



**MSDS**

In accordance with NBR 14725:2014

## MATERIAL SAFETY DATA SHEET

Product: Extra Neutral Ethl Alcohol Organic Certified

Nº: 002

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1- IDENTIFICATION	
Product name (commercial name):	Extra Neutral Ethyl Alcohol Organic Certified
Recommended uses for the substance:	Industrial solvent, excipient, food/beverage
Company Name:	<b>Legado S.A. / Fairly Traded Organics LLC</b>
Address:	Petrossi 1145 e/ Coronel Franco y Colon Fernando de la Mora, Paraguay
Contact Phone Number:	+595 (21) 509 124
Emergency Phone Number:	+595981593679

2 – DANGER IDENTIFICATION	
Substance danger classification:	Inflammable Liquid – Category 2 Serious eye damage / eyes irritation – Category 2A
Classification system used:	Norma ABNT-NBR 14725 – Part 2:2009 Corrected Version 2:2010. Global Harmonized System of Classification and Label Chemical, UN.
Other hazards which don't result in classification:	The product doesn't present other hazards.
<b>GHS Label elements</b>	
Pictograms:	
Warning word:	DANGER
Hazardous statements:	H225 Highly flammable liquid and vapor H319 Causes serious eyes irritation
Precaution statements:	P210 Keep away from heat / sparks / open flames / hot surfaces. – Don't smoke. P233 Keep container tightly closed. P240 Ground the container vessel and the product receiver during transfers.



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	<p>P264 Wash the hands thoroughly after handling.</p> <p>P280 Wear protective gloves / protective clothing / eye protection / face protection</p> <p>P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.</p>
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### 3 - COMPOSITION AND INFORMATION ON INGREDIENTS

SUBSTANCE	
Chemical identity:	ETHANOL
Synonym:	Ethyl Alcohol, Hidroxide Ethyl
CAS Number:	64-17-5
Ingredients contributing to hazard:	None

### 4 - FIRST AID MEASURES

Inhalation:	<p>Remove person to fresh air and keep at rest in a position comfortable for breathing.</p> <p>If signs/symptoms continue, get medical attention. Take this MSDS.</p>
Skin:	<p>Wash exposed skin with sufficient amount of water for removal of material. Remove contaminated clothing and shoes. If skin irritation occurs: Get medical attention. Take this MSDS.</p>
Eyes:	<p>Rinse thoroughly with water for several minutes. In the case of use contact lenses, remove them, if it is easy and rinse again. If eye irritation persists: Get medical attention. Take this MSDS.</p>
Ingestion:	<p>Don't induce vomiting. Never give anything by mouth to an unconscious person. Wash the victim's mouth with plenty of water. If the victim doesn't feel well, contact a TOXICOLOGICAL INFORMATION CENTER or physician. Take this MSDS.</p>
Most important symptoms and effects, acute and delayed:	<p>It causes eye irritation with tearing and redness.</p>
Notes to physician:	<p>Avoid contact with this product while helping the victim. If necessary,</p>



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	symptomatic treatment must include, specially, support measures such as correction of electrolyte disturbances, metabolic and respiratory assistance. In case of contact with the skin, don't rub the affected area.
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**5 - FIRE FIGHTING MEASURES**

Extinguishing media:	<p><b>Appropriate:</b> Compatible with alcohol-resistant foam, water fog, dry chemical and carbon dioxide (CO<sub>2</sub>).</p> <p><b>Not recommended:</b> Water directly onto the burning liquid.</p>
Specific hazards of the substance or mixture:	<p>Very dangerous when exposed to excessive heat or other sources of ignition such as open flames, sparks or open flames from matches and cigarettes, welding operations, pilot-lamps and electric motors. It can accumulate static charge by flow or agitation. The vapors of heated liquid can be ignited by static discharge. Vapors may be heavier than air and tend to accumulate in low or confined areas like sewers and basements. Vapors can move for long distances causing retrogression of the flame or new fires both in open environments such as confined. Containers may explode if heated. The chemical combustion or from its container may form toxic and irritant gases like carbon monoxide and carbon dioxide.</p>
Protection measures team of fire-fighting:	<p>Respiratory protection equipment independent type (SCBA) with positive pressure and complete protective clothing. Containers and tanks involved in the fire should be cooled with water fog.</p>

**6 - ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions, protective equipment and emergency procedures</b>	
For staff that is not part of the emergency services:	<p>Isolate the leak ignition sources. Prevent sparks or flames. Don't smoke. Don't touch damaged containers or spilled material without the use of appropriate attire. Avoid exposure to the chemical. Stay out of low areas, with the wind from behind. Use personal protective equipment as described in Section 8.</p>
For staff as part of the emergency services:	<p>Use PPE complete with protection glasses, PVC or latex gloves, safety shoes and safety clothing waterproof to protect all the body against chemical. In case of large spills, where exposure is great, it is recommended to use respiratory protection mask with filter against</p>



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	organic vapors. Isolate the leakage from sources of ignition. Evacuate the area within a radius of at least 50 meters. Keep unauthorized persons away from the area. Stop leak if it can be done without risk.
Environmental precautions:	Prevent spilled material reaches waterways or sewage system.
Methods and materials for containment and cleaning up:	Use natural barriers or spill containment. Collect the product and put the material into suitable containers. Absorb remaining product with dry sand, land, vermiculite or other inert material. Place absorbed material in appropriate containers and remove them to a safe place. Use tools that don't cause sparks to collect absorbed material. For disposal, proceed according Section 13 of this MSDS.
Differences in the action of large and small leaks:	For small spills, wipe up with absorbent material. Collect material in suitable containers, open and clearly labeled. Wash the remaining amount of water. Large Spill: Confine the liquid into a dike away from the spill for subsequent proper disposal. Water fog may be used to reduce vapors, but this will not prevent ignition indoors.

### 7 - HANDLING AND STORAGE

#### Technical measures suitable for handling

Precautions for safe handling:	Handle in a well ventilated area or general ventilation system / local exhaust. Avoid formation of mists and vapors. Avoid inhaling the product in case of formation of vapors or mists. Avoid contact with incompatible materials. Use individual protection equipment as indicated in Section 8.
Hygiene measures:	Wash hands and face thoroughly after handling and before eating, drinking, smoking or going to the bathroom. Contaminated clothing should be changed and washed before reuse. Remove clothing and protective equipment before entering the contaminated feeding areas.
<b>Conditions for safe storage, including any incompatibility</b>	
Prevention of Fire and Explosion:	Keep away from heat, sparks, open flames and hot surfaces. Do not smoke. Keep container tightly closed. Ground the container vessel and the receiver of the product during shipment. Only use anti-sparking tools. Avoid the accumulation of electrostatic charges. Use electrical equipment, ventilation and lighting explosion proof.



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Appropriate conditions:	Store in a well ventilated place away from sunlight. Keep container closed. Keep stored at room temperature.
Materials for packaging:	<b>Recommended:</b> carbon steel, iron or copper, glass and plastic can be used in smaller packages. <b>Not recommended:</b> Aluminum. May attack some plastics, rubber and coatings.

### 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

#### Control parameters specific

Occupational Exposure Limits	Chemical name or technical name	TLV – STEL (ACGIH, 2014)	LT (NR-15, 1978)
		Ethanol	1000 ppm
Biological indicators:	Not established		
Other limits and values:	IDLH (NIOSH, 2010): 3300 ppm		
Engineering control measures:	Promote mechanical ventilation and direct exhaust system to the outside environment. These measures help to reduce the exposure to the chemical. Keep the atmospheric concentrations of the product constituents below the limits of occupational exposure indicated.		
<b>Personal protective measures</b>			
Eye / Face protection:	Goggles or face shield.		
Skin / Body Protection:	Protective gloves nitrile, neoprene or butyl rubber, safety shoes and safety clothing waterproof for all body protection.		
Respiratory Protection:	In cases where exposure is great, it is recommended to use respiratory protection mask with filter against organic vapors.		
Thermal Hazards:	There aren't thermal hazards.		

### 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color):	Liquid, colorless liquid
Odor:	Characteristic

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pH:	6 – 8
Freezing point:	- 114,3 °C
Initial boiling point and boiling range:	78,4 °C
Flash point	18°C (Closed cup)
Evaporation rate	44 mmHg a 20°C
Flammability (solid, gas)	Not Applicable
Upper / Lower flammability or explosive limits	High: 19,0% Low: 3,3%
Vapor pressure	40 mmHg at 19 °C
Vapor density	1,59 (air=1)
Relative density	0,8051 – 0,8085 at 20 °C
Solubility(ies)	Soluble in water, diethyl ether, chloroform, ketones and alcohols (most of organic solvents)
Partition coefficient n-octanol/water	Log Kow: -0,31
Auto-ignition temperature	363 °C
Decomposition temperature	Not Applicable
Viscosity	Not available

**10 - STABILITY AND REACTIVITY**

Stability and reactivity:	The product is stable under normal conditions of temperature and pressure.
Possibility of hazardous reactions:	Reacts violently with permanganic acid, Sulphuric Acid, Nitric Acid, Silver Nitrate, Phosphoric Oxide, Acetyl Bromide, Caustics, Aliphatic Amines and Isocyanates, releasing large amounts of heat. Risk of explosion in contact with strong oxidizing agents, calcium hypochlorite, acetic anhydride, acid salts, potassium dioxide, potassium permanganate, sodium, sodium peroxide, per chlorates, peracids,



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	mercury nitrate, hydrogen peroxide.
Conditions to avoid:	High temperatures. Sparks, heat, sunlight, ignition sources and incompatible materials.
Incompatible materials:	Permanganic acid, sulfuric acid, nitric acid, silver nitrate, phosphoric oxide, Ethyl bromide, aliphatic amines, isocyanates, strong oxidizing agents, calcium hypochlorite, acetic anhydride, acid salts, potassium dioxide, potassium permanganate, sodium, sodium peroxide, per chlorates, peracids, mercury nitrate, hydrogen peroxide.
Hazardous decomposition products:	Thermal decomposition may generate irritating and toxic gases as carbon monoxide and carbon dioxide.

**11 - TOXICOLOGICAL INFORMATION**

Acute toxicity:	Product not classified as acute toxic by oral, dermal and inhalation. DL <sub>50</sub> (oral, rats): 10470 mg/kg CL <sub>50</sub> (inhalation, rats, 4h): 124,7 mg/L DL <sub>50</sub> (dermal, rabbits): 20000 mg/kg
Corrosion / irritation skin:	It isn't expected that the product causes skin irritation.
Serious eye damage / irritation	Causes severe eye irritation with tearing and redness
Respiratory or skin sensitization:	It isn't expected that the product causes respiratory or skin sensitization.
Germ cell mutagenicity:	No classified as mutagenic. Occupationally acceptable ethanol concentrations don't produce mutagenic effects.
Carcinogenicity:	It isn't expected that the product presents carcinogenicity. Information related: -Ethanol (In the alcoholic beverage) Animal carcinogen confirmed with unknown relevance to humans. (Grupo A3 – ACGIH,2014).
Reproduction toxicity:	Not classified as toxic to reproduction. In the form of alcoholic beverage, it can damage fertility or the unborn child if swallowed. Studies have shown that ethanol can cause spontaneous abortions as well as birth defects and other development

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	problems.
Toxicity for specific target organs - single exposure:	It isn't expected that the product presents toxicity for specific target organs - single exposure.
Toxicity for specific target organs - repeated exposure:	Repeated exposure at high concentrations may affect the liver and nervous system.
Aspiration hazard:	It isn't expected that the product presents a danger by aspiration.

**12 - ECOLOGICAL INFORMATION****Environmental effects, behavior and impact of product**

Ecotoxicity:	The product isn't classified as toxic to the aquatic environment. CL <sub>50</sub> (fish, 96h): >100 mg/L CE <sub>50</sub> ( <i>Daphnia magna</i> s, 48h): > 100 mg/L
Persistence and degradability:	The product doesn't present persistence and it is considered readily degradable. Biodegradation rate: 89% in 14 days.
Bioaccumulative potential:	It presents low potential bioaccumulation in aquatic organisms. BCF: 3000 Log kow: -310
Mobility in soil	It is expected high mobility in soil
Other adverse effects:	There aren't known other environmental effects for this product.

**13- DESTINATION CONSIDERATIONS****Recommended methods for treatment and disposal applied to the product**

Product:	It must be disposed as hazardous waste in compliance with local regulations. The treatment and disposal should be evaluated specifically for each product. Federal, state and municipal laws should be consulted, among them: Law nº 12.305, August 2, 2010 (National Policy on Solid Waste).
Product residues:	Keep the product remains in its original packaging and properly closed. Disposal should be carried out as established for the product.



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Contaminated packaging:	Don't reuse empty containers. These may contain residues of the product and should be kept closed and sent for proper disposal as required for the product.
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<b>14 - TRANSPORT INFORMATION</b>	
<b>National and international regulations</b>	
<b>Land:</b>	Resolution nº 420, February 12, 2004, National Land Transportation Agency (ANTT) approves the Regulation of Land Transportation of Dangerous Products and its modifications.
UN Number:	1170
Appropriate name for shipment:	ETHANOL (ETHYL ALCOHOL)
Hazard Class or Subclass major risk:	3
Hazard Class or Subclass subsidiary risk:	NA
Risk Number:	33
Packing Group:	II
<b>Waterways:</b>	DPC – Department of Ports and Coasts (Transport in Brazilian waters ) Standards Maritime Authority (NORMAN) NORMAM 01/DPC: Vessels Employed in Navigation Open Sea. NORMAN 02/DPC: Vessels Employed in Inland Navigation. IMO – “ <i>International Maritime Organization</i> ” <i>International Maritime Dangerous Goods Code (IMDG Code)</i>
UN Number:	1170
Appropriate name for shipment:	ETHANOL (ETHYL ALCOHOL)
Hazard Class or Subclass major risk:	3
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EmS:	F-E, S-D
Danger to the environment:	The product isn't considered marine pollutant.
<b>Air transport:</b>	ANAC - National Agency of Civil Aviation - Resolution N° 129 December 8, 2009 RBAC N°175 – (Civil Aviation Brazilian Regulation) – Transport of Dangerous Goods in Civil Aircraft. IS N° 175-001 – <b>Supplementary Instruction – IS</b> ICAO – “ <i>International Civil Aviation Organization</i> ”– Doc 9284-NA/905 IATA – “ <i>International Air Transport Association</i> ” <i>Dangerous Goods Regulation (DGR)</i>
UN Number:	1170
Appropriate name for shipment:	ETHANOL (ETHYL ALCOHOL)
Hazard Class or Subclass major risk:	3
Hazard Class or Subclass subsidiary risk:	NA
Packing Group:	II

### 15 - REGULATORY INFORMATIONS

Regulations specific to the chemical:	Federal Decree n° 2.657, July, 3, 1998. ABNT-NBR 14725:2014. Ordinance n° 229, May, 24, 2011 – Changes to Regulatory Standard 26. Ordinance N° 1.274, August, 25, 2003: Product under the control and supervision of the Ministry of Justice - Federal Police Department - MJ / DPF, in the case of import, export and re-export, is essential DPF Prior Authorization for carrying out the operations.
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### 16- OTHER INFORMATIONS

#### **Important information, but not specifically described in the previous sections.**

This MSDS was elaborated based on current knowledge about the proper handling of the product and under normal conditions of use, in accordance with the application specified on the packaging.



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Any other use of the product involving its combination with other materials, as well as various forms of use from those indicated, are the user's responsibility. It cautions that the handling of any chemical substance requires the previous knowledge of its hazards for the user

The user company's product is responsible for promoting the training of its employees about the possible risks arising from exposure to chemical.

MSDS elaborated in December 2015

### **Legendas e abreviaturas:**

**ACGIH** – *American Conference of Governmental Industrial Hygienists*

**AIHA** – *American Industrial Hygiene Association*

**BCF** – *Bioconcentration Factor*

**BEI** – *Biological Exposure Index*

**CAS** – *Chemical Abstracts Service*

**C** – *Ceiling*

**CL<sub>50</sub>** – *Lethal concentration 50%*

**DL<sub>50</sub>** – *Lethal Dose50%*

**IARC** – *International Agency for Research on Cancer*

**IBMP** - *Maximum Permissible Biological Index*

**IDLH** - *Immediately Dangerous to Life or Health*

**ERPG** – *Emergency Response Planning Guidelines*

**LEI** – *Lower Explosive Limit*

**LES** – *Superior Explosive Limit*

**LT** – *Tolerance Limit*

**NIOSH** – *National Institute for Occupational Safety and Health*

**NR** – *Regulatory Norm*

**OSHA** – *Occupational Safety & Health Administration*

**PEL** – *Permissible Exposure Limit*

**REL** – *Recommended Exposure Limit*

**STEL** – *Short Term Exposure Limit*

**TLV** – *Threshold Limit Value*

**TWA** – *Time Weighted Average*

### **References:**

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIALS HYGIENISTS. TLVs® and BEIs®: *Based on the Documentation of the Threshold Limit Values (TLVs®) for Chemical Substances and Physical Agents & Biological Exposure Indices (BEIs®)*. Cincinnati-USA, 2014.



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