

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 07/21/2014 Version: 1.0

1.1. Product identifier Product form	
	: Substance
Trade name	. Substance : ISOPROPYL ALCOHOL HPLC BIOPLUS™
CAS No	: 67-63-0
Product code	: AB00640
Formula	: C3H8O
	substance or mixture and uses advised against
Jse of the substance/mixture	: Laboratory use/Manufacturing component/Research
Jse of the substance/mixture	: Disinfectant Solvent
1.3. Details of the supplier of the sa	afety data sheet
AmericanBio, Inc. 15 Erie Dr. Natick, MA 01760 - USA F 800.443.0600 - F 508.655.2754 nfo@americanbio.com - <u>www.americanbio</u>	. <u>.com</u>
1.4. Emergency telephone number	
Emergency number	: 855.835.2572 (U.S.) :: 760.602.8703 (Outside U.S.)
SECTION 2: Hazards identification	on
2.1. Classification of the substance	e or mixture
Classification (GHS-US)	
GHS-US labeling	
Hazard pictograms (GHS-US)	
iazaiu piciografiis (GNS-US)	GHS02 GHS07
	GHS02 GHS07 CHS02 GHS07
Signal word (GHS-US)	
Signal word (GHS-US)	: Danger

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2.3. Other hazards				
No additional information available				
2.4. Unknown acute toxicity (GHS-U	5)			
No data available				
SECTION 3: Composition/information	tion on ingre	dients		
3.1. Substance				
Name	Pr	oduct identifier	%	Classification (GHS-US)
ISOPROPYL ALCOHOL HPLC BIOPLUS™ (Main constituent)	(Ca	AS No) 67-63-0	100	Flam. Liq. 2, H225 STOT SE 3, H336
Full text of H-phrases: see section 16				
3.2. Mixture				
Not applicable				
SECTION 4: First aid measures				
I.1. Description of first aid measure First-aid measures general				ate airway and respiration. Respiratory
	laboured prevent a Keep wat Dependin anything	breathing: half-seated. Vie sphyxia/aspiration pneum ching the victim. Give psy g on the victim's conditior	ctim in shock: on his onia. Prevent cooling chological aid. Keep n: doctor/hospital. Ne	rform resuscitation. Victim conscious with back with legs slightly raised. Vomiting: g by covering the victim (no warming up). the victim calm, avoid physical strain. ver give alcohol to drink. Never give I unwell, seek medical advice (show the
irst-aid measures after inhalation	Remove		st in a position comfo	consult a doctor/medical service. ortable for breathing. Call a POISON
First-aid measures after skin contact	a doctor i	h water. Soap may be use f irritation persists. Rinse : ated clothing.	ed. Do not apply (che skin with water/show	mical) neutralizing agents. Take victim to er. Remove/Take off immediately all
First-aid measures after eye contact	ophthalm	nediately with plenty of wa ologist if irritation persists if pain, blinking or redness	. Rinse immediately	utralizing agents. Take victim to an with plenty of water. Obtain medical
First-aid measures after ingestion	vomiting. Consult a	Give activated charcoal. (doctor/medical service if Doctor: gastric lavage. Rir	Call Poison Information	ve lots of water to drink. Do not induce on Centre (www.big.be/antigif.htm). estion of large quantities: immediately to nduce vomiting. Obtain emergency
I.2. Most important symptoms and e	ffects, both acu	te and delayed		
Symptoms/injuries after inhalation		RE TO HIGH CONCENT		. Dry/sore throat. Central nervous system drowsiness or dizziness.
Symptoms/injuries after skin contact	: Dry skin.			
Symptoms/injuries after eye contact		of the eye tissue.		
symptoms/injuries after ingestion	Dilation o Disturbed	f the blood vessels. Low a	arterial pressure. Nau ances of consciousne	nervous system depression. Headache. Isea. Vomiting. Abdominal pain. Poss. FOLLOWING SYMPTOMS MAY ation.
Chronic symptoms		TINUOUS/REPEATED E> Skin rash/inflammation. In		T: Red skin. Dry skin. Itching. Cracking of
Indication of any immediate me	lical attention ar	nd special treatment nee	ded	
lo additional information available				
SECTION 5: Firefighting measure	S			
.1. Extinguishing media				
suitable extinguishing media		ray. Polyvalent foam. Alco		C powder. Carbon dioxide. Foam. Dry

suitable extinguishing media	:	Water spray. Polyvalent foam. Alcohol-resistant foam. BC powder. Carbon dioxide. Foam. Dry
		powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	:	Solid water jet ineffective as extinguishing medium. Do not use a heavy water stream.

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5.2.	Special hazards arising from the s	ubstance or mixture
Fire haz		: DIRECT FIRE HAZARD. Highly flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard. Highly flammable liquid and vapor.
Explosic	n hazard	: DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard". May form flammable/explosive vapor-air mixture.
Reactivi	ty	: Upon combustion: CO and CO2 are formed. Violent to explosive reaction with (strong) oxidizers. Prolonged storage/in large quantities: may form peroxides.
5.3.	Advice for firefighters	
Firefight	ing instructions	: Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection	on during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.
SECTI	ON 6: Accidental release mea	asures
6.1.	Personal precautions, protective e	quipment and emergency procedures
General	measures	: Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.
6.1.1.	For non-emergency personnel	
Protectiv	/e equipment	: Gloves. Protective goggles. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus. See "Material-Handling" to select protective clothing.
Emerge	ncy procedures	: Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes. Evacuate unnecessary personnel.
6.1.2.	For emergency responders	
Protectiv	ve equipment	: Equip cleanup crew with proper protection. Avoid breathing vapours/spray.
Emerge	ncy procedures	: Ventilate area.
6.2.	Environmental precautions	
Prevent	spreading in sewers. Prevent entry to s	sewers and public waters. Notify authorities if liquid enters sewers or public waters.
6.3.	Methods and material for containm	ent and cleaning up
	ainment	: Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.
Vethods	s for cleaning up	Take up liquid spill into absorbent material, e.g.: dry sand/earth/vermiculite or powdered limestone. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
	Reference to other sections	

See Heading 8. Exposure controls and personal protection.

SECTIO	N 7: Handling and storage		
7.1.	Precautions for safe handling		
Additional	hazards when processed	: Handle empty containers with care because residual vapors are flammable.	

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Precautions for safe handling	: Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Use only non-sparking tools. Avoid breathing vapours/spray. Use only outdoors or in a well-ventilated area.
7.2. Conditions for safe storage, inclu	ding any incompatibilities
Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/lighting equipment.
Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : Direct sunlight., Heat sources., Keep in fireproof place. Keep in fireproof place. Keep container tightly closed.
Incompatible products	: Strong bases. strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources.
Heat-ignition	: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage	: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases. amines. halogens.
Storage area	: Store in a cool area. Store in a dry area. Ventilation at floor level. Fireproof storeroom. Provide for an automatic sprinkler system. Provide for a tub to collect spills. Provide the tank with earthing. May be stored under nitrogen. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: closing. with pressure relief valve. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: stainless steel. monel steel. carbon steel. copper. nickel. bronze. glass. Teflon. polyethylene. polypropylene. zinc. MATERIAL TO AVOID: steel with rubber inner lining. aluminium.
7.3. Specific end use(s)	

No additional information available

SECTION 8: Exposure controls/personal protection			
8.1. Control parameters			
ISOPROPYL ALCOHOL HPLC BIOPLUS™ (67-63-0)			
USA ACGIH	ACGIH TWA (ppm)	200 ppm	
USA ACGIH ACGIH STEL (ppm) 200 ppm		200 ppm	

8.2.	Exposure controls	
Person	al protective equipment	: Avoid all unnecessary exposure.
Materia	als for protective clothing	: GIVE EXCELLENT RESISTANCE: butyl rubber. nitrile rubber. viton. polyethylene/ethylenevinylalcohol. GIVE GOOD RESISTANCE: neoprene. GIVE LESS RESISTANCE: PVC. neoprene/natural rubber. GIVE POOR RESISTANCE: natural rubber. polyethylene. PVA.
Hand p	protection	: Gloves. Wear protective gloves.
Eye pro	otection	: Safety glasses. Chemical goggles or safety glasses.
Skin ar	nd body protection	: Protective clothing.
Respira	atory protection	: Wear gas mask with filter type A if conc. in air > exposure limit. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
Other i	nformation	: When using, do not eat, drink or smoke.
SECT	ION 9: Physical and chemica	properties

hemical properties
: Liquid
: Liquid.
: 60.10 g/mol
: Colourless.
: Alcohol odour. Stuffy odour. Mild odour.

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Odor threshold	: 3 - 610 ppm 8 - 1499 mg/m ³
рН	: No data available
Relative evaporation rate (butyl acetate=1)	: 2.3
Relative evaporation rate (ether=1)	: 21
Melting point	: -88 °C
Freezing point	: No data available
Boiling point	: 82 °C
Flash point	: 12 °C
Critical temperature	: 235 °C
Self ignition temperature	: 399 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 44 hPa
Vapor pressure at 50 °C	: 229 hPa
Critical pressure	: 47600 hPa
Relative vapor density at 20 °C	: 2.1
Relative density	: 0.79
Relative density of saturated gas/air mixture	: 1.05
Density	: 785 kg/m³
Solubility	 Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in oils/fats. Soluble in chloroform. Water: Complete Ethanol: Complete Ether: Complete Acetone: soluble
Log Pow	: 0.05 (Experimental value)
Log Kow	: No data available
Viscosity, kinematic	: 2.5316 mm²/s (25 °C)
Viscosity, dynamic	: 0.0020 Pa.s (25 °C)
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 2 - 13 vol % 50 - 335 g/m³
9.2. Other information	
Minimum ignition energy	: 0.65 mJ
Specific conductivity	: 5.8 µS/m
Saturation concentration	: 106 g/m³
VOC content	: 100 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Volatile.

SECTION 10: Stability and reactivity

10.1. Reactivity

Upon combustion: CO and CO2 are formed. Violent to explosive reaction with (strong) oxidizers. Prolonged storage/in large quantities: may form peroxides.

10.2. Chemical stability

Stable under normal conditions. Not established. Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

strong acids. Strong bases.

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10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

: Not classified

Serious eye damage/irritation : Not classified Respiratory or skin sensitization : Not classified Gern cell mutagenicity : Not classified Carcinogenicity : Not classified IORC group : 3 - Not Classified Reproductive toxicity : Not classified Specific target organ toxicity (single exposure) : May cause drowsiness or diziness. Specific target organ toxicity (repeated : Not classified Specific target organ toxicity (repeated : Di yskin. Symptoms/injuries after secontact : Di yskin. Symptoms/injuries after secontact : Di yskin. Symptoms/injuries after ingestion : AFTER ASSORPTION OF HCH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood veselse. Specific target organ contact : Constitute and the reperature fail. Silowing respiration. Chronic symptoms ECCTION 12: ECOlogical information ECCOlogical information	ISOPROPYL ALCOHOL HPLC BIOPLUS™ (\f)67-63-0
LC50 inhalation rat (mg/l) 73 mg/4/h (Rat) Skin corresion/initiation : Not classified Respiratory or skin sensitization : Not classified Respiratory or skin sensitization : Not classified Carcinogenicity : Not classified ISOPROPYL ALCOHOL HPLC BIOPLUS** (67-63-0) : Not classified IARC group : Not classified Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness. Specific target organ toxicity (repeated : Not classified Parential Adverse human health effects and : Based on available data, the classification criteria are not met. Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing, Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after eve contact : Initiation of the eye lissue. Symptoms/injuries after ingestion : AFTER ABSOPTION OF HIGH QUANTITIES: Central nervous system depression. Disturbed more incolousness. FOLLOWING SYMPTOMS MAY APPERA LATER: Body temperature fail. Slowing respiraton. Chronic symptoms : On CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rashriftammation. Impaired memory. SECTION 12: Ecological information : Classification concerning the environment. not applicable. <t< td=""><td>LD50 oral rat</td><td></td></t<>	LD50 oral rat	
Skin corrosion/irritation : Not classified Serious eye damage/irritation : Not classified Serious eye damage/irritation : Not classified Germ cell mutagenicity : Not classified ISOPROPYL ALCOHOL HPLC BIOPLUS***(#7-63-0) : Not classified IARC group 3 - Not Classified : Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness. Specific target organ toxicity (repeated exposure) : Not classified Symptoms/injuries after inhalation :: EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after ingesion : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low afterial pressure. Nausea. Vorniing. Abdominal pain. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fail. Slowing respiration. Chronic symptoms : Classification concerning the environment: not applicable. Ecology - eneral : Classification concerning the environment: not applicable. Ecology - air : Classification concerning the environment: not applicable. Ecology - air	LD50 dermal rabbit	12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; 16.4; Rabbit)
Serious eye damage/irritation : Not classified Respiratory or skin sensitization : Not classified Gern cell mutagenicity : Not classified Carcinogenicity : Not classified IORC group : 3 - Not Classified Reproductive toxicity : Not classified Specific target organ toxicity (single exposure) : May cause drowsiness or diziness. Specific target organ toxicity (repeated : Not classified Specific target organ toxicity (repeated : Di yskin. Symptoms/injuries after secontact : Di yskin. Symptoms/injuries after secontact : Di yskin. Symptoms/injuries after ingestion : AFTER ASSORPTION OF HCH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood veselse. Specific target organ contact : Constitute and the reperature fail. Silowing respiration. Chronic symptoms ECCTION 12: ECOlogical information ECCOlogical information	LC50 inhalation rat (mg/l)	73 mg/l/4h (Rat)
Respiratory or skin sensitization I. Not classified Germ cell mutagenicity I. Not classified Carcinogenicity I. Not classified IARC group 3 - Not Classified Reproductive toxicity IN Not classified Specific target organ toxicity (single exposure) I. Not classified Specific target organ toxicity (repeated I. Not classified Specific target organ toxicity (repeated I. Not classified Potential Adverse human health effects and Based on available data, the classification criteria are not met. Symptoms/injuries after inhalation EXPOSURE TO HIGH CONCENTRATIONS: Coughing, Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after sin contact Dry skin. Symptoms/injuries after sin contact Dry skin. Symptoms/injuries after ingestion A FTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the biod vessels. Low anterial pressure. Natuse. Vomling. Aborninal pain. Disturbed molor response. Disturbarce and ronsclousness. FOLLOWING SYMPTONS MAY APPEAR LATER: Body temperature fail. Slowing expiration. Chronic symptoms C. Classification concerning the environment: not applicable. Chronic symptoms C. Classification concerning the environment: not applicable. Eco	Skin corrosion/irritation	: Not classified
Germ cell mutagenicity : Not classified Carcinogenicity : Not classified ISOPROPYL ALCOHOL HPLC BIOPLUS™ (67-63-0)	Serious eye damage/irritation	: Not classified
Carcinogenicity : Not classified INPROPYL ALCOHOL HPLC BIOPLUS TM (67-63-0) IARC group 3 - Not Classified Reproductive toxicity : Not classified Specific target organ toxicity (repeated : Not classified exposure) : Not classified Aspiration hazard : Not classified exposure) : Based on available data, the classification criteria are not met. symptoms : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after inhalation : EXPOSURE TO HIGH QUANTITIES: Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after skin contact : Dry skin. Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomting. Abdominal pain. Disturbances Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration. Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. skin rash/infammation. Impaired memory. SECTION 12: Ecological information : Classification concerning the environment: not applicable. Ecology - air : Clas	Respiratory or skin sensitization	: Not classified
ISOPROPY ALCOHOL HPLC BIOPLUS TM (67-63-0) IARC group 3 - Not classified Reproductive toxicity : Not classified Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness. Specific target organ toxicity (repeated exposure) : Not classified exposure) : Not classified Specific target organ toxicity (repeated exposure) : Not classified Aspiration hazard : Not classified Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing, Dry/sore throat, Central nervous system depression, Dizziness. Headache. Narcosis, May cause drowsiness or dizziness. Symptoms/injuries after skin contact : Dry skin. Symptoms/injuries after reye contact : Irritation of the eye tissue. Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the biod vessels. Low arterial pressure. Nausea. Vomiling. Abdominal pain. Disturbed more response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fail. Slowing respiration. Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. skin rash/inflammation. Impaired memory. SECTION 12: Ecological information : Classified as dangerous for the coone layer (Regulation (EC) No 1005/2009), Not included in the list of substances which may contribut	Germ cell mutagenicity	: Not classified
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Specific target organ toxicity (repeated szposure) : Not classified Aspiration hazard : Not classified Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing, Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after skin contact : Dry skin. Symptoms/injuries after eye contact : Irritation of the eye tissue. Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea, Vomiting, Abdominal pain. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration. Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory. SECTION 12: Ecological information : Classification concerning the environment: not applicable. Ecology - general : Classification concerning the environment: not applicable. Ecology - air : Classification concerning the environment: not applicable. Ecology - air : Ground water pollutant. Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (ABh) > 1000 mg/l). Not harmful to invertebra	Reproductive toxicity	Not classified
Specific target organ toxicity (repeated szposure) : Not classified Aspiration hazard : Not classified Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing, Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after skin contact : Dry skin. Symptoms/injuries after eye contact : Irritation of the eye tissue. Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea, Vomiting, Abdominal pain. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration. Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory. SECTION 12: Ecological information : Classification concerning the environment: not applicable. Ecology - general : Classification concerning the environment: not applicable. Ecology - air : Classification concerning the environment: not applicable. Ecology - air : Ground water pollutant. Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (ABh) > 1000 mg/l). Not harmful to invertebra	Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
skipration hazard : Not classified Aspiration hazard : Based on available data, the classification criteria are not met. symptoms : Based on available data, the classification criteria are not met. Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after eye contact : Irritation of the eye tissue. Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTTIES: Central nervous system depression. Headache. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fail. Slowing respiration. Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory. SECTION 12: Ecological information : Classification concerning the environment: not applicable. 12.1. Toxicity Ecology - air : Ont classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of substances which mary contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5. Ecology - water : Ground water pollutant. Not		
Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Symptoms : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. May cause drowsiness or dizziness. Symptoms/injuries after eye contact : Irritation of the eye tissue. Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration. Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory. SECTION 12: Ecological information : Classification concerning the environment: not applicable. Ecology - general : Classification concerning the environment: not applicable. Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 84/2/2006). TA-Luft Klasse 5.2.5.	Specific target organ toxicity (repeated exposure)	: Not classified
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Symptoms/injuries after eye contact : Initiation of the eye tissue. Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration. Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory. SECTION 12: Ecological information : Classification concerning the environment: not applicable. Ecology - general : Classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5. Ecology - water : Ground water pollutant. Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (48h) > 1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (48h) > 1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (56h) >1000 mg/l). Not harmful to any of the size bactor and the size bactor and theremorpha; Flow-through system) EC50 Daphnia 1 > 10000 mg/l (96 h; Rasbora heteromorpha; Flow-through system) EC50 Daphnia 1 > 10000 mg/l (96 h; Pimephales promelas; Lethal) EC50 Daphnia 1 > 10000 mg/l (96 h; Pimephales promelas; Growth rate)	Symptoms/injuries after inhalation	
Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration. Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory. SECTION 12: Ecological information : ON continuous/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory. SECTION 12: Ecological information : ON conscient the environment: not applicable. Ecology - general : Classification concerning the environment: not applicable. Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5. Ecology - water : Ground water pollutant. Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (48h) > 1000 mg/l). Not harmful to algae (EC50 (72h) >1000 mg/l). Inhibition of activated sludge. ISOPROPYL ALCOHOL HPLC BIOPLUS™ (67-63-0) : LC50 fish 1 4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system) : EC50 Daphnia 1 > 1000 mg/l (96 h; Rasbora heteromorpha; Flow-through system) : EC50 Daphnia 2 : EC50 Daphnia 2 : EC50 Daphnia 2 : EC50 Daphn	Symptoms/injuries after skin contact	: Dry skin.
Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration. Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory. SECTION 12: Ecological information : 12.1. Toxicity : Ecology - general : Classification concerning the environment: not applicable. Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5. Ecology - water : Ground water pollutant. Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (48h) > 1000 mg/l). Not harmful to algae (EC50 (72h) >1000 mg/l). Inhibition of activated sludge. ISOPROPYL ALCOHOL HPLC BIOPLUS TM (67-63-0) 4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system) LC50 fish 1 4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system) LC50 Tish 2 9640 mg/l (96 h; Pimephales promelas; Lethal) EC50 Daphnia 2 13299 mg/l (48 h; Daphnia magna) Threshold limit algae 1 > 1000 mg/l (72 h; Scenedesmus subspicatus; Growth rate)	Symptoms/injuries after eye contact	: Irritation of the eye tissue.
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EC50 Daphnia 1> 10000 mg/l (48 h; Daphnia magna)LC50 fish 29640 mg/l (96 h; Pimephales promelas; Lethal)EC50 Daphnia 213299 mg/l (48 h; Daphnia magna)Threshold limit algae 1> 1000 mg/l (72 h; Scenedesmus subspicatus; Growth rate)	ISOPROPYL ALCOHOL HPLC BIOPLUS™ (67	-63-0)
LC50 fish 29640 mg/l (96 h; Pimephales promelas; Lethal)EC50 Daphnia 213299 mg/l (48 h; Daphnia magna)Threshold limit algae 1> 1000 mg/l (72 h; Scenedesmus subspicatus; Growth rate)	LC50 fish 1	4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system)
EC50 Daphnia 213299 mg/l (48 h; Daphnia magna)Threshold limit algae 1> 1000 mg/l (72 h; Scenedesmus subspicatus; Growth rate)	EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna)
Threshold limit algae 1 > 1000 mg/l (72 h; Scenedesmus subspicatus; Growth rate)	LC50 fish 2	9640 mg/l (96 h; Pimephales promelas; Lethal)
	EC50 Daphnia 2	13299 mg/l (48 h; Daphnia magna)
Threshold limit algae 2 1800 mg/l (72 h; Algae; Cell numbers)	Threshold limit algae 2	1800 mg/l (72 h; Algae; Cell numbers)

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12.2. Persistence and degradability	
ISOPROPYL ALCOHOL HPLC BIOPLUS™ (67-63-0)
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available. Not established.
Biochemical oxygen demand (BOD)	1.19 g O ² /g substance
Chemical oxygen demand (COD)	2.23 g O ² /g substance
ThOD	2.40 g O ² /g substance
BOD (% of ThOD)	0.49 % ThOD
2.3. Bioaccumulative potential	
ISOPROPYL ALCOHOL HPLC BIOPLUS™ (
Log Pow	0.05 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4). Not established.
2.4. Mobility in soil	
ISOPROPYL ALCOHOL HPLC BIOPLUS™ (67-63-0)
Surface tension	0.021 N/m (25 °C)
2.5. Other adverse effects	
Other information	: Avoid release to the environment.
SECTION 13: Disposal consideration	ns
3.1. Waste treatment methods	
Vaste disposal recommendations	: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into surface water. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. Dispose in a safe manner in accordance with local/national regulations.
dditional information	 : LWCA (the Netherlands): KGA category 03. Hazardous waste according to Directive 2008/98/EC. Handle empty containers with care because residual vapors are flammable.
cology - waste materials	: Avoid release to the environment.
SECTION 14: Transport information	
n accordance with DOT	
	. UN1010 Jappropul cleaned 2, U
ransport document description	: UN1219 Isopropyl alcohol, 3, II
N-No.(DOT)	: 1219
OT NA no.	: UN1219
OT Proper Shipping Name	: Isopropyl alcohol
epartment of Transportation (DOT) Hazard lasses	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid
łazard labels (DOT) Packing group (DOT) DOT Special Provisions (49 CFR 172.102)	 : 3 - Flammable liquid : II - Medium Danger : II - Medium Danger : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal
Packing group (DOT) OOT Special Provisions (49 CFR 172.102)	 II - Medium Danger IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31H21). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal
Packing group (DOT)	 II - Medium Danger IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal

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according to Federal Register / Vol. 77, No. 58 / Monday, DOT Packaging Bulk (49 CFR 173.xxx)	: 242			
DOT Quantity Limitations Passenger aircraft/rail				
(49 CFR 173.27)				
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L			
DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.			
Additional information				
Other information	: No supplementary information available.			
ADR				
Transport document description	: UN 1219, 3, II, (D/E)			
Packing group (ADR)	: 11			
Class (ADR)	: 3 - Flammable liquid			
Hazard identification number (Kemler No.)	: 33			
Classification code (ADR)	: F1			
Danger labels (ADR)	: 3 - Flammable liquids			
Orange plates	³ 33 1219			
Tunnel restriction code	: D/E			
Transport by sea				
UN-No. (IMDG)	: 1219			
Class (IMDG)	: 3 - Flammable liquids			
EmS-No. (1)	: F-E			
EmS-No. (2)	: S-D			
Air transport				
UN-No.(IATA)	: 1219			
Class (IATA)	: 3 - Flammable Liquids			
Packing group (IATA)	: II - Medium Danger			
SECTION 15: Regulatory information	h an			
15.1. US Federal regulations				
ISOPROPYL ALCOHOL HPLC BIOPLUS™ (67-63-0)				
Listed on the United States TSCA (Toxic Substances Control Act) inventory				

Listed on SARA Section 313 (Specific toxic chemical listings)

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

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Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225 Eye Irrit. 2 H319 STOT SE 3 H336

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11 Xi; R36 R67 Full text of R-phrases: see section 16

15.2.2. National regulations

No additional information available

15.3. US State regulations		
ISOPROPYL ALCOHOL HPLC BIOPLUS™(67-63-0)		
State or local regulations	U.S New Jersey - Right to Know Hazardous Substance List	

SECTION 16: Other information

Other information

: None.

Full text of H-phrases: see section 16:

Flam. Liq. 2	Flammable liquids Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H336	May cause drowsiness or dizziness

NFPA health hazard	: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.	
NFPA fire hazard	: 3 - Liquids and solids that can be ignited under almost all ambient conditions.	
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.	

SDS US (GHS HazCom 2012)

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