

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 03-Nov-2009

Revision Date 02-Feb-2024

**Revision Number** 3

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

1.1. Product identifier

Product Description:	Formic acid, 85%
Cat No. :	L17434
REACH registration number	-

Unique Formula Identifier (UFI) Y7KW-V26V-GX0X-R038

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

Recommended Use	Laboratory chemicals.
Sector of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Product category	PC21 - Laboratory chemicals
Process categories	PROC15 - Use as a laboratory reagent
Environmental release category	ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
Uses advised against	No Information available

#### 1.3. Details of the supplier of the safety data sheet

Company	Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific) Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608
E-mail address	begel.sdsdesk@thermofisher.com
<u>1.4. Emergency telephone number</u>	For information <b>US</b> call: 001-800-227-6701 / <b>Europe</b> call: +32 14 57 52 11 Emergency Number <b>US</b> :001-201-796-7100 / <b>Europe:</b> +32 14 57 52 99 <b>CHEMTREC</b> Tel. No. <b>US</b> :001-800-424-9300 / <b>Europe:</b> 001-703-527-3887
Poison Centre - Emergency information services	Ireland : National Poisons Information Centre (NPIC) - 01 809 2166 (8am-10pm, 7 days a week) Malta : +356 2395 2000 Cyprus : +357 2240 5611

# **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

#### Formic acid, 85%

#### Revision Date 02-Feb-2024

#### Physical hazards

Flammable liquids

#### Health hazards

Acute oral toxicity Acute Inhalation Toxicity - Vapors Skin Corrosion/Irritation Serious Eye Damage/Eye Irritation

#### **Environmental hazards**

Based on available data, the classification criteria are not met

Category 3 (H226)

Category 4 (H302) Category 3 (H331) Category 1 B (H314) Category 1 (H318)

#### Full text of Hazard Statements: see section 16

#### 2.2. Label elements



Signal Word

Danger

#### **Hazard Statements**

H226 - Flammable liquid and vapor H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage H331 - Toxic if inhaled EUH071 - Corrosive to the respiratory tract

#### **Precautionary Statements**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

#### 2.3. Other hazards

Lachrymator (substance which increases the flow of tears) This product does not contain any known or suspected endocrine disruptors

### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.2. Mixtures

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Formic acid	64-18-6	200-579-1	85 - 90	Flam. Liq. 3 (H226)

Formic acid, 85%

#### Revision Date 02-Feb-2024

				Acute Tox. 4 (H302) Skin Corr. 1A (H314) Eye Dam. 1 (H318) Acute Tox. 3 (H331) EUH071
Water	7732-18-5	231-791-2	10 - 15	-

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Formic acid	Skin Corr. 1A :: C>=90% Skin Corr. 1B :: 10%<=C<90% Skin Irrit. 2 :: 2%<=C<10% Eye Irrit. 2 :: 2%<=C<10%	-	-

REACH registration number			-
Components	Reach Registration Number		
Formic acid	01-2	2119491174-37	

#### Full text of Hazard Statements: see section 16

# **SECTION 4: FIRST AID MEASURES**

#### 4.1. Description of first aid measures

General Advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Self-Protection of the First Aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
4.2. Most important symptoms and	effects, both acute and delayed
	Difficulty in breathing. Causes burns by all exposure routes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
4.3. Indication of any immediate me	dical attention and special treatment needed
Notes to Physician	Treat symptomatically.

### **SECTION 5: FIREFIGHTING MEASURES**

#### 5.1. Extinguishing media

#### Suitable Extinguishing Media

Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

### Extinguishing media which must not be used for safety reasons

No information available.

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

Flammable. Corrosive material. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

#### Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrogen, Thermal decomposition can lead to release of irritating gases and vapors.

#### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment as required. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing.

#### 6.2. Environmental precautions

Avoid release to the environment. See Section 12 for additional Ecological Information.

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

Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Use spark-proof tools and explosion-proof equipment.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

### **SECTION 7: HANDLING AND STORAGE**

#### 7.1. Precautions for safe handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Use spark-proof tools and explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

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

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area.

Technical Rules for Hazardous Substances (TRGS) 510Class 3Storage Class (LGK) (Germany)Class 3

#### 7.3. Specific end use(s)

Use in laboratories

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control parameters

#### **Exposure limits**

List source(s): EU - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC UK - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. IRE - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Formic acid	STEL: 15 ppm 15 min	TWA: 5 ppm 8 hr	TWA: 5 ppm 8 hr.
	STEL: 28.8 mg/m <sup>3</sup> 15 min	TWA: 9 mg/m <sup>3</sup> 8 hr	TWA: 9 mg/m <sup>3</sup> 8 hr.
	TWA: 5 ppm 8 hr	-	STEL: 15 ppm 15 min
	TWA: 9.6 mg/m <sup>3</sup> 8 hr		STEL: 27 mg/m <sup>3</sup> 15 min

#### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Formic acid 64-18-6(85 - 90)		DNEL = 19 mg/m <sup>3</sup>	DNEL = 9.5mg/m <sup>3</sup>	DNEL = 9.5 mg/m <sup>3</sup>

#### Predicted No Effect Concentration (PNEC)

See values below.

Compone	nt Fi	esh water	Fresh water sediment		Microorganisms in sewage treatment	,
Formic ac 64-18-6 ( 85		EC = 2mg/L	PNEC = 13.4mg/kg sediment dw	PNEC = 1mg/L	PNEC = 7.2mg/L	PNEC = 1.5mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Formic acid 64-18-6(85 - 90)	PNEC = 0.2mg/L	PNEC = 1.34mg/kg sediment dw			

#### 8.2. Exposure controls

#### **Engineering Measures**

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

#### Personal protective equipment

Eye Protection	Goggles (European standard - EN 166)
Hand Protection	Protective gloves

Hand Protection

Formic acid, 85%

Glove material	Ū.	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers	-	EN 374	(minimum requirement)
Butyl rubber	recommendations			
Nitrile rubber				
Neoprene PVC				
	hastian Maaran	proprioto protoctivo	alouse and elething to p	revent akin avnagura
Skin and body prot	vear ap	propriate protective	gloves and clothing to p	nevent skin exposure.
(Refer to manufacturer/s Ensure gloves are suitable	ructions regarding permisupplier for information) ble for the task: Chemica o take into consideration	al compatability, Dex n the specific local co	terity, Operational conc	ovided by the supplier of the gloves. litions, User susceptibility, e.g. he product is used, such as the danger
Respiratory Protec	EN 149. exposure To prote	Use a NIOSH/MSH/ e limits are exceeded	A or European Standard d or if irritation or other s	CFR 1910.134 or European Standard d EN 149 approved respirator if symptoms are experienced. ent must be the correct fit and be used
Large scale/emergency	are exce <b>Recom</b> r	eded or if irritation o	r other symptoms are e Particulates filter confo	approved respirator if exposure limits xperienced orming to EN 143 or Acid gases filter
Small scale/Laboratory	limits are <b>Recom</b> r 141	e exceeded or if irrita nended half mask:-	ition or other symptoms	; or; Half mask: EN140; plus filter, EN
Environmental exposu	re controls Prevent	product from enterin	g drains.	

# **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

#### 9.1. Information on basic physical and chemical properties

Physical State	Liquid	
Appearance	Colorless	
Odor	pungent	
Odor Threshold	No data available	
Melting Point/Range	8 °C / 46.4 °F	
Softening Point	No data available	
Boiling Point/Range	101 °C / 213.8 °F	@ 760 mn
Flammability (liquid)	Flammable	On basis o
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	Lower 18 vol%	
	Upper 57 vol%	
Flash Point	60 °C / 140 °F	Method -
Autoignition Temperature	520 °C / 968 °F	
Decomposition Temperature	No data available	
рН	2.1	10 g/L aq.
Viscosity	1.47 mPa.s @ 20 °C	
Water Solubility	Miscible	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/wa	ter)	
Component	log Pow	
Formic acid	-0.54	
Vapor Pressure	44 mbar @ 20 °C	
Density / Specific Gravity	1.220	

mHg of test data

No information available

q.sol

Formic acid, 85%	•••• =•• =•••		Revision Date 02-Feb-2024
Bulk Density Vapor Density Particle characteristics	Not applicable No data available Not applicable (liquid)	Liquid (Air = 1.0)	
9.2. Other information			
Explosive Properties	explosive air/vapour mixtures p	possible	
S	ECTION 10: STABILITY	AND REACTIVITY	
10.1. Reactivity	None known, based on informa	tion available	
10.2. Chemical stability	Hygroscopic. heat sensitive. De	ecomposes to water and car	bon dioxide.
10.3. Possibility of hazardous read	tions		
Hazardous Polymerization Hazardous Reactions	No information available. None under normal processing		
10.4. Conditions to avoid	Incompatible products. Excess sources of ignition. Exposure to		flames, hot surfaces and
10.5. Incompatible materials	Strong oxidizing agents. Metals	. Finely powdered metals. S	Strong bases.
10.6. Hazardous decomposition pr			Thermal decomposition can lead
SE	CTION 11: TOXICOLOGI	CAL INFORMATION	l

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

#### **Product Information**

(a) acute toxicity; Oral

Inhalation

Dermal

Category 4 Based on available data, the classification criteria are not met Category 3

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Formic acid	730 mg/kg (Rat)	-	7.85 mg/l (Rat) 4h OECD 403
Water	-	-	-

(b) skin corrosion/irritation;	Category 1 B
--------------------------------	--------------

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;	
Respiratory Skin	Based on available data, the classification criteria are not met Based on available data, the classification criteria are not met
(e) germ cell mutagenicity;	Based on available data, the classification criteria are not met

Revision Date 02-Feb-2024

vomiting.

Based on available data, the classification criteria are not met There are no known carcinogenic chemicals in this product
Based on available data, the classification criteria are not met
Based on available data, the classification criteria are not met
Based on available data, the classification criteria are not met None known.
Based on available data, the classification criteria are not met
Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

### **SECTION 12: ECOLOGICAL INFORMATION**

#### 12.1. Toxicity **Ecotoxicity effects**

Formic acid, 85%

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Formic acid	Leuciscus idus: LC50 = 46-100	EC50 = 34 mg/L/48h	EC50 = 25 mg/L/96h
	mg/L/96h		

Component	Microtox	M-Factor
Formic acid	EC50 = 46.7 mg/L/17h	

12.2. Persistence and degradability Readily biodegradable Miscible with water, Persistence is unlikely, based on information available. Persistence

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Formic acid	-0.54	0.22 dimensionless

<u>12.4. Mobility in soil</u>	The product is water soluble, and may spread in water systems . Will likely be mobile in the
	environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB No data available for assessment.

assessment

12.6. Endocrine disrupting properties

**Endocrine Disruptor Information** 

This product does not contain any known or suspected endocrine disruptors

### Formic acid, 85%

#### Revision Date 02-Feb-2024

Component	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances
Formic acid	Applicable	

#### 12.7. Other adverse effects Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

### **SECTION 13: DISPOSAL CONSIDERATIONS**

13.1. Waste treatment methods	
Waste from Residues/Unused Products	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.
European Waste Catalogue (EWC)	According to the European Waste Catalog, Waste Codes are not product specific, but application specific.
Other Information	Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

# **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

<u>14.1. UN number</u>	UN1779
14.2. UN proper shipping name	Formic acid
14.3. Transport hazard class(es)	8
Subsidiary Hazard Class	3
14.4. Packing group	II

<u>ADR</u>

14.1. UN number	UN1779
14.2. UN proper shipping name	Formic acid
14.3. Transport hazard class(es)	8
Subsidiary Hazard Class	3
14.4. Packing group	II

<u>IATA</u>

<u>14.1. UN number</u>	UN1779
<u>14.2. UN proper shipping name</u>	Formic acid
<u>14.3. Transport hazard class(es)</u>	8
Subsidiary Hazard Class	3
<u>14.4. Packing group</u>	II
14.5. Environmental hazards	No hazards identified

**14.6. Special precautions for user** No special precautions required.

# 14.7. Maritime transport in bulk according to IMO instruments

Not applicable, packaged goods

### **SECTION 15: REGULATORY INFORMATION**

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

#### International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Formic acid	64-18-6	200-579-1	-	-	Х	Х	Х	Х	Х
Water	7732-18-5	231-791-2	-	-	Х	Х	KE-35400	Х	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Formic acid	64-18-6	Х	ACTIVE	Х	-	Х	Х	Х
Water	7732-18-5	Х	ACTIVE	Х	-	Х	Х	Х

Legend: X - Listed '-' - Not Listed KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

#### Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Formic acid	64-18-6	-	Use restricted. See item 75. (see link for restriction details)	-
Water	7732-18-5	-	-	-

#### **REACH links**

https://echa.europa.eu/substances-restricted-under-reach

#### Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Formic acid	64-18-6	Not applicable	Not applicable
Water	7732-18-5	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

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 .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

#### **WGK Classification** Water endangering class = 1 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Formic acid	WGK 1	Class I : 20 mg/m <sup>3</sup> (Massenkonzentration)

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Formic acid	Prohibited and Restricted		
64-18-6 (85 - 90)	Substances		

#### 15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

### **SECTION 16: OTHER INFORMATION**

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

H226 - Flammable liquid and vapor

- H314 Causes severe skin burns and eye damage
- H318 Causes serious eye damage

H302 - Harmful if swallowed

H331 - Toxic if inhaled

EUH071 - Corrosive to the respiratory tract

#### Legend

<ul> <li>CAS - Chemical Abstracts Service</li> <li>EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances</li> <li>PICCS - Philippines Inventory of Chemicals and Chemical Substances</li> <li>IECSC - Chinese Inventory of Existing Chemical Substances</li> <li>KECL - Korean Existing and Evaluated Chemical Substances</li> </ul>	<ul> <li>TSCA - United States Toxic Substances Control Act Section 8(b) Inventory</li> <li>al DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List</li> <li>ENCS - Japanese Existing and New Chemical Substances</li> <li>AICS - Australian Inventory of Chemical Substances</li> <li>NZIOC - New Zealand Inventory of Chemicals</li> </ul>
WEL - Workplace Exposure Limit ACGIH - American Conference of Governmental Industrial Hygienists DNEL - Derived No Effect Level RPE - Respiratory Protective Equipment LC50 - Lethal Concentration 50% NOEC - No Observed Effect Concentration PBT - Persistent, Bioaccumulative, Toxic	<ul> <li>TWA - Time Weighted Average</li> <li>IARC - International Agency for Research on Cancer</li> <li>Predicted No Effect Concentration (PNEC)</li> <li>LD50 - Lethal Dose 50%</li> <li>EC50 - Effective Concentration 50%</li> <li>POW - Partition coefficient Octanol:Water</li> <li>vPvB - very Persistent, very Bioaccumulative</li> </ul>
ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code OECD - Organisation for Economic Co-operation and Development BCF - Bioconcentration factor Key literature references and sources for data https://echa.europa.eu/information-on-chemicals Suppliers safety data sheet, Chemadvisor - LOLI, Merck index,	ICAO/IATA - International Civil Aviation Organization/International Air Transport Association MARPOL - International Convention for the Prevention of Pollution from Ships ATE - Acute Toxicity Estimate VOC - (Volatile Organic Compound)

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Formic acid, 85%

Physical hazards	On basis of test data
Health Hazards	On basis of test data
Environmental hazards	On basis of test data

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Prepared By	Health, Safety and Environmental Department
Creation Date	03-Nov-2009
Revision Date	02-Feb-2024
Revision Summary	New emergency telephone response service provider.

# This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

. 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**