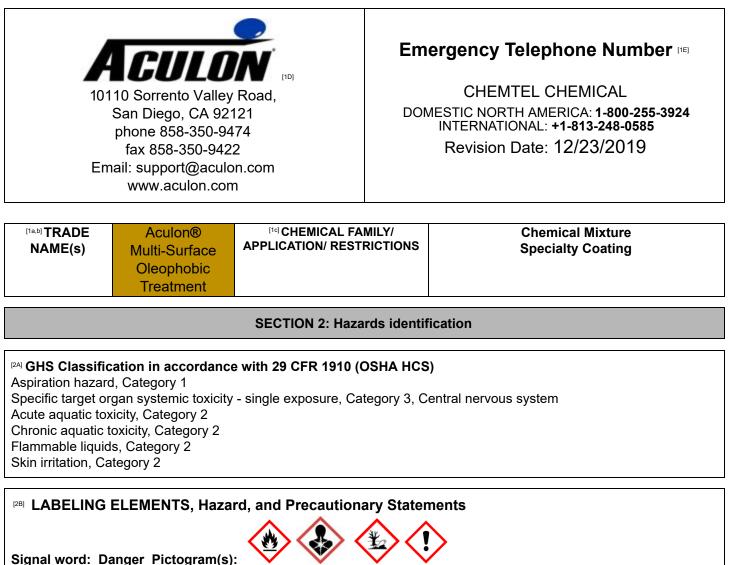
SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking



Hazard statement(s):

H225: Highly flammable liquid and vapor.

H304: May be fatal if swallowed and enters airways.

H315: Causes skin irritation.

H336: May cause drowsiness or dizziness.

H411: Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention:

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P243: Take precautionary measures against static discharge.

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P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection. **Response:**P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P331: Do NOT induce vomiting.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P391: Collect spillage.
Storage:
P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
Disposal:
P501: Dispose of contents/ container to an approved waste disposal plant.

^[2C]HAZARDS NOT OTHERWISE CLASSIFIED: none known

^[2D]INGREDIENTS OF UNKNOWN ACUTE TOXICITY >/= 1%:

SECTION 3: Composition/information on ingredients

	EINECS NO.	CONC.*
NA	none	< 1 %
NA	none	< 1 %
67-63-0	200-661-7	> 5 %
163702-08-7	422-270-2	> 45 %
70024-92-9	274-273-1	> 45 %
	NA NA 67-63-0 163702-08-7	NA none NA none 67-63-0 200-661-7 163702-08-7 422-270-2

* The specific chemical identity and/or percentage of this material has been withheld as a trade secret.

SECTION 4: First aid measures

	Consult a physician after significant exposure. If unconscious place in recovery position and seek
	medical advice.
[4a]SKIN CONTACT	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye
	wide open while rinsing. If eye irritation persists, consult a specialist.
[4a]INGESTION	Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms
	persist, call a physician. Take victim immediately to hospital.
^[4b] MOST	The most important known symptoms and effects are described in the labelling (see section 2) and/or
IMPORTANT	in section 11
SYMPTOMS &	
EFFECTS	
	no data available
ANY IMMEDIATE	
MEDICAL	
ATTENTION AND	
SPECIAL	
TREATMENT	
NEEDED	

SECTION 5: Firefighting measures

^[5a] SUITABLE/

EXTINGUISHING	Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. UNSUITABLE : High volume water jet.
(5b) SPECIFIC HAZARDS IE HAZARDOUS COMBUSTION PRODUCTS	Do not allow run-off from fire fighting to enter drains or water courses.
^[5c] PRECAUTIONS / SPECIAL PROTECTIVE EQUIPMENT	Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6: Accidental release measures

PRECAUTIONS,	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
MATERIALS OF	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7: Handling and storage

[7a] PRECAUTIONS	Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special
FOR SAFE	instructions before use. Avoid contact with skin and eyes. For personal protection see section 8.
HANDLING	Smoking, eating and drinking should be prohibited in the application area. Take precautionary
	measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms.
	Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with
	local and national regulations.
^[7b] CONDITIONS FOR	No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are
SAFE STORAGE	opened must be carefully resealed and kept upright to prevent leakage. Observe label
	precautions. Electrical installations / working materials must comply with the technological safety
	standards.

SECTION 8: Exposure controls/personal protection				
	PEL/ TWA/ STEL	CONTROL PARAMETERS	BASIS (ACGIH, OSHA ETC)	NOTES
Isoalkanes 7-8	TWA	300 ppm	ACGIH TLV	
Methyl nonafluoroisobutyl ether	TWA	750 ppm	ACGIH TLV	

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2-Propanol	STEL	500 ppm 1,250 mg/m3	UK. EH40 WEL - Workplace Exposure Limits	
	TWA	400 ppm 999 mg/m3	UK. EH40 WEL - Workplace Exposure Limits	
[8b] VENTILATION / ENGINEERING CONTROLS	Consider th activities, a selecting p adequate t listed below	he potential hazar and other substan ersonal protective o prevent exposu w is recommende ith the equipment	ds of this material (see Se ces in the workplace when e equipment. If engineering re to harmful levels of this d. The user should read an	below the exposure guidelines/limits. ction 2), applicable exposure limits, job designing engineering controls and g controls or work practices are not material, the personal protective equipment and understand all instructions and limitations provided for a limited time or under certain
[BC]RESPIRATORY PROTECTION	Circumstances. Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as:. Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical			
	breakthrou Eye wash	gh. bottle with pure w	ater. Tightly fitting safety go clothing to prevent skin ex	oggles.

SECTION 9: Physical and chemical properties

[9a]Appearance (physical state, color,	Liquid, Clear Colorless	[9]]Upper/lower flammability or	no data available
etc.		explosive limits:	
[9b] Odor	mild	[9k]Vapor pressure	No data available
[9c]Odor threshold	no data available	[9]]Vapor density	2(Air = 1.0)
Hq[b6]	not applicable	[9m]Relative Density	1.1 g/ml
[9e]]Melting point/freezing point	no data available	[9n]Solubility (in H₂O)	Negligible
Initial boiling point and boiling	no data available	[90] Partition coefficient:	No data available
range		n-octanol/water	
⊮gFlash point	-11 °C (12 °F)	[9p]Auto-ignition temperature	No data available
	Method: Tag closed cup		
[™]]Evaporation rate	no data available	[9q]Decomposition temperature	no data available
⊪Flammability (solid, gas)	no data available	[9r]Viscosity	no data available

SECTION 10: Stability and reactivity

	no data available				
[10b] CHEMICAL	This material is considered sta	This material is considered stable under normal ambient and anticipated storage and handling			
STABILITY	conditions of temperature and	pressure.			
	none known				
HAZARDOUS					
REACTIONS					
	Ignition sources, excess heat,	Ignition sources, excess heat, incompatible materials			
AVOID					
[10e] INCOMPATIBLE	May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.				
MATERIALS					
IN HAZARDOUS	Other decomposition products	-			
DECOMPOSITION	Hydrogen Fluoride	At Elevated Temperatures - extreme conditions of			
PRODUCTS		heat			
	Perfluoroisobutylene (PFIB)	At Elevated Temperatures - extreme conditions of			
		heat			
	Toxic Vapor, Gas, Particulate	At Elevated Temperatures - extreme conditions of			
		heat			
	Defects eachier 5.0 feets				
	Refer to section 5.2 for hazardous decomposition products during combustion.				
	If the product is exposed to extreme condition of heat from misuse or equipment failure, toxic				
	decomposition products that in	clude hydrogen fluoride and perfluoroisobutylene can occur.			

	SECTION 11: Toxicological information
OF EXPOSURE	INHALATION: is not expected if proper ventilation or personal protective equipment is used while working with this product
	INGESTION: Ingestion is not expected if proper industrial hygiene practices are followed, including no eating, drinking, or smoking while working with chemicals
	SKIN: is not expected if proper personal protective equipment (gloves and protective clothing) is used while working with this product
	EYE CONTACT: is not expected if proper personal protective equipment (safety glasses or goggles) is used while working with this product
	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
	INHALATION: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and
RELATED TO PHYSICAL,	vomiting. Concentrations substantially above the TLV value may cause narcotic effects. May be fatal if swallowed and enters airways. Substances known to cause human aspiration toxicity
	hazards or to be regarded as if they cause human aspiration toxicity hazard. Vapors from heated
	material may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
	INGESTION: May be fatal if swallowed and enters airways. Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.
	SKIN: irritating, Solvents may degrease the skin.

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	EYE CONTACT:Serious eye damage/eye irritation: Eyes - rabbit; Result: Eye irritation - 24 h .					
[11d] DELAYED /	Reproductive toxicity: no data available					
IMMEDIATE	Specific target organ toxicity - single exposure: Symptoms of overexposure may be headache,					
EFFECTS,	dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may					
CHRONIC EFFECTS	cause narcotic effects. Solvents may degrease the skin.					
FROM	Specific target organ toxicity - repeated exposure:					
SHORT/LONG	Isoalkanes 7-8 Species: rat, Application Route: Inhalation Dose: 0, 385, 1180 ppm,					
TERM EXPOSURE	Exposure time: 12 wk, Number of exposures: 6 hr/d, 5 d/wk NOEL: > 1180 ppm, Target					
	Organs: Kidney					
	Aspiration hazard: May be fatal if swallowed and enters airways.					
	Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause					
	human aspiration toxicity hazard.					
	Did not cause sensitization on laboratory animals					
	Did not cause sensitization on laboratory animals. Information given is based on data obtained from similar substances.					
	information given is based on data obtained nom similar substances.					
	Repeated dose toxicity: no data available					
	Repeated dose toxicity. No data available					
	ACUTE TOXICITY ESTIMATES:					
MEASURES OF	Isoalkanes 7-8					
TOXICITY	Acute toxicity					
	LD50: > 5.000 mg/kg, Species: rat					
	Method: OECD Test Guideline 401					
	Information given is based on data obtained from similar substances.					
	LC50 Inhalation - rat - 4 h - LC50: > 33.520 mg/l					
	Test atmosphere: dust/mist					
	Method: OECD Test Guideline 403					
	An LC50/inhalation/4h/rat could not be determined because no mortality of rats was					
	observed at the maximum achievable concentration. Information given is based on data					
	obtained from similar substances.					
	1050 Dormal rat 1050 ; > 2.000 mg/kg					
	LD50 Dermal - rat - LD50: > 2.000 mg/kg Species: rat					
	Method: OECD Test Guideline 402					
	Information given is based on data obtained from similar substances.					
	Methyl nonafluoroisobutyl ether					
	Acute toxicity					
	LC50 Inhalation - Rat - 4h - LC50 > 1,000 mg/l					
	LD50 Ingestion - Rat - LD50 > 5,000 mg/kg					
	2 Propanol:					
	Acute toxicity					
	LD50 Oral - rat - 5,045 mg/kg					
	Remarks: Behavioral:Altered sleep time (including change in righting reflex).					
	Behavioral:Somnolence (general depressed activity).					
	LC50 Inhalation - rat - 8 h - 16000 ppm					
	LD50 Dermal - rabbit - 12,800 mg/kg					
	SKIN CORROSION/IRRITATION					
	Skin - Rabbit					
	Result: Mild skin irritation					
	Serious eye damage/eye irritation					
	Eyes - Rabbit					
•	•					

	Result: Eye irritation - 24 h Respiratory or skin sensitization No data available Germ cell mutagenicity No data available
	This product is or contains a component that is not classifiable as to its carcinogenicity based on its
	IARC, ACGIH, NTP, or EPA classification.
	IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol)
ADDITIONAL	2-PROPANLOL:
INFORMATION	RTECS: NT8050000
	Central nervous system depression, prolonged or repeated exposure can cause:, Nausea,
	Headache,
	Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects., Aspiration
	may
	lead to:, Lung oedema, Pneumonia
	Kidney - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

Is	soalkanes 7-8
	soarkanes 7-o
	Toxicity to fish LC50 - LC50: 5.4 mg/l
	Exposure time: 96 h
	Species: Oncorhynchus mykiss (rainbow trout)
	Information given is based on data obtained from similar substances.
	Toxicity to daphnia and other aquatic invertebrates: EL50: 143 mg/l
	Exposure time: 48 h
	Species: Daphnia magna (Water flea)
	static test Method: OECD Test Guideline 202
	Toxicity to algae EC50 - EL50: 29.0 mg/l
	Exposure time: 72 h
	Species: Raphidocellus subcapitata (algae)
	Growth inhibition Method: OECD Test Guideline 201
2	Propanol:
	Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h other aquatic invertebrates
	Immobilization EC50 - Daphnia magna (Water flea) - 6,851 mg/l - 24 h
	Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72
	h EC50 - Algae - > 1,000.00 mg/l - 24 h
	n environmental hazard cannot be excluded in the event of unprofessional handling or disposal. oxic to aquatic life with long lasting effects.

Г

	Result: Not readily biodegradable. 22 % The Isoalkanes material is not expected to be readily biodegradable.
	No data available
E POTENTIAL	
[12d] MOBILITY IN SOIL	No data available
^[12e] OTHER ADVERSE	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate
EFFECTS (OZONE	ponds, waterways or ditches with chemical or used container. Send to a licensed waste
LAYER ETC.)	management company.

SECTION 13: Disposal considerations

^[13]Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations.
 Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated Packaging Disposal: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

^[14a] UN/NA	^[14b] UN/NA PROPER SHIPPING NAME	[14ca] TRANSPORT HAZARD CLASS	
UN 1993	Flammable Liquid, n.o.s. (hydrocarbon)	3	II

US DOT/IATA	UN1993, Flammable Liquid, n.o.s. (hydrocarbons), 3, II
	Marine Pollutant:UN1993, Flammable Liquid, n.o.s. (hydrocarbons), 3, II, MARINE
HAZARDS	POLLUTANT, (ISOPENTANE)
[147] BULK TRANSPORT	IMDG:UN1993, Flammable Liquid, n.o.s. (hydrocarbons), 3, II EMS-No: F-E, S-D
(MARPOL 73/78/IBC CODE)	
^[14g] SPECIAL PRECAUTIONS	none known

SECTION 15: Regulatory information

US

TSCA	On the inventory, or in compliance with the inventory	
OSHA	This document has been prepared in accordance with the SDS requirements	
	of the OSHA Hazard Communication Standard.	
SARA SECTION 302 EXTREMELY	No chemicals in this material are subject to the reporting requirements of	
HAZARDOUS SUBSTANCES	SARA Title III, Section 302.	
	2- Propanol, CAS# 67-63-0 Revision Date 1987-01-01	
levels established by SARA Title III, Section 313		

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Sara 311/312 Hazards	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
Massachusetts Right To Know Components	2- Propanol, CAS# 67-63-0 Revision Date 1987-01-01
Pennsylvania Right To Know	2- Propanol, CAS# 67-63-0 Revision Date 1987-01-01
Components	
New Jersey Right To Know Components	2- Propanol, CAS# 67-63-0 Revision Date 1987-01-01
California Prop. 65 Components	This product does not contain any chemicals known to State of California to
	cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

Revision Date: 12/23/2019 Updated Address 06/14/2018 Updated Emergency Contact and Trademarks 06/06/2018 Updated Emergency Contact 07/15/2015 version 1

Full text of H-Statements referred to under sections 2 and 3.

Aspiration hazard, Category 1 Specific target organ systemic toxicity - single exposure, Category 3, Central nervous system Acute aquatic toxicity, Category 2 Chronic aquatic toxicity, Category 2 Flammable liquids, Category 2 Skin irritation, Category 2

Hazard statement(s):

H225: Highly flammable liquid and vapor. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H336: May cause drowsiness or dizziness. H411: Toxic to aquatic life with long lasting effects.

HMIS Rating	NFPA Rating
Health hazard: 2	Health hazard: 2
Chronic Health Hazard: *	
Flammability: 3	Fire Hazard: 3
Physical Hazard 0	Reactivity Hazard: 0

INFORMATION CONTAINED IN THIS SAFETY DATA SHEET IS FOR USE BY TECHNICALLY QUALIFIED PERSONNEL AT THEIR DISCRETION AND RISK. ALL STATEMENTS, TECHNICAL INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED ON TESTS AND DATA WHICH WE BELIEVE TO BE RELIABLE, BUT THE ACCURACY OR COMPLETENESS THEREOF IS NOT GUARANTEED AND NO WARRANT OF ANY KIND IS MADE WITH RESPECT THERETO. SINCE THE COMPANY SHALL HAVE NO CONTROL OF THE USE OF THE PRODUCT DESCRIBED HEREIN, THE COMPANY ASSUMES NO LIABILITY OF LOSS OR DAMAGE INCURRED FROM THE PROPER OR IMPROPER USE OF SUCH PRODUCT.

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