea:** Substances present on the inventory - Existing and Evaluated Chemical Substances.**Mexico:** Not available**New Zealand:** Substances present on the Chemical Inventory (NZIoC).**Philippines:** Not available**Taiwan:** Substance present on the inventory (TCSI).

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Section 16: Other Information**Revision date:**

February 25, 2019

Revision summary:

Not applicable

References and sources for data:

CCOHS, Cheminfo
HSDB® Hazardous Substances Data Bank, US National Library of Medicine
NIOSH Pocket Guide to Chemical Hazards
RTECS, Registry of Toxic Effects of Chemical Substances

Legend to abbreviations:

ACGIH® – American Conference of Governmental Industrial Hygienists
GHS- Globally Harmonized System for Classification and Labeling.
LD50- Median lethal dose; the dose causing 50 % lethality
NIOSH-National Institute for Occupational Safety and Health
OSHA - Occupational Safety and Health Administration
TLV® - Threshold Limit Value
WHMIS – Workplace Hazardous Materials Information System.

Supplier Note:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.