SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 01-Nov-2023 **Revision Number** 1.2

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

1.1. Product identifier

Product Name Affi-Gel Hz Hydrazide

Catalogue Number(s) 1536047, 1536050, 9701043

Nanoforms Not applicable

Pure substance/mixture Mixture

Contains Isopropyl alcohol

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Laboratory chemicals

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Corporate Headquarters
Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer
Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address
Bio-Rad Laboratories Ltd
The Junction
Station Road
Watford, WD17 1ET
UK

Bio-Rad Laboratories Pvt. Ltd.
Bio-Rad House
86-87, Udyog Vihar Phase IV Gurgaon
122005
Haryana India

Bio-Rad Laboratories (Pty) Ltd.
34 Bolton Road
Parkwood, Johannesburg 2193
South Africa

For further information, please contact

Technical Service 00800 00246 723
Ireland: Techsupport.UK@bio-rad.com
India: support.india@bio-rad.com
South Africa: cdg_techsupport_eemea@bio-rad.com

1.4. Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Ireland: 353-19014670
CHEMTREC India: 000-800-100-7141
CHEMTREC South Africa: 0-800-983-611

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Serious eye damage/eye irritation	Category 2 - (H319)
Specific target organ toxicity — single exposure	Category 3 - (H336)
Category 3 Narcotic effects	
Flammable liquids	Category 2

2.2. Label elements

Contains Isopropyl alcohol

Signal word
Danger

Hazard statements
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H225 - Highly flammable liquid and vapour

Precautionary Statements - EU (§28, 1272/2008)
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P312 - Call a POISON CENTER or doctor if you feel unwell
P370 + P378 - In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Isopropyl alcohol 67-63-0	50 - 100	No data available	(603-117-00-0) 200-661-7	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)	-	-	-

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate
If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Isopropyl alcohol 67-63-0	1870	4059	Inhalation LC50 Rat >10000 ppm 6 h (no deaths occurred, vapor, Source: ECHA_API)	>10000 30.1002	Inhalation LC50 Rat >10000 ppm 6 h (no deaths occurred, vapor, Source: ECHA_API)

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

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

Symptoms May cause redness and tearing of the eyes. Burning sensation. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

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

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	Use personal protection equipment. Avoid breathing vapours or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat,

sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store according to product and label instructions.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Isopropyl alcohol 67-63-0	-	TWA: 200 ppm TWA: 500 mg/m³ STEL 800 ppm STEL 2000 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ STEL: 400 ppm STEL: 1000 mg/m³	STEL: 1225.0 mg/m³ TWA: 980.0 mg/m³	TWA: 400 ppm TWA: 999 mg/m³ STEL: 500 ppm STEL: 1250 mg/m³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Isopropyl alcohol 67-63-0	-	TWA: 500 mg/m³ Ceiling: 1000 mg/m³ D*	TWA: 200 ppm TWA: 490 mg/m³ STEL: 400 ppm STEL: 980 mg/m³	TWA: 150 ppm TWA: 350 mg/m³ STEL: 250 ppm STEL: 600 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ STEL: 250 ppm STEL: 620 mg/m³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Isopropyl alcohol 67-63-0	STEL: 400 ppm STEL: 980 mg/m³	TWA: 200 ppm TWA: 500 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ Peak: 400 ppm Peak: 1000 mg/m³	TWA: 400 ppm TWA: 980 mg/m³ STEL: 500 ppm STEL: 1225 mg/m³	TWA: 500 mg/m³ STEL: 1000 mg/m³ b*
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Isopropyl alcohol 67-63-0	TWA: 200 ppm STEL: 400 ppm Sk*	-	TWA: 200 ppm TWA: 492 mg/m³ STEL: 400 ppm STEL: 983 mg/m³	TWA: 350 mg/m³ STEL: 600 mg/m³	TWA: 150 ppm TWA: 350 mg/m³ STEL: 250 ppm STEL: 600 mg/m³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Isopropyl alcohol 67-63-0	-	-	-	TWA: 100 ppm TWA: 245 mg/m³ STEL: 150 ppm STEL: 306.25 mg/m³	STEL: 1200 mg/m³ TWA: 900 mg/m³ skóra*
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Isopropyl alcohol 67-63-0	TWA: 200 ppm STEL: 400 ppm	TWA: 81 ppm TWA: 200 mg/m³ STEL: 203 ppm STEL: 500 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ Ceiling: 1000 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ STEL: 400 ppm STEL: 1000 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ STEL: 400 ppm STEL: 1000 mg/m³

Chemical name	Sweden	Switzerland	United Kingdom
Isopropyl alcohol 67-63-0	NGV: 150 ppm NGV: 350 mg/m³ Vägledande KGV: 250 ppm Vägledande KGV: 600 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ STEL: 400 ppm STEL: 1000 mg/m³	TWA: 400 ppm TWA: 999 mg/m³ STEL: 500 ppm STEL: 1250 mg/m³

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Isopropyl alcohol 67-63-0	-	-	-	50 mg/L - blood (Acetone) - at the end of the work shift 50 mg/L - urine	-

				(Acetone) - at the end of the work shift	
Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
Isopropyl alcohol 67-63-0	-	-	-	25 mg/L - whole blood (Acetone) - end of shift 25 mg/L - urine (Acetone) - end of shift	25 mg/L (whole blood - Acetone end of shift) 25 mg/L (urine - Acetone end of shift)

Chemical name	Hungary	Ireland	Italy MDLPS	Italy AIDII
Isopropyl alcohol 67-63-0	-	40 mg/L - urine (Acetone) - end of shift at end of workweek	-	40 mg/L - urine (Acetone) - end of shift at end of workweek

Chemical name	Latvia	Luxembourg	Romania	Slovakia
Isopropyl alcohol 67-63-0	-	-	50 mg/L - urine (Acetone) - end of shift	-

Chemical name	Slovenia	Spain	Switzerland	United Kingdom
Isopropyl alcohol 67-63-0	25 mg/L - blood (Acetone) - at the end of the work shift 25 mg/L - urine (Acetone) - at the end of the work shift	40 mg/L (urine - Acetone end of workweek)	25 mg/L (urine - Acetone end of shift) 0.4 mmol/L (urine - Acetone end of shift) 25 mg/L (whole blood - Acetone end of shift) 0.4 mmol/L (whole blood - Acetone end of shift)	-

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC)

8.2. Exposure controls

Personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid
Appearance Slurry
Colour colourless
Odour Alcohol.
Odour threshold No information available

Property	Values	Remarks • Method
Melting point / freezing point	-89.5 °C	
Initial boiling point and boiling range	82 °C	
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	13 °C	
Autoignition temperature	399 °C	
Decomposition temperature		None known
pH	No data available	None known
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	Partially miscible	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known
Relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regards to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause drowsiness or dizziness.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Acute toxicity

Numerical measures of toxicity
No information available

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (inhalation-vapour) 31.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Isopropyl alcohol	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	> 10000 ppm (Rat) 6 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure May cause drowsiness or dizziness.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity The environmental impact of this product has not been fully investigated.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Isopropyl alcohol	EC50: >1000mg/L (96h, Desmodesmus subspicatus) EC50: >1000mg/L (72h, Desmodesmus subspicatus)	LC50: =9640mg/L (96h, Pimephales promelas) LC50: =11130mg/L (96h, Pimephales promelas) LC50: >1400000µg/L (96h, Lepomis macrochirus)	-	EC50: =13299mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Isopropyl alcohol	0.05

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Isopropyl alcohol	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	UN1219
14.2 UN proper shipping name	Isopropanol
14.3 Transport hazard class(es)	3
14.4 Packing group	II
Description	UN1219, Isopropanol, 3, II
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	A180

IMDG

14.1 UN number or ID number	UN1219
14.2 UN proper shipping name	ISOPROPANOL
14.3 Transport hazard class(es)	3
14.4 Packing group	II
Description	UN1219, ISOPROPANOL, 3, II, (13°C C.C.)
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None
EmS-No	F-E, S-D
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number	UN1219
14.2 UN proper shipping name	ISOPROPANOL
14.3 Transport hazard class(es)	3
14.4 Packing group	II
Description	UN1219, ISOPROPANOL, 3, II
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	601
Classification code	F1

ADR

14.1 UN number or ID number	1219
14.2 UN proper shipping name	ISOPROPANOL
14.3 Transport hazard class(es)	3
14.4 Packing group	II
Description	1219, ISOPROPANOL, 3, II
14.5 Environmental hazards	Not applicable

14.6 Special Precautions for Users

Special Provisions 601
Classification code F1
Tunnel restriction code (D/E)

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

France
Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Isopropyl alcohol 67-63-0	RG 84	-

Germany
Water hazard class (WGK) slightly hazardous to water (WGK 1)

European Union
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Isopropyl alcohol - 67-63-0	75.	-

Persistent Organic Pollutants
Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)
P5a - FLAMMABLE LIQUIDS
P5b - FLAMMABLE LIQUIDS
P5c - FLAMMABLE LIQUIDS

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

Biocidal Products Regulation (EU) No 528/2012 (BPR)

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Isopropyl alcohol - 67-63-0	Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals Product-type 4: Food and feed area Product-type 1: Human hygiene

International Inventories Contact supplier for inventory compliance status

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H225 - Highly flammable liquid and vapour
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

Legend
SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision Note Reformatted and updated existing information

Revision date 01-Nov-2023

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet