

SAFETY DATA SHEET

M-FLUX AR-2

www.vpgsensors.com



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

Date of issue: 06/12/2022
Date of First Issue: 15/09/2016
Version 2.0

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

1.1 Product identifier		
Product Name	M-FLUX AR-2	
Product Code	Not applicable	
Unique Formula Identifier (UFI)	Not applicable	
Nanoform	The product does not contain nanoparticles.	
1.2 Relevant identified uses of the substance or mixture and uses advised against		
Identified Use(s)	Soldering Flux. Welding and soldering products	
Uses Advised Against	Anything other than the above.	
1.3 Details of the supplier of the safety data sheet		
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	
1.4 Emergency telephone number		
National Poisons Information Service (United Kingdom)	+44 (0) 3448 920111	24 hr. emergency phone number Healthcare Professionals ONLY Members of Public CHEMTREC (24 hours)
NHS 24	111	
Emergency Phone No.	(00-1) 703-527-3887	
Languages spoken	All official European languages.	

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture		
2.1.1 Regulation (EC) No. 1272/2008 (CLP)	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	
2.2 Label elements		
Product Name	M-FLUX AR-2	
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.	

SAFETY DATA SHEET

M-FLUX AR-2

www.vpgsensors.com

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

Date of issue: 06/12/2022
Date of First Issue: 15/09/2016
Version 2.0

P233: Keep container tightly closed.
P235: Keep cool.
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.

3.2 Mixtures

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

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard classification
Propan-2-ol	>60 - <80	67-63-0	200-661-7	Not yet assigned in the supply chain	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
Benzyl alcohol	>1 - <10	100-51-6	202-859-9	Not yet assigned in the supply chain	Acute Tox. 4; H302 Eye Irrit. 2; H319 Acute Tox. 4; H332

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. Call a POISON CENTER/doctor if you feel unwell.

Skin Contact

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.

SAFETY DATA SHEET

M-FLUX AR-2

www.vpgsensors.com

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

Date of issue: 06/12/2022
Date of First Issue: 15/09/2016
Version 2.0

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** Highly 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 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.
- 5.3 Advice for fire-fighters** 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.

SAFETY DATA SHEET

M-FLUX AR-2

www.vpgsensors.com

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

Date of issue: 06/12/2022
Date of First Issue: 15/09/2016
Version 2.0

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

United Kingdom

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Propan-2-ol	67-63-0	400	999	500	1250	-

Source: UK WEL: Workplace Exposure Limit (UK HSE EH40)

Ireland

SUBSTANCE	CAS No.	Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
		ppm	mg/m ³	ppm	mg/m ³	
Propan-2-ol	67-63-0	200	-	400	-	Sk

Source: 2021 Code of Practice for Safety, Health and Welfare at Work (Chemical Agents) Regulation (2001 – 2021) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001 – 2019); Health and Safety Authority

8.1.2 Biological limit value

Not established.

8.1.3 PNECs and DNELs

Not established.

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)

General hygiene measures for the handling of chemicals are applicable. Avoid contact with skin, eyes or clothing. Avoid breathing mist/vapours/spray. Wash hands before breaks and after work. Keep work clothes separately. Contaminated clothing should be thoroughly cleaned. 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). Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Recommended: PVC / Nitrile rubber.

During full contact:

Protective index 6, corresponding > 480 minutes of permeation time according to EN 374.

Nitrile rubber (Minimum thickness: 0.33 mm)

Butyl rubber (Minimum thickness: 0.5 mm)

During splash contact:

SAFETY DATA SHEET

M-FLUX AR-2

www.vpgsensors.com

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

Date of issue: 06/12/2022
Date of First Issue: 15/09/2016
Version 2.0

At least protective index 5, corresponding > 240 minutes of permeation time according to EN 374

Polychloroprene - CR (Minimum thickness: 0.5 mm)

Unsuitable gloves materials:

Natural rubber/natural latex, Polyvinyl chloride - PVC.

Body protection:

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

Use only in well-ventilated areas. In case of inadequate ventilation wear respiratory protection. A suitable mask with filter type A (EN141 or EN405) may be appropriate.

High concentrations: Wear suitable respiratory equipment. Recommended: Self-contained breathing apparatus (DIN EN 137)

Not applicable

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

Respiratory protection



Thermal hazards

8.2.3 Environmental exposure controls

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Amber
Odour	Alcohol-like.
Melting point and freezing point	Not established.
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	18 °C
Auto-ignition temperature	425 °C
Decomposition temperature	Not established.
pH	Not established.
Kinematic viscosity	Not established.
Solubility	Partly soluble in water.
Partition coefficient: n-octanol/water (log value)	Not established.
Vapour pressure	43 hPa
Density and/or relative density	0.88 g/cm ³
Relative vapour density	Not established.
Particle characteristics	Not applicable - Liquid

9.2 Other information

Explosive properties	Not explosive. Vapours can form explosive mixtures with air.
Oxidising properties	Not established.

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.

SAFETY DATA SHEET

M-FLUX AR-2

www.vpgsensors.com

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

Date of issue: 06/12/2022
Date of First Issue: 15/09/2016
Version 2.0

10.3	Possibility of hazardous reactions	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	Strong oxidising agents, Strong acids and alkali., Iron, Aluminium, Air, Halogens, Peroxides.
10.6	Hazardous decomposition product(s)	Highly flammable liquid and vapour. May decompose in a fire giving off toxic fumes. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. In confined spaces, sewers, etc., the vapours may collect to form explosive mixtures with air. When heated to soldering temperatures, the solvents are evaporated and rosin may be thermally degraded. Decomposition products: Carbon monoxide, Carbon dioxide, aliphatic aldehydes, aromatic aldehydes, acids and terpenes.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	Information on hazard classes as defined in Regulation (EC) No 1272/2008	
	Acute toxicity	
	Ingestion	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated Estimated LD50 > 2000 mg/kg bw/day
	Inhalation	Acute Toxicity Estimate Mixture Calculation: LC50 >5 mg/l (Dust/Mist)
	Skin Contact	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LD50 > 2000 mg/kg bw/day
	Skin corrosion/irritation	Based upon the available data, the classification criteria are not met.
	Serious eye damage/irritation	Mixture: Eye Irrit. 2; H319: Causes serious eye irritation.
	Propan-2-ol	Eye Irrit. 2; Causes serious eye irritation. Test Result: Irritating to eyes. (OECD 405) Harmonised Classification/ ECHA registration dossier
	Benzyl alcohol	Eye Irrit. 2; Causes serious eye irritation. Test Result: Irritating to eyes. (OECD 405) Harmonised Classification/ ECHA registration dossier
	Respiratory or skin sensitization	Mixture: Based upon the available data, the classification criteria are not met.
	Germ cell mutagenicity	Mixture: Based upon the available data, the classification criteria are not met.
	Carcinogenicity	Mixture: Based upon the available data, the classification criteria are not met.
	Reproductive toxicity	Mixture: Based upon the available data, the classification criteria are not met.
	STOT - single exposure	Mixture: STOT SE 3; H336: May cause drowsiness or dizziness.
	Propan-2-ol	STOT SE 3; May cause drowsiness or dizziness. Test Result: Higher concentrations can produce central nervous system depression, narcosis, and unconsciousness. (OECD 403) Harmonised Classification/ ECHA registration dossier
	STOT - repeated exposure	Mixture: Based upon the available data, the classification criteria are not met.
	Aspiration hazard	Mixture: Based upon the available data, the classification criteria are not met.
11.2	Information on other hazards	
11.2.1	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.
11.2.2	Other information	None

SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	Based upon the available data, the classification criteria are not met. Estimated Mixture LC50 >100 mg/l (Fish)
12.2	Persistence and degradability	No data for the mixture as a whole.
	Propan-2-ol	Readily biodegradable (according to OECD criteria).

SAFETY DATA SHEET

M-FLUX AR-2

www.vpgsensors.com

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

Date of issue: 06/12/2022
Date of First Issue: 15/09/2016
Version 2.0

12.3	Bioaccumulative potential	Benzyl alcohol	Readily biodegradable (according to OECD criteria). No data for the mixture as a whole.
		Propan-2-ol	The substance has low potential for bioaccumulation. Log Pow < 3.
		Benzyl alcohol	The substance has low potential for bioaccumulation. Bioconcentration factor (BCF) : 1.37 l/kg ww, Log Pow: 1.1 (Q)SAR (US EPA, 2014)
12.4	Mobility in soil		No data for the mixture as a whole.
		Propan-2-ol	The substance is predicted to have high mobility in soil. Log Pow: < 3. Readily biodegradable.
		Benzyl alcohol	The substance is predicted to have high mobility in soil. Koc at 20°C = 15.7, Log Koc = 1.2 (Q)SAR (US EPA, 2014)
12.5	Results of PBT and vPvB assessment		Not classified as PBT or vPvB.
12.6	Endocrine disrupting properties		This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.
12.7	Other adverse effects		None known

SECTION 13: DISPOSAL CONSIDERATIONS

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

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA/ICAO
14.1	UN number or ID number	UN 1219	UN 1219	UN 1219
14.2	UN proper shipping name	ISOPROPANOL (ISOPROPYL ALCOHOL) mixture	ISOPROPANOL (ISOPROPYL ALCOHOL) mixture	ISOPROPANOL (ISOPROPYL ALCOHOL) mixture
14.3	Transport hazard class(es)	3	3	3
14.4	Packing group	II	II	II
14.5	Environmental hazards	Not applicable	Not applicable	Not applicable
14.6	Special precautions for user	See Section: 2		
14.7	Maritime transport in bulk according to IMO instruments	Not applicable	Not applicable	Not applicable
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).

SAFETY DATA SHEET

M-FLUX AR-2

www.vpgsensors.com

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

Date of issue: 06/12/2022
Date of First Issue: 15/09/2016
Version 2.0

To follow:

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

15.1.2 National regulations

Germany

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)
Water hazard class (WGK)

5.2.5 Organische Stoffe
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).

Harmonised Classification(s) for Propan-2-ol (CAS No. 67-63-0) and Benzyl alcohol (CAS No. 100-51-6).

Existing ECHA registration(s) for Propan-2-ol (CAS No. 67-63-0); Rosin, modified (CAS No. 65997-06-0) and Benzyl alcohol (CAS No. 100-51-6).

Literature References:

1. United States Environmental Protection Agency, 2014. EPI Suite v4.1, <http://epa.gov/oppt/exposure/pubs/episuite.htm>

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	On basis of test data Flash point/Boiling Point (°C)
Eye Irrit. 2; H319	Threshold Calculation
STOT SE 3; H336	Threshold Calculation

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

SAFETY DATA SHEET

M-FLUX AR-2

www.vpgsensors.com

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

Date of issue: 06/12/2022
Date of First Issue: 15/09/2016
Version 2.0

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
Acute Tox. 4; Acute toxicity, Category 4
Acute Tox. 4; Acute toxicity, Category 4

Hazard Statement(s)

H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H302: Harmful if swallowed.
H332: Harmful if inhaled.

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.

Disclaimers

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Vishay Precision Group gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Vishay Precision Group accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.



Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "VPG"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

The product specifications do not expand or otherwise modify VPG's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

VPG makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. **To the maximum extent permitted by applicable law, VPG disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.**

Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on VPG's knowledge of typical requirements that are often placed on VPG products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. You should ensure you have the current version of the relevant information by contacting VPG prior to performing installation or use of the product, such as on our website at vpgsensors.com.

No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of VPG.

The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling VPG products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify VPG for any damages arising or resulting from such use or sale. Please contact authorized VPG personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Copyright Vishay Precision Group, Inc., 2014. All rights reserved.