

# SAFETY DATA SHEET

## M-LINE GC-6 Isopropyl Alcohol



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP)  
& 2020/878

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### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

<b>1.1 Product identifier</b>	
Product Name	M-LINE GC-6 Isopropyl Alcohol
Product Code	Not applicable
Unique Formula Identifier (UFI)	Not applicable
Nanoform	The product does not contain nanoparticles.
<b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b>	
Identified Use(s)	PC14 Metal surface treatment products, including galvanic and electroplating products
Uses Advised Against	None Known
<b>1.3 Details of the supplier of the safety data sheet</b>	
Company Identification	VISHAY MEASUREMENTS GROUP GMBH Tatschenweg 1 74078 Heilbronn Deutschland
Telephone	+49 (0) 7131 39099-0
Fax	+49 (0) 7131 39099-229
E-Mail (competent person)	mm.de@vpgsensors.com
<b>1.4 Emergency telephone number</b>	
Emergency Phone No.	(00-1) 703-527-3887
Languages spoken	CHEMTREC (24 hours) All official European languages.

### SECTION 2: HAZARDS IDENTIFICATION

<b>2.1 Classification of the substance or mixture</b>	
<b>2.1.1 Regulation (EC) No. 1272/2008 (CLP)</b>	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
<b>2.2 Label elements</b>	According to Regulation (EC) No. 1272/2008 (CLP)
Product Name	M-LINE GC-6 Isopropyl Alcohol
Hazard Pictogram(s)	 
Signal Word(s)	DANGER
Contains:	Propan-2-ol
Hazard Statement(s)	H225: Highly flammable liquid and vapour. H319: Causes serious eye irritation. H336: May cause drowsiness or dizziness.
Precautionary Statement(s)	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P235: Keep cool.

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P370+P378: In case of fire: Use dry powder to extinguish.  
P403+P235: Store in a well-ventilated place. Keep cool.  
P501: Dispose of contents in accordance with local, state or national legislation.

Supplemental information

None assigned

### 2.3 Other hazards

Vapours can form explosive mixtures with air.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances - Not applicable.

EC Classification Regulation (EC) No. 1272/2008 (CLP)

SUBSTANCE	CAS No.	EC No.	REACH Registration No.	%W/W
Propan-2-ol	67-63-0	200-661-7	Not yet assigned in the supply chain	≤100

### 3.2 Mixtures - Not applicable

Note: For full text of H phrases see section 16.

## SECTION 4: FIRST AID MEASURES



### 4.1 Description of first aid measures

Self-protection of the first aider

Avoid breathing mist/vapours/spray. Ensure adequate ventilation. Wear suitable protective clothing. Wear suitable respiratory protective equipment if exposure to high levels of material are likely. Avoid contact with skin. Contaminated clothing should be laundered before reuse. Do not use mouth-to-mouth resuscitation. Eyewash facilities should be stationed close to workplace where possible.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Skin Contact

Call a POISON CENTER/doctor if you feel unwell.

IF ON SKIN: Gently wash with plenty of soap and water. Remove contaminated clothing and wash clothing before reuse. If irritation (redness, rash, blistering) develops, get medical attention.

Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

IF SWALLOWED: Rinse mouth. Do not give anything by mouth to an unconscious person. Do NOT induce vomiting. If symptoms occur obtain medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye irritation. May cause drowsiness or dizziness.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Suitable Extinguishing media

As appropriate for surrounding fire. Extinguish preferably with foam, carbon dioxide or dry chemical.

Unsuitable extinguishing media

Do not use water jet. Direct water jet may spread the fire.

### 5.2 Special hazards arising from the substance or mixture

Flammable liquid and vapour. Vapours can form explosive mixtures with air. Containers may explode when involved in a fire. Keep container(s) exposed to fire cool, by spraying with water. Thermal decomposition will evolve toxic and corrosive vapours: Carbon dioxide, Carbon monoxide lammable liquid and

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### 5.3 Advice for fire-fighters

vapour. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. Sealed containers may rupture explosively if hot. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing mist/vapours/spray. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. See Section: 8. The vapour is heavier than air; beware of pits and confined spaces.

### 6.2 Environmental precautions

Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.

### 6.3 Methods and material for containment and cleaning up

Ensure suitable personal protection during removal of spillages. Use non-sparking equipment when picking up flammable spill. Adsorb spillages onto sand, earth or any suitable adsorbent material. Do NOT absorb in saw-dust or other combustible absorbents. Transfer to a lidded container for disposal or recovery. Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste. Allow small spillages to evaporate provided there is adequate ventilation.

#### Large spillages:

Evacuate the area and keep personnel upwind. Notify police and fire brigade as soon as possible.

### 6.4 Reference to other sections

See Section: 8, 13

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Ensure adequate ventilation. Avoid breathing mist/vapours/spray. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. See Section: 8. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Do not use sparking tools. Do not spray on an open flame or other ignition source. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Ground/bond container and receiving equipment.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from direct sunlight. Do not reuse empty containers.

Storage temperature

Store in a cool/low temperature. Keep at a temperature not exceeding (°C): 17.

Storage life

Stable under normal conditions.

Incompatible materials

Keep away from: Strong oxidising agents, Strong acids and alkali., Iron, Aluminium, Air, Halogens, Peroxides.

### 7.3 Specific end use(s)

See Section: 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### 8.1.1 Occupational Exposure Limits

Stoff	CAS Nr.	Arbeitsplatzgrenzwert		Spitzenbegr.	Bemerkungen	Änderung
		ml/m <sup>3</sup> (ppm)	mg/m <sup>3</sup>	Überschreitungsfaktor		Monat/ Jahr
Propan-2-ol	67-63-0	200	500	2(II)	DFG, Y	01/06

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### Quelle:

Die Technischen Regeln für Gefahrstoffe - Arbeitsplatzgrenzwerte (TRGS 900, Fassung 23.06.2022)

### Bemerkungen:

DFG = Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission).

Y= ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatz-grenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden (siehe Nummer 2.7)

**8.1.2 Biological limit value** Not established.

### 8.1.3 PNECs and DNELs

Propan-2-ol Derived No Effect Level	Oral	Inhalation	Dermal
Worker - Long Term - Systemic effects	-	500 mg/m <sup>3</sup>	888 mg/kg bw/day
Worker - Short Term (acute) - Systemic effects	-	1000 mg/m <sup>3</sup>	-
Consumer - Long Term - Systemic effects	26 mg/kg bw/day	89 mg/m <sup>3</sup>	319 mg/kg bw/day
Consumer - Short Term (acute) - Systemic effects	51 mg/kg bw/day	178 mg/m <sup>3</sup>	

Propan-2-ol Predicted No Effect Concentration	Value
Aquatic Compartment	PNEC Aqua (marine water) 140.9 mg/l PNEC Aqua (freshwater) 140.9 mg/l PNEC freshwater sediment 552 mg/kg dw PNEC marine sediment 552 mg/kg dw
Soil	PNEC 28 Soil mg/kg dw
STP (Sewage Treatment Plant)	PNEC STP 2251 mg/l
Hazard for predators (Secondary Poisoning)	PNEC Oral 160 mg/kg food

### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

Ensure adequate ventilation or use appropriate containment. Atmospheric levels should be controlled in compliance with the occupational exposure limit. Local exhaust recommended. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Eyewash facilities should be stationed close to workplace where possible.

#### 8.2.2 Individual protection measures, such as personal protective equipment (PPE)

Use personal protective equipment as required. Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Do not breathe vapour. Wash hands before breaks and after work. Do not eat, drink or smoke at the work place.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/ face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).

Skin protection



#### Hand protection:

Wear impervious gloves (EN374). Nitrile rubber, Butyl rubber. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Recommended: Nitrile rubber, Butyl rubber. Unsuitable gloves materials: Natural rubber / PVC.

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Respiratory protection



### Body protection:

Wear dustproof working clothes. Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Normally no personal respiratory protection is necessary. In case of inadequate ventilation wear respiratory protection. A suitable mask with filter type A (EN141 or EN405) may be appropriate.

Thermal hazards

Not applicable

### 8.2.3 Environmental exposure controls

Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Blue
Odour	Alcohol-like.
Melting point and freezing point	-88.5 °C
Boiling point or initial boiling point and boiling range	82 °C
Flammability	Highly flammable liquid and vapour.
Lower and upper explosion limit or lower and upper flammability limit	Upper explosion limit: 12.0 Vol% Lower explosion limit: 2.0 Vol%
Flash point	11.7 °C
Auto-ignition temperature	399 °C
Decomposition temperature	Not established.
pH	Not established.
Kinematic viscosity	Not established.
Solubility	Soluble in water.
Partition coefficient: n-octanol/water (log value)	Not established.
Vapour pressure	6.02 kPa @ 25 °C
Density and/or relative density	0.88 g/cm <sup>3</sup>
Relative vapour density	2.1 (Air = 1)
Particle characteristics	Not applicable - Liquid

### 9.2 Other information

Explosive properties	Not explosive. Vapours can form explosive mixtures with air.
Oxidising properties	Not oxidising.
Evaporation Rate	2.83 (BuAc = 1)
Viscosity	2.1 mPa · s @ 25 °C Dynamic viscosity

## SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under normal conditions. Hazardous polymerisation will not occur.
10.3 Possibility of hazardous reactions	Highly flammable liquid and vapour. Vapour is explosive in air at temperatures higher than the flash point. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback.
10.4 Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep from direct sunlight. Do not spray on an open flame or other ignition source. Take precautionary measures against static discharge.
10.5 Incompatible materials	Flammable liquid, Oxidizing agents, Corrosive Substances, Alcohols, Strong Acids and Alkalis.
10.6 Hazardous decomposition product(s)	Decomposes in a fire giving off toxic fumes: Carbon monoxide, Carbon dioxide.

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### SECTION 11: TOXICOLOGICAL INFORMATION

<b>11.1</b>	<b>Information on hazard classes as defined in Regulation (EC) No 1272/2008</b>	
	<b>Acute toxicity</b>	
	Ingestion	Based upon the available data, the classification criteria are not met. LD50 (oral, rat) mg/kg: 58400 (OECD 401)
	Inhalation	Based upon the available data, the classification criteria are not met. LC50 (inhalation, rat) mg/l/4h: 10000 (OECD 403)
	Skin Contact	Based upon the available data, the classification criteria are not met. LD50 (Dermal, (rabbit)) ml/kg bw 16.4 (OECD 402)
	<b>Skin corrosion/irritation</b>	Based upon the available data, the classification criteria are not met. Not irritating to skin (rabbit) ECHA registration dossier
	<b>Serious eye damage/irritation</b>	Eye Irrit. 2; Causes serious eye irritation. Irritating to eyes. (rabbit) (OECD 405) ECHA registration dossier
	<b>Respiratory or skin sensitization</b>	Based upon the available data, the classification criteria are not met. Skin sensitization: Sensitisation (guinea pig) - Negative (OECD 406) Respiratory sensitization: No data ECHA registration dossier
	<b>Germ cell mutagenicity</b>	Based upon the available data, the classification criteria are not met. In vitro: Negative (Chinese Hamster ovary) (OECD 476) In vivo: Negative (mouse) (OECD 474) ECHA registration dossier
	<b>Carcinogenicity</b>	Based upon the available data, the classification criteria are not met. NOEL 5000 ppm (OECD 451)
	<b>Reproductive toxicity</b>	Based upon the available data, the classification criteria are not met. Reproductive toxicity: NOAEL: 1000 mg/kg bw/day (OECD 416) Developmental toxicity: NOAEL: 596 mg/kg bw/day (OECD 414) ECHA registration dossier
	<b>STOT - single exposure</b>	STOT SE 3; May cause drowsiness or dizziness. Test Result: Higher concentrations can produce central nervous system depression, narcosis, and unconsciousness. (OECD 403) ECHA registration dossier
	<b>STOT - repeated exposure</b>	Based upon the available data, the classification criteria are not met.
	<b>Aspiration hazard</b>	Based upon the available data, the classification criteria are not met.
<b>11.2</b>	<b>Information on other hazards</b>	
<b>11.2.1</b>	Endocrine disrupting properties	This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.
<b>11.2.2</b>	Other information	None

### SECTION 12: ECOLOGICAL INFORMATION

<b>12.1</b>	<b>Toxicity</b>	Based upon the available data, the classification criteria are not met. Estimated Mixture LC50 >100 mg/l (Fish)
<b>12.2</b>	<b>Persistence and degradability</b>	Readily biodegradable (according to OECD criteria).
<b>12.3</b>	<b>Bioaccumulative potential</b>	The substance has low potential for bioaccumulation. Log Pow < 3.
<b>12.4</b>	<b>Mobility in soil</b>	The substance is predicted to have high mobility in soil. Water Soluble. Log Pow: < 3. Readily biodegradable.
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b>	Not classified as PBT or vPvB.
<b>12.6</b>	<b>Endocrine disrupting properties</b>	This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.
<b>12.7</b>	<b>Other adverse effects</b>	None known

### SECTION 13: DISPOSAL CONSIDERATIONS

<b>13.1</b>	<b>Waste treatment methods</b>	This material and its container must be disposed of as hazardous waste. Dispose of wastes in an approved waste disposal facility. Directive 2008/98/EC (Waste Framework Directive) HP3, HP4, HP5
<b>13.2</b>	<b>Additional Information</b>	Dispose of contents in accordance with local, state or national legislation.

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### SECTION 14: TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA/ICAO
14.1 UN number or ID number	UN 1219	UN 1219	UN 1219	UN 1219
14.2 UN proper shipping name	ISOPROPANOL (ISOPROPYL ALCOHOL)	ISOPROPANOL (ISOPROPYL ALCOHOL)	ISOPROPANOL (ISOPROPYL ALCOHOL)	ISOPROPANOL (ISOPROPYL ALCOHOL)
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	Not applicable	Not applicable	Not classified as a Marine Pollutant.	Not applicable
14.6 Special precautions for user	See Section: 2			
14.7 Maritime transport in bulk according to IMO instruments	Pollution category: Z			
14.8 Additional information	Recommended: Road/Rail/Sea transport only.			

### SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
15.1.1 EU regulations	
Use restriction according to REACH annex XVII, no.: Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]	Not restricted P5c
Restrictions of occupation:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work
To follow:	
15.1.2 National regulations	
Germany	
Technische Anleitung zur Reinhaltung der Luft (TA-Luft)	5.2.5 Organische Stoffe
Water hazard class (WGK)	Water hazard class: 1 (Self classification)
15.2 Chemical Safety Assessment	A REACH chemical safety assessment has not been carried out.

### SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New SDS Regulation 2020/878 format, all sections have been updated to include new information. Please review SDS with care.

#### References:

Existing Safety Data Sheet (SDS) and Existing ECHA registration(s) for Propan-2-ol (CAS No. 1330-20-7).

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)	Classification Procedure
Flam. Liq. 2; H225	Physical and chemical properties / Harmonised Classification
Eye Irrit. 2; H319	Harmonised Classification
STOT SE 3; H336	Harmonised Classification

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### LEGEND

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
BCF	Bioconcentration factor (BCF)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL	Derived no effect level
EU	European Union
EC	European Community
ECHA	European Chemicals Agency
EN	European Standard
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
LC50	Lethal concentration at which 50% of the population is killed
LD50	Lethal dose at which 50% of the population is killed
LTEL	Long term exposure limit
NOAEC	No observed adverse effect concentration
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time Weighted Average
STEL	Short term exposure limit
vPvB	very Persistent and very Bioaccumulative
UK	United Kingdom
UN	United Nations

### Hazard classification / Classification code:

Flam. Liq. 2; Flammable Liquid Category 2  
Eye Irrit. 2; Eye Irritation Category 2  
STOT SE 3; Specific target organ toxicity — single exposure Category 3

### Hazard Statement(s)

H225: Highly flammable liquid and vapour.  
H319: Causes serious eye irritation.  
H336: May cause drowsiness or dizziness.

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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