



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

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

Component Name	CAS#/Codes	Concentration	Risk Phrases	Safety Phrases
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/m³) 8h TWA.

UK EH40: OES 500ppm (1225mg/m³) 15min TWA.

ACGIH: TLV 200ppm (980mg/m³) 8h TWA.

ACGIH: STEL 400ppm (1225mg/m³) 15min TWA.

OSHA: PEL 400ppm (980mg/m³) 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

Physical State	Non-woven cloth saturated with liquid
Color	Clear
Odor	Alcoholic
pH	No data.
Specific Gravity	0.8405
Boiling Range/Point	80°C / 176°F
Melting Point (°C/F)	No data.
Flash Point (PMCC)	20°C / 68°F
Vapor Pressure	No data.
Density	No data.
Solubility in Water	Miscible
Vapor Density (Air = 1)	2.1
Viscosity (cSt)	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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DOT CFR 172.101 Data	Not Regulated per 49 CFR 173.4 Small Quantity Exemption
Proper Shipping Name	None
Class	None
UN Number	None
Packing Group	None
Classification for AIR Transport(IATA):	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)