


SAFETY DATA SHEET

According to Regulation (EC) 453/2010 (REACH)

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<p>1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING</p> <table border="1"><tr><td>CAS-nr</td></tr><tr><td>64-17-5</td></tr><tr><td>EC-nr</td></tr><tr><td>200-578-6</td></tr><tr><td>Index-nr</td></tr><tr><td>603-002-00-5</td></tr></table>	CAS-nr	64-17-5	EC-nr	200-578-6	Index-nr	603-002-00-5	<p>Trade name: Hvenus Rye Whiskey 45,6±0,3% v/v Product Identifier: Ethanol in Water 45,6±0,3% v/v Chemical name: Ethanol, Ethyl alcohol, C₂H₅OH Product names: Hvenus Rye Whiskey, 45,6 vol% Intended usage: Flavoured/ natural alcohol for consumption as beverage. Company: Spirit of Hven Backafallsbyn AB Norrebrogsvägen 55 SE-260 13 Sankt Ibb, Sweden Phone: +46 418 449 999 E-mail: bm@hven.com Prepared by: Henric N Molin</p>
CAS-nr							
64-17-5							
EC-nr							
200-578-6							
Index-nr							
603-002-00-5							
<p>2. HAZARDS IDENTIFICATION</p>  <p>FLAMMABLE LIQUID GHS02</p>	<p>2.1 Classification of the substance or Mixture 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]: Flammable liquid and vapour(category 3), H226, GHS02</p> <p>2.2 Label elements: 2.2.1 Lable according to Regulation (EC) No 1272/2008 [CLP]: The product is classified and labelled according to the CLP regulation 2.2.2 Hazard pictogram: See left 2.2.3 Signal word Warning 2.2.2 Hazard statement: H226 Flammable liquid and vapour 2.2.2 Precautionary statements P280 Wear protective gloves/protective clothing/ eye protection/ face protection P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P241 Use explosion-proof electrical/ ventilation/ lightning/ equipment P240 Ground/ bond container and receiving equipment P303+P361 +P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P501 Dispose of contents/ container in accordance with local/ regional/ national/ international regulations</p> <p>2.3 Other Hazards: 2.3.1 Result of PBT and vPvB assessment PBT: Not applicable vPvB: Not applicable</p>						

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3. COMPOSITION / INFORMATION ON INGREDIENTS	Substance Name	C.A.S. No.	EINECS No.	Index-No. in CLP Annex IV	Classification	Concentration				
	Water	7732-18-5	231-791-2	-	Not Classified	54-55%				
	Ethanol	64-17-5	200-578-6	603-002-00-5	Not Classified	45-46%				
	Formula:		H ₂ O (water)		C ₂ H ₅ OH (ethanol)					
	Molecular Weight:		18,02 g/mol (water)		46,07 g/mol (ethanol)					
4. FIRST-AID MEASURES	<p>General: Never give anything by mouth to an unconscious person. Move out of dangerous area. When in doubt or when symptom(s) remains – seek medical advice.</p> <p>Inhalation: If irritation occurs, remove the person to fresh air and rest. If irritation remains seek medical advice.</p> <p>Contact with skin: Remove contaminated clothes. Wash with water make sure to lotion skin.</p> <p>Contact with eyes: Rinse with plenty of water and consult an ophthalmologist if condition not improves.</p> <p>Swallowing: If over consumption, drink plenty of water. Induce vomiting only upon the advice of a physician. If trouble remains seek medical advice</p>									
5. FIRE-FIGHTING MEASURES	<p>5.1 Extinguishing media</p> <p>Extinguishing media: Water Foam CO₂ Powder</p> <table border="1" data-bbox="833 1095 1444 1146"> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> </table> <p>Co-ordinate fire-fighting measures to the fire surroundings. Makes explosive mixtures with air, extremely flammable. May explode in a fire. Hazardous decomposition gases: Carbon monoxide(CO), Carbon dioxide(CO₂) Avoid inhalation of smoke.</p> <p>5.2 Special Hazards arising from substance or mixture, Hazardous combustion products: Formation of toxic gases is possible during heating or in case of fire</p> <p>5.3 Advice for firefighters, Special protective equipment for firefighters: Wear self-containing respiratory protective device</p>						X	X	X	X
X	X	X	X							
6. ACCIDENTAL RELEASE MEASURES	<p>Measures for personal safety: Provide ventilation. Shut off or remove all possible sources of ignition. Full protective clothing.</p> <p>Environmental measures: Do not discharge into the drains/surface waters/groundwater. No other environmental measures are necessary.</p> <p>Cleaning methods: Do not allow runoff to sewer. Use absorbent material (e.g. sand, silica gel, vermiculite, acid binder, universal binder etc.), take up mechanically and dispose of appropriately.</p>									

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<p>7. HANDLING AND STORAGE</p>	<p>Ensure adequate ventilation, do not breathe vapours. Follow advice against fire and explosion. Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Contact lenses are not recommended.</p> <p>May attack some plastics, rubber and coatings. Ground the container and transfer equipment to eliminate static electric sparks.</p> <p>Store in a cool, dry, well-ventilated place, protected from foreign odours. Keep separated from oxidizing substances, unsaturated oils, metal salts, and sources of direct heat or naked flames. Store dry in original packaging, shrink or stretch wrapped on pallets. Do not pile up. Pay attention to anti-explosion rules.</p> <p>Storage class (VCI): 3A</p> <p>Storing temperature: +1 - +25 degrees Celsius</p> <p>Storing Humidity: Below 80% Relative Humidity</p>																					
<p>8. EXPOSURE CONTROLS / PERSONAL PROTECTION</p>  <p>PROTECTIVE GLOVES</p>  <p>TIGHTLY SEALED GOGGLES</p>	<p>Exposure limit values (EH40)</p> <table border="1"><thead><tr><th>CAS Nr</th><th>Substance</th><th>ml/m³</th><th>mg/m³</th><th>F/ml</th><th>Category</th><th>Origin</th></tr></thead><tbody><tr><td>64-17-5</td><td>Ethanol</td><td>500</td><td>1000</td><td></td><td>TWA (8h)</td><td>WEL</td></tr><tr><td>64-17-5</td><td>Ethanol</td><td>1000</td><td>1920</td><td></td><td>STEL (15min)</td><td>WEL</td></tr></tbody></table> <p>Protection for respiratory tract: Use adequate protective respiratory equipment if necessary. Respiratory protection must be used if the general level exceeds the Occupational Exposure Level (OEL). Filter classification A.</p> <p>Protection for eyes: In general, safety goggles are recommended.</p> <p>Protection for skin: Use clothing that provides comprehensive protection to the skin.</p> <p>Protection for hands: Recommended. Following directive 89/686/EEC and EN374. Nitrile, butyl rubber, NBR</p>	CAS Nr	Substance	ml/m ³	mg/m ³	F/ml	Category	Origin	64-17-5	Ethanol	500	1000		TWA (8h)	WEL	64-17-5	Ethanol	1000	1920		STEL (15min)	WEL
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<p>9. PHYSICAL AND CHEMICAL PROPERTIES</p>	<p>Appearance: Liquid, Hygroscopic</p> <p>Colour: Light to dark brown/red</p> <p>Odour: Whiskey character with vanilla and smoke</p> <p>Molecular weight: 46,07</p> <p>Flashpoint: 24-33 °C</p> <p>Boiling Point: ~78 °C (100% v/v Ethanol)</p> <p>pH: Neutral (6,9)</p> <p>Solubility: Soluble in water and most organic solvents</p> <p>Hazard identification:</p> <p>Ignition temperature: 420-425°C</p> <p>Explosion limits: Lower: 3,5% v/v ; Upper: 19% v/v</p> <p>Vapour pressure: 5,9 kPa (20 °C, 100% v/v Ethanol)</p> <p>Density: 0,938 kg/dm³ (20 °C, 45,6% v/v Ethanol)</p>																					

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10. STABILITY AND REACTIVITY	<p><u>Stability:</u> Avoid heat, sparks and flames. Stable under normal conditions. Will not polymerize</p> <p><u>Conditions to avoid</u> Reacts strongly with alkali metals, alkaline earths, oxidising agents (such as perchlorates, CrO₃, halogen oxides, peroxy compounds, perchloric acid, non-metallic oxides, nitric acid, KMnO₄, salts of halogen, oxyacids), halogen-halogen compounds, alkali oxides, non-metallic halides, anhydrides/ sodium acetate/ acids, ethylene oxide, fluorine, hydrides, mercury compounds, silver compounds, chromyl chloride, UF₆; Capable of exploding with air in a vaporous/gaseous stat.</p> <p>Avoid oxidizing substances, unsaturated oils, metal salts.</p> <p>Hazardous decomposition products: Carbon dioxide and carbon monoxide.</p>																
11. TOXICOLOGICAL INFORMATION	<p><u>Health Warning:</u> When concentration is more than 50%, ethanol causes local mucosal lesions through dehydration and albumin precipitation. Absorption, which occurs swiftly from the gastrointestinal tract, causes euphoria, with subsequent dizziness, inebriation, paralysis, diminished reflex, excitability, cyanosis, narcosis and respiratory paralysis. Dangerous intolerance reactions and increased absorption occur through the simultaneous action of disulfiram, trichloroethylene, tetra-chloromethane, nitrobenzene, carbon disulfide, aniline, lime-nitrogen, arsenic, lead and mercury. CNS depressant. Repeated exposure may cause chronic eye irritation. Defatting, drying and cracking of skin. Mild dermatitis, allergic skin rash. Swallowing concentrated chemical may cause severe internal injury.</p> <p><u>Medical Symptoms:</u> Rhinitis (inflammation of the nasal mucous membranes). Upper respiratory irritation. Skin irritation. Nausea, vomiting.</p> <p><u>Medical Considerations:</u> Convulsive disorders, CNS problems.</p> <p><u>Toxic dose 1-LD50:</u></p> <table border="1" data-bbox="555 1218 1442 1357"><thead><tr><th>Exposure</th><th>Value/Unit</th><th>Specie</th><th>Exposure time</th></tr></thead><tbody><tr><td>Oral LD50</td><td>7060 mg/kg</td><td>Rat (ethanol)</td><td></td></tr><tr><td>Dermal LD50</td><td>>20000 mg/kg</td><td>Rabbit (ethanol)</td><td></td></tr><tr><td>Respiratory LC50</td><td>>8000 mg/kg</td><td>Rat (ethanol)</td><td>4h</td></tr></tbody></table> <p>(corresponds to approx. 1,9cl/kg 40% v/v, or 1,5litre for a 80kg person)</p>	Exposure	Value/Unit	Specie	Exposure time	Oral LD50	7060 mg/kg	Rat (ethanol)		Dermal LD50	>20000 mg/kg	Rabbit (ethanol)		Respiratory LC50	>8000 mg/kg	Rat (ethanol)	4h
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12. ECOLOGICAL INFORMATION	<p><u>Ethanol:</u> Fish LC50 (96h): 13480 mg/l P.promelas Daphnia magna EC50 (48h): 5400 mg/l Alge IC-50 (7d): 5000 ng/l Scenedesmus subspicatus Ethanol is biodegradable. No indication to bioaccumulation potential.</p> <p><u>Ethanol:</u> BOD₅/COD=0,4-0,8 BOD₁₀=65-74% of TbOD BCF:<10 Log P (o/w)<1</p>																
13. DISPOSAL CONSIDERATIONS	<p>Dispose of waste according to applicable local, state and federal regulations.</p> <p>Sweden: classified as hazardous waste (SFS 2001:1063)</p> <p>Waste group: 140105 (EWC)</p> <p>Recommended cleansing agents: Water, if necessary together with cleansing agents.</p>																

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<p>14. TRANSPORT INFORMATION</p> 	<p>14.1 UN-number 14.1.1 ADR, IMDG, IATA: UN1170 14.1.2 ADR: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) 14.1.3 IMDG: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) 14.1.4 IATA: ETHANOL SOLUTION 14.3 Transport hazard classes 14.3.1 ADR, IMDG, IATA: See left 14.3.2 Class 3 Flammable liquids 14.3.3 Label: 3 14.4 Packing group 14.4.1 ADR, IMDG, IATA: III 14.5 Environmental hazards: Not Applicable 14.6 Special precautions for user Warning: Flammable liquids Danger code (Kemler): 30 EMS Number: F-E, S-D 14.7 Transport in bulk according to Annex II of Marpol and the IBC code Not applicable Transport/ Additional information -ADR Limited quantities (LQ): 5L Transport category: 3 Tunnel restriction code: D/E</p>
<p>15. REGULATORY INFORMATION</p> <p>Persons under 18 years of age should not work with this product.</p>	<p>15.1 Safety, health and environmental regulations/legislation specific for the substances or mixtures Directive 2012/18/EU Named dangerous substances – Annex 1. None of the ingredients are listed. Seveso category: P5c FLAMMABLE LIQUIDS Regulation (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3</p>
<p>16. OTHER INFORMATION</p> <p>UPDATED TO COMPLY WITH REGULATION (EC) NO. 1907/2006</p>	<p>The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety of performance considerations may arise when using, handling and/or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. Spirit of Hven makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purpose or the consequences of such use, and shall not be liable for any damages or loss, howsoever arising, direct or otherwise.</p>

Date: November 23rd 2018

This Safety Data Sheet information replaces all previous ones, latest of: This computer generated Safety Data Sheet is valid without signature

Safety Data Sheet validated by: Master Distiller Henric N Molin
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