# SAFETY DATA SHEET

## SECTION 1 — PRODUCT IDENTIFICATION

**Product identifier:** **VLR LETTER REMOVING SOLVENT**
**Product Number:** 1019 & 1020
**Intended Use:** Removal of heat applied materials from textiles.
**Manufacturer's name and address:** Refer to supplier
**Supplier name and address:**

***ALBATROSS USA INC./EXPERT WORLDWIDE***

36-41 36th Street
Long Island City, New York
United States
11106
718-392-6272

5439 San Fernando Road West
Los Angeles, California
United States
90039
818-543-5850

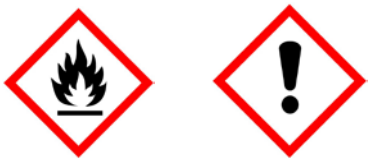
**Emergency Telephone #:** Chemtrec (Day or Night) 800-424-9300
(For Chemical Emergency: Spill, Leak, Fire, Exposure or Accident)

This MSDS complies with 29CFR 19190.1200 (Hazard Communication Standard) and WHMIS regulations.

IMPORTANT: Read this MSDS before handling and disposing of this product. Pass this information on to employees, customer, and users of this product.

## SECTION 2 — HAZARDS IDENTIFICATION

**GHS-US Classification**
**Flammable Liquids, Category 2, H225**
**Eye Irritation, Category 2A, H319**
For full text of the H-Statements mentioned in this Section, see Section 16.



**GHS Signal Word:** **Danger**
**GHS Hazard Phrases:** H225: Highly flammable liquid and vapour
H319: Causes serious eye irritation

**GHS Precaution Phrases:** P210 - Keep away from open flames, sparks, hot surfaces, heat. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P280 - Wear protective gloves, eye protection, protective clothing
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: Get medical advice/attention
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

**Other Hazards** No additional information available

**Unknown acute toxicity (GHS US)**
Not applicable

## SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

**Substances**
**Substance type**: Mono-constituent
**Name** : 1,3-dioxolane UP Lambiotte
**CAS N°** : 646-06-0

| Name | Product identifier | % | GHS-US classification |
|---|---|---|---|
| 1,3-dioxolane | (CAS N°) 646-06-0 | >= 99,96 | Flam. Liq. 2, H225<br>Eye Irrit. 2A, H319 |

Full text of H-statements: see section 16

**Mixture**
Not applicable

## SECTION 4 — FIRST AID MEASURES

**First-aid measures general:** Take victim to fresh air, in a quiet place and if necessary take medical advice.
**First-aid measures after inhalation:** Obtain medical attention if breathing difficulty persists.
**First-aid measures after skin contact:** Wash skin thoroughly with mild soap and water.
**First-aid measures after eye contact:** Obtain emergency medical attention if pain, blinking, tears or redness persist.
**First-aid measures after ingestion:** If a large quantity is swallowed, immediately administer lukewarm water (1/2 litre) only if victim is completely conscious/alert and induce vomiting.

## SECTION 5 —FIRE FIGHTING MEASURES

**Suitable extinguishing media**
**Suitable extinguishing media:** Foam. AFFF. Water spray.
**Unsuitable extinguishing media:** Do not use a heavy water stream. Dry powder.

**Special hazards arising from the substance or mixture**
**Fire hazard:** Highly flammable.
**Explosion hazard:** Not applicable.
**Reactivity:** Strong acids and oxidants.

**Advice for firefighters**

| | |
|---|---|
| **Precautionary measures fire:** | No naked flames, sparks, and do not smoke. |
| **Firefighting instructions:** | Do not enter fire area without proper protective equipment, including respiratory protection. |
| **Protection during firefighting:** | Use water spray or fog for cooling exposed containers. |
| **Other information:** | Exercise caution when fighting any chemical fire. |

## SECTION 6 — ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:**

| | |
|---|---|
| **General measures:** | No smoking. |

**For non-emergency personnel**

| | |
|---|---|
| **Protective equipment:** | Equip clean-up crew with proper protection. |
| **Emergency procedures:** | Keep public away. |

**For emergency responders**

No additional information available

**Environmental precautions**

Clean up any spills as soon as possible, using an absorbent material to collect it. Prevent entry to sewers and public waters.

**Methods and material for containment and cleaning up**

| | |
|---|---|
| **For containment:** | Use suitable disposal containers. |
| **Methods for cleaning up:** | Clean up any spills as soon as possible, using an absorbent material to collect it. |

**Reference to other sections**

No additional information available

## SECTION 7 — HANDLING & STORAGE

**Precautions for safe handling**

| | |
|---|---|
| **Additional hazards when processed:** | No open flames. No smoking. |
| **Precautions for safe handling:** | Ground well. Use special care to avoid static electric charges. |

**Conditions for safe storage, including any incompatibilities**

| | | |
|---|---|---|
| **Technical measures:** | | Provide local exhaust or general room ventilation to minimize mist and/or vapour concentrations. |
| **Storage conditions:** | | Keep container closed when not in use. |
| **Incompatible products** | **:** | Strong acids and oxidants. |
| **Incompatible materials** | **:** | Heat sources. |
| **Storage temperature** | **:** | -30 / 40 °C |

## SECTION 8 — EXPOSURE CONTROL/PERSONAL PROTECTION

**Control parameters**

| **1,3-dioxolane (646-06-0)** |
|---|
| Not applicable |

**Exposure controls**

**Materials for protective clothing:** Non-static creating clothing and conductive shoes should be worn.
**Hand protection:** In case of repeated or prolonged contact wear gloves.
**Eye protection:** Safety glasses.
**Skin and body protection:** Wear suitable protective clothing.

## SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Physical state:** | **Liquid** |
| **Appearance**: | Clear. |
| **Colour**: | Colourless |
| **Odour**: | characteristic |
| **Odour threshold**: | No data available |
| **pH**: | No data available |
| **pH solution**: | Not applicable |
| **Melting point**: | No data available |
| **Freezing point**: | - 95 °C |
| **Boiling point**: | 76 °C (OECD103) |
| **Flash point**: | <= 2,5 °C (ASTM D93) |
| **Relative evaporation rate (butylacetate=1)**: | 0,29 |
| **Flammability (solid, gas):** | No data available |
| **Explosive limits**: | No data available |
| **Explosive properties**: | No data available |
| **Oxidising properties**: | No data available |
| **Vapour pressure**: | 101 hPa (OECD104) |
| **Relative density**: | 1,06 |
| **Relative vapour density at 20 °C**: | No data available |
| **Density**: | 1,06 g/m³ (20°C) |
| **Molecular mass**: | 74,08 g/mol |
| **Solubility**: | Water: g/l completely soluble |
| **Log Pow**: | - 0,37 (20°C) |
| **Auto-ignition temperature**: | 250 °C (DIN51794) |
| **Decomposition temperature**: | No data available |
| **Viscosity**: | No data available |
| **Viscosity, kinematic**: | 9,43 mm²/s |
| **Viscosity, dynamic**: | < 10 mPa.s 20°C (OECD114) |

## SECTION 10 — STABILITY AND REACTIVITY

**Reactivity**

Strong acids and oxidants

**Chemical Stability**

Stable under normal conditions. Formaldehyde may be generated when material comes in contact with strong acid

**Possibility of hazardous reactions:**
May form flammable vapour-air mixture.
**Conditions to avoid:**
No flames, no sparks. Eliminate all sources of ignition. Overheating
**Incompatible materials:**
Strong acids and oxidants.
**Hazardous decomposition products**
Stable under normal conditions

## SECTION 11 — TOXICOLOGICAL INFORMATION

**Information on toxicological effects**
**Acute toxicity:** Not classified

| **1,3-Dioxolane Ultra Pure (646-06-0)** | |
|---|---|
| LD50 oral rat | >= 2000 mg/kg |
| **1,3-dioxolane (646-06-0)** | |
| LD50 oral rat | >= 2000 mg/kg |

**Skin corrosion/irritation:** Not classified
**Serious eye damage/irritation:** Causes serious eye irritation.
**Respiratory or skin sensitisation:** Not classified
**Germ cell mutagenicity:** Not classified
**Carcinogenicity:** Not classified

| **1,3-Dioxolane Ultra Pure (646-06-0)** | |
|---|---|
| NOAEL (chronic, oral, animal/male, 2 years) | 75 mg/kg bodyweight |
| **1,3-dioxolane (646-06-0)** | |
| NOAEL (chronic, oral, animal/male, 2 years) | 75 mg/kg bodyweight |

**Reproductive toxicity:** Not classified
**Specific target organ toxicity (single exposure):** Not classified
**Specific target organ toxicity (repeatedexposure):** Not classified
**Aspiration hazard:** Not classified

## SECTION 12 — ECOLOGICAL INFORMATION

**Toxicity**

| **1,3-Dioxolane Ultra Pure (646-06-0)** | |
|---|---|
| LC50 fish 1 | 95,4 mg/l |
| EC50 Daphnia 1 | 772 mg/l |
| ErC50 (algae) | 877 mg/l |
| NOEC chronic fish | 546,3 mg/l |
| NOEC chronic crustacea | 197,4 mg/l |
| NOEC chronic algae | 877 mg/l |
| **1,3-dioxolane (646-06-0)** | |
| LC50 fish 1 | 95,4 mg/l |
| EC50 Daphnia 1 | 772 mg/l |

| | |
|---|---|
| ErC50 (algae) | 877 mg/l |
| NOEC chronic fish | 546,3 mg/l |
| NOEC chronic crustacea | 197,4 mg/l |
| NOEC chronic algae | 877 mg/l |

**Persistence and degradability**

No additional information available

**Bioaccumulative potential:**

| **1,3-Dioxolane Ultra Pure (646-06-0)** | |
|---|---|
| Log Pow | - 0,37 (20°C) |
| **1,3-dioxolane (646-06-0)** | |
| Log Pow | - 0,37 (20°C) |

**Mobility in soil:**

No additional information available

**Other adverse effects:**

**Effect on the global warming:** No known ecological damage caused by this product.

## SECTION 13 — DISPOSAL CONSIDERATIONS

**Waste Disposal Method:**

**Regional legislation (waste):** Disposal must be done according to official regulations.

## SECTION 14 — TRANSPORT INFORMATION

**Department of Transportation (DOT)**
**In accordance with DOT**
**Transport document description:** UN1166 Dioxolane, 3, II
**UN-No.(DOT):** UN1166
**Proper Shipping Name (DOT):** Dioxolane
**Class (DOT):** 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
**Hazard labels (DOT):** 3 - Flammable liquid


**Packing group (DOT):** II - Medium Danger
**DOT Packaging Non Bulk (49 CFR 173.xxx):** 202
**DOT Packaging Bulk (49 CFR 173.xxx):** 242
**DOT Special Provisions (49 CFR 172.102):** IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / (1 + a

(tr - tf)) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling

**DOT Packaging Exceptions (49 CFR 173.xxx):** 150
**DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27):** 5 L
**DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75):** 60 L
**DOT Vessel Stowage Location:** B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded
**DOT Vessel Stowage Other:** 40 - Stow ‘‘clear of living quarters’’
**Emergency Response Guide (ERG) Number:** 127
**Other information:** No supplementary information available.

**TDG**
No additional information available

**Transport by sea**
**UN-No. (IMDG):** 1166
**Proper Shipping Name (IMDG):** DIOXOLANE
**Class (IMDG):** 3 - Flammable liquids
**Packing group (IMDG):** II - substances presenting medium danger
**EmS-No. (1):** F-E S-D

**Air transport**
**UN-No. (IATA):** 1166
**Proper Shipping Name (IATA):** Dioxolane
**Class (IATA):** 3 - Flammable Liquids
**Packing group (IATA):** II - Medium Danger

## SECTION 15 — REGULATORY INFORMATION

**US Federal Regulations**

| **1,3-Dioxolane Ultra Pure (646-06-0)** |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

| **1,3-dioxolane (646-06-0)** |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

**International regulations**

**Canada**

| **1,3-Dioxolane Ultra Pure (646-06-0)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

**EU-Regulations**

| 1,3-Dioxolane Ultra Pure (646-06-0) |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)- Directive 79/831/EEC, sixth Amendment of Directive 67/548/EEC (dangerous substances) |

**National Regulation**

| 1,3-Dioxolane Ultra Pure (646-06-0) |
|---|
| Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List)<br>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) |

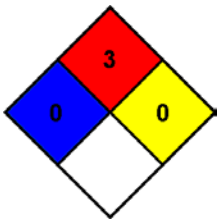
**US State Regulations**
No additional information available

## SECTION 16 — OTHER INFORMATION

**Revision date:** 08/07/2017
**Full text of H-statements:**

| | |
|---|---|
| H225 | Highly flammable liquid and vapour |
| H319 | Causes serious eye irritation |

**NFPA health hazard:** 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
**NFPA fire hazard:** 3 - Liquids and solids that can be ignited under almost all ambient conditions.
**NFPA reactivity:** 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.




SDS US (GHS HazCom 2012)

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