

Formamide

47670-1L

Version 1.5

Revision Date 21.04.2021

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

1.1. Product identifier

Product name : Formamide
SDS-number : 000000020419
Type of product : Substance
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.
In accordance to the Article 14 (1) of the REACH Regulation
(EC) No 1907/2006, exposure estimation and risk
characterisation is not required.

Chemical name : formamide
Index-No. : 616-052-00-8
REACH Registration
Number : no data available

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

Use of the
Substance/Mixture : Laboratory chemicals
Uses advised against : none

1.3. Details of the supplier of the safety data sheet

| | | |
|---------|---|--|
| Company | : Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA | Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA |
|---------|---|--|

Telephone :
For further information,
please contact: : SafetyDataSheet@Honeywell.com

1.4. Emergency telephone number

Emergency telephone
number : +1-703-527-3887 (ChemTrec-Transport)
+1-303-389-1414 (Medical)
Country based Poison : see chapter 15.1

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Control Center

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Carcinogenicity Category 2

H351 Suspected of causing cancer.

Reproductive toxicity Category 1B

H360D May damage the unborn child.

Specific target organ toxicity - repeated exposure Category 2

H373 May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: H351
H360D
H373

Suspected of causing cancer.
May damage the unborn child.
May cause damage to organs through
prolonged or repeated exposure.

Precautionary statements

: P260

P280

P308 + P313

Do not breathe dust/ fume/ gas/ mist/
vapours/ spray.
Wear protective gloves/protective
clothing/eye protection/face protection.
IF exposed or concerned: Get medical
advice/ attention.

Special labelling of certain
products:

: Restricted to professional users.

2.3. Other hazards

Can be absorbed through skin. Results of PBT and vPvB assessment, see chapter 12.5.

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SECTION 3: Composition/information on ingredients

3.1. Substance

| Chemical name | CAS-No. Index-No. REACH Registration Number EC-No. | Classification 1272/2008 | Concentration | Remarks |
|---------------|--|---|---------------|---------|
| formamide | 75-12-7 616-052-00-8 200-842-0 | Carc. 2; H351 Repr. 1B; H360D STOT RE 2; H373 | 100 % | |

3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

Inhalation:

When inhaled remove to fresh air and seek medical aid.

Skin contact:

After contact with skin, wash immediately with plenty of soap and water.

Eye contact:

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion:

When swallowed, allow water to be drunk. Call a physician immediately.

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

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No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray
Foam
Carbon dioxide (CO₂)
Dry powder

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

Fire may cause evolution of:
Hydrogen cyanide (hydrocyanic acid)
Carbon oxides

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Provide adequate ventilation.

6.2. Environmental precautions

Do not let product enter drains. Suppress (knock down) gases/vapours/mists with a water spray jet.

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6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:
Exhaust ventilation at the object is necessary.

Advice on protection against fire and explosion:
Normal measures for preventive fire protection.

Hygiene measures:
Take off all contaminated clothing immediately. Avoid contact with skin, eyes and clothing. Wash hands before breaks and at the end of workday.

7.3. Specific end use(s)

no additional data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

| Components | Basis / Value type | Value / Form of exposure | Exceeding Factor | Remarks |
|------------|--------------------|--------------------------------|------------------|---------|
| formamide | EH40 WEL STEL | 56 mg/m ³ 30 ppm | | |
| formamide | EH40 WEL TWA | 37 mg/m ³ 20 ppm | | |
| formamide | EH40 WEL | | | Listed |

STEL - Short term exposure limit

TWA - Time weighted average

DNEL/ PNEC-Values

| Component | End-use/impact | Exposure duration | Value | Exposure routes | Remarks |
|-----------|--------------------------------------|-------------------|------------------------|-----------------|---------|
| formamide | Workers / Long-term systemic effects | | 0,66 mg/m ³ | Inhalation | |
| formamide | Workers / Long-term local effects | | 6,66 mg/m ³ | Inhalation | |
| formamide | Workers / Long-term systemic effects | | 0,952mg/kg bw/d | Skin contact | |

| Component | Environmental compartment / Value | Remarks |
|-----------|-----------------------------------|-------------------------|
| formamide | Fresh water: 0,5 mg/l | Assessment factor: 1000 |
| formamide | Marine water: 0,5 mg/l | Assessment factor: 1000 |
| formamide | Sewage treatment plant: 100 mg/l | Assessment factor: |

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| | | |
|-----------|-------------------------------------|----|
| | | 10 |
| formamide | Fresh water sediment: 1,26 mg/kg dw | |
| formamide | Soil: 0,151 mg/kg dw | |

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Avoid exposure - obtain special instructions before use.

Engineering measures

Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Hand protection:

Glove material: Natural Latex

Break through time: 480 min

Glove thickness: 0,6 mm

Lapren®706

Gloves must be inspected prior to use.

Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer´s directions for use should be observed because of great diversity of types .

Eye protection:

Safety goggles

Skin and body protection:

Protective suit

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Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|------------------------------------|
| Physical state | : liquid |
| Colour | : colourless |
| Odour | : weak |
| molecular weight | : 45,04 g/mol |
| Melting point/range | : 1 - 3 °C |
| Boiling point/boiling range | : 210 °C at 1.013 hPa |
| Upper explosion limit | : 19 %(V) |
| Lower explosion limit | : 2,7 %(V) |
| Flash point | : 175 °C Method: DIN 51584 |
| Auto-ignition temperature | : 500 °C |
| Decomposition temperature | : 180 °C |
| pH | : 4,0 - 5,0 at 20 °C |
| Viscosity, kinematic | : No data available |
| Water solubility | : completely miscible |
| Solubility in other solvents | : Soluble in most organic solvents |
| Partition coefficient: n-octanol/water | : log Pow -0,82 at: 25 °C |
| Vapour pressure | : 1 hPa |

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| | | |
|-----------------|---|---|
| | | at 50 °C |
| Vapour pressure | : | 0,08 hPa at 20 °C |
| Density | : | ca. 1,133 g/cm ³ at 20 °C |

9.2 Other Information

| | | |
|--------------------|---|------------------------|
| Evaporation rate | : | No data available |
| Viscosity, dynamic | : | 3,75 mPa.s at 20 °C |

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

>180 °C
Decomposition temperature

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Incompatible with oxidizing agents.

10.6. Hazardous decomposition products

Carbon oxides
Hydrogen cyanide (hydrocyanic acid)

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

LD50

Species: Rat

Value: 3.200 mg/kg

Acute dermal toxicity:

LD50

Species: Rat

Value: > 17.000 mg/kg

Acute inhalation toxicity:

LC50

Species: Rat

Value: > 7,3 mg/l

Exposure time: 6 h

Skin irritation:

Species: Rabbit

Classification: non-irritant

Eye irritation:

Species: Rabbit

Classification: non-irritant

Respiratory or skin sensitisation:

Species: Guinea pig

Classification: non-sensitizing

Repeated dose toxicity:

Species: Rat, male and female

Application Route: Oral

Exposure time: 90 d

NOAEL: 40 - 80 mg/kg

Method: OECD Test Guideline 408

Species: Rat, male

Application Route: Inhalation

Exposure time: 14 d

NOAEL: 0,19 mg/l

Method: OECD Test Guideline 412

Species: Rat, male and female

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Application Route: Dermal
Exposure time: 90 d
LOAEL: 300 mg/kg
Method: OECD Test Guideline 411

Carcinogenicity:

Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 451
Result : negative

:

Species: Mouse, male and female
Application Route: Oral
Method: OECD Test Guideline 451
Result : positive

Germ cell mutagenicity:

Test Method: In vitro mammalian cell gene mutation test
Cell type: mammalian cells
Metabolic activation: without metabolic activation
Result: positive

Cell type: mammalian cells
Metabolic activation: without metabolic activation
Result: negative

Test Method: reverse mutation assay
Cell type: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative
Method: OECD Test Guideline 471

Test Method: reverse mutation assay
Cell type: Escherichia coli
Metabolic activation: with and without metabolic activation
Result: negative
Method: OECD Test Guideline 471

Test Method: dominant lethal test
Species: Mouse, male
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 478
Result: negative

Test Method: Micronucleus test
Species: Mouse, male and female

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Cell type: Micronucleus
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Test Method: Micronucleus test
Species: Mouse, male
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: positive

Species: *Drosophila melanogaster* (vinegar fly), male
Application Route: Oral
Method: OECD Test Guideline 477
Result: negative

Reproductive toxicity:
Test Type: Two-generation study
Species: Mouse - male and female
Route of Application: Oral
Symptoms / Adverse Effects: Effects on fertility
Method: OECD Test Guideline 414
Species: Rat
Route of Application: Oral
Symptoms / Adverse Effects: Reduced body weight

Aspiration hazard:
No data available

11.2. Information on other hazards

Endocrine disrupting properties
No data available

Other information:
May cause birth defects.
No experimental information on genotoxicity in vitro available.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:
LC50
Species: *Leuciscus idus* (Golden orfe)
Value: > 4.600 mg/l

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Exposure time: 96 h

LC50

Species: Brachydanio rerio (zebrafish)

Value: 9.135 mg/l

Exposure time: 96 h

Toxicity to aquatic plants:

LC50

Species: Desmodismus subspicatus (green algae)

Value: > 500 mg/l

Exposure time: 72 h

Toxicity to Microorganisms:

LC50

Species: Pseudomonas putida

Value: > 10.000 mg/l

Exposure time: 17 h

Toxicity to aquatic invertebrates:

LC50

Species: Daphnia magna (Water flea)

Value: > 500 mg/l

Exposure time: 48 h

12.2. Persistence and degradability

Biodegradability:

Biodegradation: > 70 %

Result: Readily biodegradable.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting properties

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No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:

EC Directive 2006/12/EC; 2008/98/EEC

Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number

ADR/RID:Not dangerous goods IMDG:Not dangerous goods IATA:Not dangerous goods

14.2 UN proper shipping name

ADR/RID:Not dangerous goods

IMDG:Not dangerous goods

IATA:Not dangerous goods

14.3 Transport hazard class(es)

14.4 Packaging group

14.5 Environmental hazards

ADR/RID:no

Marine pollutant: no

14.6 Special precautions for user

No data available

14.7 Maritime transport in bulk according to IMO instruments

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No data available

SECTION 15: Regulatory information

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

| Basis | Value | Remarks |
|---|-------|--|
| Substances of very high concern (SVHC) | | This product does contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of ≥ 0.1 % (w/w). |
| Directive 2012/18/EC | | Not applicable |
| Regulation (EC) No. 1907/2006, Annex XVII | | This product contains an ingredient according to Annex XVII of the REACH Regulation 1907/2006/EC. |

Poison Control Center

| Country | Phone Number |
|----------------|------------------------------|
| Austria | +4314064343 |
| Belgium | 070 245245 |
| Bulgaria | (+)35929154233 |
| Croatia | (+3851)23-48-342 |
| Cyprus | +357 2240 5611 |
| Czech Republic | +420224919293; +420224915402 |
| Denmark | 82121212 |
| Estonia | 16662; (+372)6269390 |
| Finland | 9471977 |
| France | +33(0)145425959 |
| Greece | +30 210 779 3777 |
| Hungary | (+36-80)201-199 |
| Iceland | 5432222 |

| Country | Phone Number |
|-----------------|--|
| Liechtenstein | +41 442515151 |
| Lithuania | +370532362052 |
| Luxembourg | 070245245; (+352)80002-5500 |
| Malta | +356 2395 2000 |
| Netherlands | 030-2748888 |
| Norway | 22591300 |
| Poland | +48 42 25 38 400 |
| Portugal | 808250250 |
| Romania | +40 21 318 3606 |
| Slovakia (NTIC) | +421 2 54 774 166 |
| Slovenia | +386 1 400 6051 |
| Spain | +34915620420 |
| Sweden | 112 (begär Gifinformation); +46104566786 |

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| | | | |
|--------------------|------------------------|----------------|--------------------|
| Ireland | +353(1)8092166 | Switzerland | 145 |
| Italy | 0382 24444 | United Kingdom | (+44) 844 892 0111 |
| Germany | Berlin : 030/19240 | | |
| | Bonn : 0228/19240 | | |
| | Erfurt : 0361/730730 | | |
| | Freiburg : 0761/19240 | | |
| | Göttingen : 0551/19240 | | |
| | Homburg : 06841/19240 | | |
| | Mainz : 06131/19240 | | |
| Munich : 089/19240 | | | |
| Latvia | +37167042473 | | |

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

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A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

formamide : H351 Suspected of causing cancer.
H360D May damage the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very bioaccumulative substance
PBT Persistent, bioaccumulative and toxic substance

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. Final determination of suitability of any material is the sole responsibility of the user.

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