



**Telephone:** (845) 365-8200 \* **Website:** www.dynarex.com  
**Toll Free:** (888) DYNAREX \* **Website:** www.thcnet.com  
**Fax:** (845) 365-8201

Dtd. 2011, Reviewed on 4/11/13

## Material Safety Data Sheet

### **1. Product and Company Identification**

Product/Trade Name: Electrode Skin Prep Pads  
Manufacturer's Name: Dynarex Corporation.  
Manufacturer's Address: 10 Glenshaw Street  
Orangeburg, NY 10941  
Emergency or Information Phone No.: 888-DYNAREX or 845-365-8200  
At other times, contact the local Poison Control Centre  
Chemical Name: Mixture

### **2. Composition/Information on Ingredients**

<b>Component Name</b>	<b>CAS#/Codes</b>	<b>Concentration</b>	<b>Risk Phrases</b>	<b>Safety Phrases</b>
Isopropyl alcohol	67-63-0	>60%	R11, R36, R67	S2, S16, S25, S26

The above ingredients are raw materials that undergo processing, dilution and absorption into a non-woven pad and enclosure in a pouch. Upon completion of the manufacturing process the material does not possess the occupational health risks associated with the exposure to undiluted isopropyl alcohol.

### **3. Hazards Identification**

#### **NFPA Ratings**

NFPA Code for Flammability - 3  
NFPA Code for Health - 1  
NFPA Code for Reactivity - 0  
NFPA Code for Special Hazards - None

#### **HMIS Ratings**

HMIS Code for Flammability - 3  
HMIS Code for Health - 1  
HMIS Code for Reactivity - 0  
HMIS Code for Personal Protection - See Section 8

#### **EU Main Hazards**

Highly flammable.  
Irritating to eyes.  
Vapors may cause drowsiness and dizziness

#### **Routes of Entry**



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- Absorption - Eye contact - Ingestion - Inhalation - Skin contact

#### **Carcinogenic Status**

Not considered carcinogenic by NTP, IARC, and OSHA.

#### **Target Organs**

- Central Nervous System - Skin - Eye - Liver – Respiratory System

#### **Health Effects - Eyes**

Liquid, mist or vapor will cause conjunctival irritation and possibly corneal damage.

#### **Health Effects - Skin**

Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis. Liquid may be absorbed through the skin but not in toxicologically significant amounts, unless the area of contact is large and exposure prolonged.

#### **Health Effects - Ingestion**

Swallowing may have the following effects:

- irritation of mouth, throat and digestive tract - central nervous system depression

A large dose may have the following effects:

- dizziness - drowsiness - headache - mental confusion - nerve damage leading to numbness and muscle weakness - fall of blood pressure - liver damage - lung damage

Health Effects - Inhalation

Exposure to vapor may have the following effects:

- irritation of nose, throat and respiratory tract - central nervous system depression

Exposure to vapor at high concentrations may have the following effects:

- dizziness - drowsiness - headache - mental confusion - lung damage - fall of blood pressure - liver damage - nerve damage leading to numbness and muscle weakness

## **4. First Aid Measures**

#### **Eyes:**

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

#### **Skin**

Immediately flood the skin with large quantities of water, preferably under a shower. Remove contaminated clothing and continue washing. Contaminated clothing should be washed or dry-cleaned before re-use. Obtain medical attention if blistering occurs or redness persists.

#### **Ingestion**

Do not induce vomiting. Have victim drink 1-3 glasses of water to dilute stomach contents. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

#### **Inhalation**

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

#### **Advice to Physicians**

Monitor for systemic secondary effects on liver and kidney; support and treat.



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## **5. Fire Fighting Measures**

### **Extinguishing Media**

Use foam, dry chemical or carbon dioxide. Be aware of the possibility of re-ignition. Keep containers and surroundings cool with water spray.

### **Unusual Fire and Explosion Hazards**

Vapors can travel a considerable distance to a source of ignition and flashback. Flashback can occur if air temperature exceeds flash point. Be aware of possibility of re-ignition.

### **Protective Equipment for Fire-Fighting**

Wear full protective clothing and self-contained breathing apparatus.

## **6. Accidental Release Measures**

Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Wear appropriate protective clothing. Eliminate all sources of ignition. Vapors can accumulate in low areas. Consider need for evacuation.

## **7. Handling and Storage**

Use in well ventilated area. Use local exhaust ventilation. Avoid inhaling vapour. Avoid contact with eyes, skin and clothing. Store away from sources of heat or ignition. Storage area should be: - cool - dry - well ventilated - away from incompatible materials.

## **8. Exposure Controls/Personal Protection**

### **Occupational Exposure Standards**

Exposure Limits are listed below, if they exist.

#### **Isopropyl alcohol**

UK EH40: OES 400ppm (980mg/m<sup>3</sup>) 8h TWA.

UK EH40: OES 500ppm (1225mg/m<sup>3</sup>) 15min TWA.

ACGIH: TLV 200ppm (980mg/m<sup>3</sup>) 8h TWA.

ACGIH: STEL 400ppm (1225mg/m<sup>3</sup>) 15min TWA.

OSHA: PEL 400ppm (980mg/m<sup>3</sup>) 8h TWA.

Can be absorbed through skin.

### **Engineering Control Measures**

Good general room ventilation is expected to be adequate to control airborne levels.

### **Respiratory Protection**

Respiratory protection if there is a risk of exposure to high vapor concentrations. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.



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### Hand Protection

Chemical resistant gloves

For isopropyl alcohol, gloves made of polyvinyl alcohol do not provide adequate protection.

### Eye Protection

Chemical goggles or safety glasses with side shields

### Body Protection

If there is danger of splashing, wear: - overall or apron

## 9. Physical and Chemical Properties

<b>Physical State</b>	Non-woven cloth saturated with liquid
<b>Color</b>	Clear
<b>Odor</b>	Alcoholic
<b>pH</b>	No data.
<b>Specific Gravity</b>	0.8405
<b>Boiling Range/Point</b>	80°C / 176°F
<b>Melting Point (°C/F)</b>	No data.
<b>Flash Point (PMCC)</b>	20°C / 68°F
<b>Vapor Pressure</b>	No data.
<b>Density</b>	No data.
<b>Solubility in Water</b>	Miscible
<b>Vapor Density (Air = 1)</b>	2.1
<b>Viscosity (cSt)</b>	2.9 cps at 2°C

## 10. Stability and Reactivity

### Stability

Stable under normal conditions.

### Conditions to Avoid

- Heat - High temperatures - Static discharge - Exposure to direct sunlight - Mechanical shock

### Materials to Avoid

- Strong oxidizing agents - Acids - Halogens - Aluminum - Acid anhydrides - Isopropyl alcohol may attack some forms of plastic, rubber and coatings

### Hazardous Polymerization

Will not occur.

### Hazardous Decomposition Products

- oxides of carbon

## 11. Toxicological Information



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### **Acute Toxicity**

Low order of acute toxicity predicted. Material may be harmful by skin absorption.

Isopropyl Alcohol: Oral LD50 (rat) 5045 mg/kg. Dermal LD50 (rabbit) 12800mg/kg. Inhalation LCLO (rat) 1600ppm 4h

### **Chronic Toxicity/Carcinogenicity**

This product is not expected to cause long term adverse health effects.

(Isopropyl Alcohol) IARC assessment: this product is not classifiable as to its carcinogenicity to humans (Group 3). Chronic/Subchronic studies resulted in adverse effects to: - liver - spleen - biochemical effects - brain tissue degeneration - changes in reflex behavior - sensory nerve damage

### **Genotoxicity**

This product is not expected to cause any mutagenic effects.

### **Reproductive/Developmental Toxicity**

This product is not expected to cause reproductive or developmental health effects.

(Isopropyl Alcohol) Experimental studies in animals have provided some evidence of embryo/fetotoxicity and birth defects only at doses producing marked maternal toxicity.

## **12. Ecological Information**

### **Mobility**

(Isopropyl Alcohol)

If released to soil, isopropyl alcohol is expected to have very high mobility.

### **Persistence/Degradability**

(Isopropyl Alcohol)

Isopropyl alcohol is readily degraded in aerobic aqueous systems.

### **Bio-accumulation**

(Isopropyl Alcohol)

An estimated BCF of 3 suggests the potential for bioconcentration in aquatic organisms is low.

### **Ecotoxicity**

(Isopropyl Alcohol)

Tests on the following species gave a 96h LC50 of 1150mg/litre: - brown shrimp

Tests on the following species gave a 96h LC50 of 6.12-9.64mg/litre: - fathead minnows

## **13. Disposal Considerations**

Dispose of in accordance with all applicable local and national regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near to the container. Do not incinerate closed containers. Empty containers may contain hazardous residues. Dispose of containers with care.

## **14. Transport Information**





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<b>DOT CFR 172.101 Data</b>	Not Regulated per 49 CFR 173.4 Small Quantity Exemption
<b>Proper Shipping Name</b>	None
<b>Class</b>	None
<b>UN Number</b>	None
<b>Packing Group</b>	None
<b>Classification for AIR Transport(IATA):</b>	Consult current IATA Regulations prior to shipping by air.

## 15. Regulatory Information

### EU Label Information

Classification and labeling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments.

### EU Hazard Symbol and Indication of Danger

F - Highly flammable

Xi - Irritant

### R phrases

R11 - Highly flammable.

R36 - Irritating to eyes.

R67 - Vapors may cause drowsiness and dizziness.

### S phrases

S2 - Keep out of reach of children.

S16 - Keep away from sources of ignition - No smoking.

S25 - Avoid contact with eyes.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### US REGULATIONS(Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

#### TSCA Listing

This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Inventory.

#### EINECS Listing

All ingredients in this product are listed on the European Inventory of Existing Commercial Chemical Substances (EINECS) or are exempt from listing.

#### DSL (Canadian) Listing

All ingredients in this product are listed on the Domestic Substance List (DSL).

#### MA Right To Know Law

All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at or above the de minimal concentration include: - Isopropyl Alcohol



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### **PA Right To Know Law**

This product contains the following chemicals found on the Pennsylvania Hazardous Substance List: - Isopropyl Alcohol

### **NJ Right To Know Law**

This product contains the following chemicals found on the NJ Right To Know Hazardous Substance List: - Isopropyl Alcohol

### **California Proposition 65**

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

### **SARA Title III Sect. 302 (EHS)**

This product does not contain any chemicals subject to SARA Title III Section 302.

### **SARA Title III Sect. 304**

This product does not contain any chemicals subject to SARA Title III Section 304.

### **SARA Title III Sect. 311/312 Categorization**

Immediate (Acute) Health Hazard  
Delayed (Chronic) Health Hazard  
Flammable

### **SARA Title III Sect. 313**

This product does not contain a chemical which is listed in Section 313 at or above the minimal concentrations.

## **16. Other Information**

### **Abbreviations**

N/A: Denotes no applicable information found or available  
CAS#: Chemical Abstracts Service Number  
ACGIH: American Conference of Governmental Industrial Hygienists  
OSHA: Occupational Safety and Health Administration  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
STEL: Short Term Exposure Limit  
NTP: National Toxicology Program  
IARC: International Agency for Research on Cancer  
EU: European Union  
R: Risk

### **Disclaimer:**

The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and Dynarex Corp.. assumes no legal responsibility or liability resulting from its use.

This MSDS has been compiled in accordance - EC Directive 91/155/EC - OSHA's Hazcom Standard (29 CFR 1910.1200)