

# BODYFX

## MATERIAL SAFETY DATA SHEET

### SECTION 1 - IDENTIFICATION

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**PRODUCT DESIGNATION** – Isopropyl Alcohol 99%

**PRODUCT DESCRIPTION** – Rubbing Alcohol

**MANUFACTURED IN** - USA

**SUPPLIED BY** - BODYFX NEW ZEALAND LIMITED

607 New North Road, Morningside, Auckland, New Zealand 1021

**EMERGENCY TELEPHONE:** (0064) 21 430 045

**EMAIL ADDRESS:** shop@bodyfx.co.nz

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### SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

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**CAS NUMBER:** 67-63-0

**CHEMICAL NAME :** Isopropyl Alcohol

**CHEMICAL FORMULA** - C<sub>3</sub>H<sub>8</sub>O

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### SECTION 3 – HAZARD IDENTIFICATION

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OSHA Hazards: Flammable liquid, Target Organ Effect, Irritant Target Organs: Cardiovascular system, Gastrointestinal tract, Kidney, Liver, Nerves

**Hazard Statement(s) H225:** Highly flammable liquid and vapor. H319: Causes serious eye irritation. H336: May cause drowsiness or dizziness.

#### **Precautionary statements**

P261: Avoid breathing dust/fumes/gas/mist/vapors.

P312: Call a POISON CENTER or doctor/ physician if you feel unwell.

P501: Dispose of contents and container to an approved waste disposal plant.

P240: Ground/bond container and receiving equipment.

P321: Specific treatment (see First Aid Measures on this label).

P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
P210: Keep away from heat, sparks, open flames, and hot surfaces. No smoking.  
P233: Keep container tightly closed.  
P102: Keep out of reach of children.  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P235: Keep cool.  
P405: Store locked up.  
P243: Take precautionary measures against static discharge.  
P241: Use explosion-proof electrical, ventilating, and lighting equipment.  
P242: Use only non-sparking tools.  
P271: Use only outdoors or in a well-ventilated area.  
P264: Wash hands thoroughly after handling. P280: Wear protective gloves and eye and face protection

### **FIRST AID MEASURES:**

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

**Skin Contact:** Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

**Serious Inhalation:** Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

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### **SECTION 4 – FIRE-FIGHTING MEASURES**

#### **FIREFIGHTING MEDIA: HIGHLY FLAMMABLE**

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 399°C (750.2°F)

Flash Points: CLOSED CUP: 11.667°C (53°F) - 12.778 deg. C (55 deg. F) (TAG)

Flammable Limits: LOWER: 2% UPPER: 12.7%

Products of Combustion: These products are carbon oxides (CO, CO<sub>2</sub>).

**Fire Hazards in Presence of Various Substances:** Highly flammable in presence of open flames and sparks, of heat. Flammable in presence of oxidizing materials. Nonflammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence

of mechanical impact: Not available. Explosive in presence of open flames and sparks, of heat.

**Fire Fighting Media and Instructions:** Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

**Special Protective Equipment and Precautions for Firefighters:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

**Special Remarks on Fire Hazards:** Vapor may travel considerable distance to source of ignition and flash back. CAUTION: MAY BURN WITH NEAR INVISIBLE FLAME. Hydrogen peroxide sharply reduces the autoignition temperature of Isopropyl alcohol. After a delay, Isopropyl alcohol ignites on contact with dioxygenyl tetrafluoroborate, chromium trioxide, and potassium tert-butoxide. When heated to decomposition it emits acrid smoke and fumes.

**Special Remarks on Explosion Hazards:** Secondary alcohols are readily autooxidized in contact with oxygen or air, forming ketones and hydrogen peroxide. It can become potentially explosive. It reacts with oxygen to form dangerously unstable peroxides, which can concentrate and explode during distillation or evaporation. The presence of 2-butanone increases the reaction rate for peroxide formation. Explosive in the form of vapor when exposed to heat or flame. May form explosive mixtures with air. Isopropyl alcohol + phosgene forms isopropyl chloroformate and hydrogen chloride. In the presence of iron salts, thermal decomposition can occur, which in some cases can become explosive. A homogeneous mixture of concentrated peroxides + isopropyl alcohol are capable of detonation by shock or heat. Barium perchlorate + isopropyl alcohol gives the highly explosive alkyl perchlorates. It forms explosive mixtures with trinitormethane and hydrogen peroxide. It produces a violent explosive reaction when heated with aluminum isopropoxide + crotonaldehyde. Mixtures of isopropyl alcohol + nitroform are explosive.

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## SECTION 5 – ACCIDENTAL RELEASE MEASURES

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**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. **Large Spill:** Flammable liquid. Keep away from heat. 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.

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## SECTION 6 – HANDLING AND STORAGE

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**Precautions:** Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids.

**Storage:** Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

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## SECTION 7 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

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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: Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. /

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: TWA: 983 STEL: 1230 (mg/m<sup>3</sup>) [Australia] TWA: 200 STEL: 400 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 980 STEL: 1225 (mg/m<sup>3</sup>) from NIOSH TWA: 400 STEL: 500 (ppm) from NIOSH TWA: 400 STEL: 500 (ppm) [United Kingdom (UK)] TWA: 999 STEL: 1259 (mg/m<sup>3</sup>) [United Kingdom (UK)] TWA: 400 STEL: 500 (ppm) from OSHA (PEL) [United States] TWA: 980 STEL: 1225 (mg/m<sup>3</sup>) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

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## SECTION 8 – PHYSICAL AND CHEMICAL PROPERTIES

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**Appearance:** Clear Colorless

**Liquid Odor:** Odor resembling that of a mixture of ethanol and acetone.

**pH** (1% soln/water): Not available

**Boiling Point:** 82.5°C (180.5°F)

**Melting Point:** -88.5°C (-127.3°F)

**Critical Temperature:** 235°C (455°F)

**Specific Gravity:** 0.78505 (Water = 1)

**Vapor Pressure:** 4.4 kPa (@ 20°C)

**Vapor Density:** 2.07 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** 22 ppm (Sittig, 1991) 700 ppm for unadapted panelists (Verschuren, 1983).

**Water/Oil Dist. Coeff.:** The product is equally soluble in oil and water; log(oil/water) = 0.1

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## SECTION 9 – STABILITY AND REACTIVITY

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**Reactivity** There are no known reactivity hazards associated with this product.

**Chemical stability** Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

**Possibility of hazardous reactions** Possibility of hazardous reactions The following materials may react strongly with the product: Oxidising agents.

**Conditions to avoid** Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented.

**Incompatible materials** Materials to avoid Oxidising materials. Acids - oxidising.

**Hazardous decomposition** Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Ionicity (in Water): Not available.

**Dispersion Properties:** See solubility in water, methanol, diethyl ether, n-octanol, acetone.

**Solubility:** Easily soluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone. Insoluble in salt solution. Soluble in benzene. Miscible with most organic solvents including alcohol, ethyl alcohol, chloroform.

**Molecular Weight:** 60.1 g/mole

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## **SECTION 10 – TOXICOLOGICAL INFORMATION**

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals: WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 3600 mg/kg [Mouse]. Acute dermal toxicity (LD50): 12800 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 16000 8 hours [Rat].

Chronic Effects on Humans: CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Development toxin [POSSIBLE]. May cause damage to the following organs: kidneys, liver, skin, central nervous system (CNS).

Other Toxic Effects on Humans: Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer, permeator).

Special Remarks on Chronic Effects on Humans: May cause adverse reproductive/teratogenic effects (fertility, fetotoxicity, developmental abnormalities (developmental toxin)) based on animal studies. Detected in maternal milk in human. (Isopropyl alcohol)

Skin: May cause mild skin irritation, and sensitization. Eyes: Can cause eye irritation. Inhalation: Breathing in small amounts of this material during normal handling is not likely

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## **SECTION 11 – DISPOSAL CONSIDERATIONS**

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

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## **SECTION 12 – TRANSPORT INFORMATION**

**Proper shipping name : ADHESIVES CONTAINING FLAMMABLE LIQUID (isopropanol)**

UN No. (ADR/RID) 1133

UN No. (IMDG) 1133

UN No. (ICAO) 1133

Transport shipping hazard classes :

ADR/RID class 3

ADR/RID label 3

IMDG class 3

ICAO class/division 3

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## **SECTION 13 – REGULATORY INFORMATION**

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**Other Classifications: WHMIS (Canada): CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). DSCG (EEC): R10- Flammable. S25- Avoid contact with eyes. S36/37- Wear suitable protective clothing and gloves. S38- In case of insufficient ventilation, wear suitable respiratory equipment. Protective Equipment: Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.**

**REVISION DATE:** 27/03/20