acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355 date of compilation: 2016-07-26 Version: GHS 4.1 en Revision: 2021-08-20

Replaces version of: 2021-07-07

Version: (GHS 4)

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

#### **Product identifier** 1.1

Identification of the substance Formic acid ≥85 %, pure

Article number 5355

CAS number [64-18-6]

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

Relevant identified uses: Laboratory chemical

Laboratory and analytical use

Uses advised against: Do not use for squirting or spraying. Do not use

for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. Do not use for private

purposes (household).

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

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone:+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 e-mail: sicherheit@carlroth.de Website: www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment

sicherheit@carlroth.de e-mail (competent person):

#### 1.4 **Emergency telephone number**

Name	Street	Postal code/city	Telephone	Website
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 West- mead, NSW	131126	

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### Classification acc. to GHS

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
2.16	Substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.1I	Acute toxicity (inhal.)	3	Acute Tox. 3	H331

Page 1 / 17 Australia (en)

acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355



Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.2	Skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	Serious eye damage/eye irritation	1	Eye Dam. 1	H318

## **Supplemental hazard information**

Code	Supplemental hazard information
EUH071	corrosive to the respiratory tract

For full text of abbreviations: see SECTION 16

#### The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

#### 2.2 Label elements

## Labelling

Signal word Danger

#### **Pictograms**

GHS05, GHS06



#### **Hazard statements**

H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H331	Toxic if inhaled

#### **Precautionary statements**

## **Precautionary statements - prevention**

P260	Do not breathe dusts or mists
P280	Wear eye protection/face protection

#### Precautionary statements - response

P303+P361+P353	IF ON SKIN (or h	nair): Take off immediately	all contaminated	clothing. Rinse skin

with water or shower

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfort-

able for breathing

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing

P390 Absorb spillage to prevent material damage

#### Precautionary statements - storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed

#### **Precautionary statements - disposal**

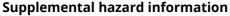
P501 Dispose of contents/container to industrial combustion plant

Australia (en) Page 2 / 17

acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355



Formic acid

#### 2.3 Other hazards

This material is combustible, but will not ignite readily.

#### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

# SECTION 3: Composition/information on ingredients

#### 3.1 **Substances**

not relevant (mixture)

#### 3.2 **Mixtures**

#### **Description of the mixture**

Name of sub- stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Formic acid	CAS No 64-18-6	85 - < 90	Flam. Liq. 3 / H226 Met. Corr. 1 / H290 Acute Tox. 4 / H302 Acute Tox. 3 / H331 Skin Corr. 1A / H314 Eye Dam. 1 / H318 EUH071		B(a)

#### Notes

B(a): The classification refers to an aqueous solution

For full text of abbreviations: see SECTION 16

## **SECTION 4: First aid measures**

#### **Description of first aid measures** 4.1



#### **General notes**

Take off immediately all contaminated clothing. Self-protection of the first aider.

#### Following inhalation

Call a physician immediately. If breathing is irregular or stopped, administer artificial respiration.

## Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

## Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

Australia (en) Page 3 / 17



Corrosive to the respiratory tract. EUH071

**Hazardous ingredients for labelling:** 

acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355



#### Following ingestion

Rinse mouth immediately and drink plenty of water. Rinse mouth with water (only if the person is conscious). Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

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

Corrosion, Vomiting, Gastric perforation, Risk of serious damage to eyes, Risk of blindness, Dyspnoea

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

none

# **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media



## Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Combustible.

#### **Hazardous combustion products**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), May produce toxic fumes of carbon monoxide if burning.

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

#### SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

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

#### Advice on how to contain a spill

Covering of drains.

Australia (en) Page 4 / 17

acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355



#### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

## Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

# **SECTION 7: Handling and storage**

## 7.1 Precautions for safe handling

Provision of sufficient ventilation. Use extractor hood (laboratory). Handle and open container with care. Clear contaminated areas thoroughly.

# Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

## Advice on general occupational hygiene

Wash hands before breaks and after work.

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

Keep container tightly closed.

## **Incompatible substances or mixtures**

Observe hints for combined storage.

#### Consideration of other advice:

Store locked up.

#### **Ventilation requirements**

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

#### 7.3 Specific end use(s)

No information available.

# **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

**National limit values** 

**Occupational exposure limit values (Workplace Exposure Limits)** 

Australia (en) Page 5 / 17

acc. to Safe Work Australia - Code of Practice

## Formic acid ≥85 %, pure

article number: 5355



Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
AU	formic acid	64-18-6	WES	5	9.4	10	19				WES

Notation

Ceiling-C STEL

**TWA** 

Ceiling value is a limit value above which exposure should not occur Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture								
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time		
Formic acid	64-18-6	DNEL	9.5 mg/m³	human, inhalat-	worker (industry)	chronic - local ef-		

Relevant PNECs of components of the mixture									
Name of sub- stance	CAS No	End- point d level Organism		Environmental compartment	Exposure time				
Formic acid	64-18-6	PNEC	2 <sup>mg</sup> / <sub>l</sub>	aquatic organ- isms	freshwater	short-term (single instance)			
Formic acid	64-18-6	PNEC	0.2 <sup>mg</sup> / <sub>l</sub>	aquatic organ- isms	marine water	short-term (single instance)			
Formic acid	64-18-6	PNEC	7.2 <sup>mg</sup> / <sub>l</sub>	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)			
Formic acid	64-18-6	PNEC	13.4 <sup>mg</sup> / <sub>kg</sub>	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)			
Formic acid	64-18-6	PNEC	1.34 <sup>mg</sup> / <sub>kg</sub>	aquatic organ- isms	marine sediment	short-term (single instance)			
Formic acid	64-18-6	PNEC	1.5 <sup>mg</sup> / <sub>kg</sub>	terrestrial organ- isms	soil	short-term (single instance)			

#### 8.2 **Exposure controls**

Individual protection measures (personal protective equipment)

**Eye/face protection** 





Use safety goggle with side protection. Wear face protection.

Skin protection





Australia (en) Page 6 / 17

acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355



## hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a quide.

#### type of material

CR: chloroprene (chlorobutadiene) rubber

#### material thickness

0,65 mm

#### breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

#### **Respiratory protection**





Respiratory protection necessary at: Aerosol or mist formation. Type: E (against acidic gases like sulphur dioxide or hydrogen chloride, colour code: Yellow).

#### **Environmental exposure controls**

Keep away from drains, surface and ground water.

# **SECTION 9: Physical and chemical properties**

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

Physical state liquid
Colour colourless

Melting point/freezing point not determined

Boiling point or initial boiling point and boiling 106 °C

range

Odour

Flammability this material is combustible, but will not ignite

readily

stinging

Lower and upper explosion limit 12 vol% - 38 vol%

Flash point 65 °C Auto-ignition temperature 528 °C

Decomposition temperature not relevant pH (value) <2 (20 °C)

Australia (en) Page 7 / 17

acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355

Kinematic viscosity  $1.176 \, ^{\text{mm}^2}/_{\text{s}}$  at 20 °C

Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

Partition coefficient n-octanol/water (log value): this information is not available

Vapour pressure 43 hPa at 20 °C

Density  $1.19 \, {}^{9}/_{cm^3}$ 

Relative vapour density information on this property is not available

Particle characteristics not relevant (liquid)

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard

classes:

Corrosive to metals category 1: corrosive to metals

Other safety characteristics:

Miscibility completely miscible with water

# **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

Substance or mixture corrosive to metals.

#### If heated

Vapours may form explosive mixtures with air.

#### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

#### 10.3 Possibility of hazardous reactions

**Danger of explosion:** Mixtures of sodium hypochlorite, Metal catalyst, Nitro compound, Hydrogen peroxide,

**Exothermic reaction with:** Alkali hydroxide (caustic alkali), Strong alkali, Oxidisers, Nitric acid, Sulphuric acid, concentrated

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

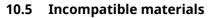
Australia (en) Page 8 / 17



acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355



different metals

#### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

# **SECTION 11: Toxicological information**

## 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### **Classification procedure**

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to GHS

#### **Acute toxicity**

Harmful if swallowed. Toxic if inhaled.

#### Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
Formic acid	64-18-6	oral	730 <sup>mg</sup> / <sub>kg</sub>
Formic acid	64-18-6	inhalation: vapour	7.85 <sup>mg</sup> / <sub>l</sub> /4h

## Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Formic acid	64-18-6	oral	LD50	730 <sup>mg</sup> / <sub>kg</sub>	rat
Formic acid	64-18-6	inhalation: va- pour	LC50	7.85 <sup>mg</sup> / <sub>l</sub> /4h	rat

#### Skin corrosion/irritation

Causes severe skin burns and eye damage.

## Serious eye damage/eye irritation

Causes serious eye damage.

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

#### **Germ cell mutagenicity**

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Shall not be classified as carcinogenic.

# **Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

## Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Australia (en) Page 9 / 17



acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355



## Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

#### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

#### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

#### • If in eyes

causes burns, Causes serious eye damage, risk of blindness

#### If inhaled

corrosive to the respiratory tract, cough, Dyspnoea, pulmonary oedema

#### • If on skin

causes severe burns, causes poorly healing wounds

#### Other information

none

## 11.2 Endocrine disrupting properties

None of the ingredients are listed.

# **SECTION 12: Ecological information**

#### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

#### Aquatic toxicity (acute) of components of the mixture Exposure time Name of sub-**CAS No Endpoint Value Species** stance LC50 130 <sup>mg</sup>/<sub>I</sub> fish Formic acid 64-18-6 96 h Formic acid 64-18-6 EC50 365 mg/<sub>I</sub> aquatic invertebrates 48 h 1,240 <sup>mg</sup>/<sub>I</sub> Formic acid 64-18-6 ErC50 algae 72 h

#### **Biodegradation**

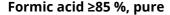
Data are not available.

## 12.2 Process of degradability

Process of degradability		
Process	Degradation rate	Time
biotic/abiotic	98 %	14 d

Australia (en) Page 10 / 17

acc. to Safe Work Australia - Code of Practice



article number: 5355



Degradability of components of the mixture						
Name of substance	CAS No	Process	Degrada- tion rate	Time	Method	Source
Formic acid	64-18-6	biotic/abiotic	98 %	14 d		
Formic acid	64-18-6	oxygen deple- tion	15 %	5 d		ECHA
Formic acid	64-18-6	DOC removal	4 %	6 d		ECHA

#### 12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture				
Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Formic acid	64-18-6		-2.1 (pH value: 7, 23 °C)	

## 12.4 Mobility in soil

Data are not available.

## 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Endocrine disrupting properties

None of the ingredients are listed.

## 12.7 Other adverse effects

Data are not available.

# **SECTION 13: Disposal considerations**

## 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

## Relevant provisions relating to waste(Basel Convention)

#### Properties of waste which render it hazardous

**H8** Corrosives

## 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

Australia (en) Page 11 / 17

acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355



# **SECTION 14: Transport information**

#### 14.1 UN number

UN RTDG UN 1779

IMDG-Code UN 1779
ICAO-TI UN 1779

14.2 UN proper shipping name

UN RTDGFORMIC ACIDIMDG-CodeFORMIC ACID

14.3 Transport hazard class(es)

UN RTDG 8 (3)

IMDG-Code 8 (3)

ICAO-TI 8 (3)

14.4 Packing group

ICAO-TI

UN RTDG II
IMDG-Code II
ICAO-TI II

**14.5 Environmental hazards** non-environmentally hazardous acc. to the dan-

gerous goods regulations

Formic acid

14.6 Special precautions for user

There is no additional information.

## 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

#### 14.8 Information for each of the UN Model Regulations

## Transport informationNational regulationsAdditional information(UN RTDG)

UN number 1779
Class 8
Subsidiary risk(s) 3
Packing group II
Danger label(s) 8+3



Special provisions (SP)

**UN RTDG** 

Excepted quantities (EQ) E2

E2 UN RTDG

Australia (en) Page 12 / 17

acc. to Safe Work Australia - Code of Practice

#### Formic acid ≥85 %, pure

article number: 5355

Limited quantities (LQ) 1 L

**UN RTDG** 

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name FORMIC ACID

Particulars in the shipper's declaration UN1779, FORMIC ACID, 8 (3), II

Marine pollutant -

Danger label(s) 8+3





Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L

EmS F-E, S-C

Stowage category A

Segregation group 1 - Acids

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name Formic acid

Particulars in the shipper's declaration UN1779, Formic acid, 8 (3), II

Danger label(s) 8+3





Excepted quantities (EQ) E2
Limited quantities (LQ) 0,5 L

# **SECTION 15: Regulatory information**

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

There is no additional information.

National regulations(Australia)

Australian Inventory of Chemical Substances(AICS)

All ingredients are listed or exempt from listing.

#### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

## **National inventories**

Australia (en) Page 13 / 17



acc. to Safe Work Australia - Code of Practice

## Formic acid ≥85 %, pure

article number: 5355



Country	Inventory	Status
AU	AICS	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed

Legend

Australian Inventory of Chemical Substances Chemical Inventory and Control Regulation List of Existing and New Chemical Substances (CSCL-ENCS)

CICR CSCL-ENCS DSL ECSI

DSL Domestic Substances List (DSL)
ECSI EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC Inventory of Existing Chemical Substances Produced or Imported in China National Inventory of Chemical Substances
KECI Korea Existing Chemicals Inventory
NZIOC New Zealand Inventory of Chemicals
PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg. REACH registered substances
TCSI Taiwan Chemical Substance Inventory
TSCA Toyic Substance Control Act

Toxic Substance Control Act

#### 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

## Indication of changes (revised safety data sheet)

Alignment to regulation: Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").

Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.1		Supplemental hazard information: change in the listing (table)	yes
2.1		The most important adverse physicochemical, human health and environmental effects: Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.	yes

Australia (en) Page 14 / 17

acc. to Safe Work Australia - Code of Practice

# Formic acid ≥85 %, pure

article number: **5355** 



Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.2		Precautionary statements - response: change in the listing (table)	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2	contains: Formic acid		yes
2.3	Other hazards: There is no additional information.	Other hazards: This material is combustible, but will not ignite readily.	yes
2.3		Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.	yes

# **Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control

Australia (en) Page 15 / 17

acc. to Safe Work Australia - Code of Practice

## Formic acid ≥85 %, pure

article number: 5355



Abbr.	Descriptions of used abbreviations
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Met. Corr.	Substance or mixture corrosive to metals
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
TWA	Time-weighted average
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne conatminants

## Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

## **Classification procedure**

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Australia (en) Page 16 / 17

acc. to Safe Work Australia - Code of Practice

## Formic acid ≥85 %, pure

article number: 5355



# List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.

## Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Australia (en) Page 17 / 17