

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

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

1.1. Product identifier

Product name : HYDRANAL™ Working Medium K
SDS-number : 000000020618
Type of product : Mixture
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.

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. Honeywell International, Inc.
115 Tabor Road 115 Tabor Road
07950-2546 Morris Plains Morris Plains, NJ 07950-2546
USA 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 Control Center : see chapter 15.1

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute toxicity Category 2 - Oral
H300 Fatal if swallowed.

HYDRANAL™ Working Medium K

34817-1L


Version 1.10

Revision Date 03.06.2021

Acute toxicity Category 2 - Inhalation
H330 Fatal if inhaled.
Acute toxicity Category 1 - Dermal
H310 Fatal in contact with skin.
Skin irritation Category 2
H315 Causes skin irritation.
Serious eye damage Category 1
H318 Causes serious eye damage.
Specific target organ toxicity - single exposure Category 3
H336 May cause drowsiness or dizziness.
Carcinogenicity Category 2
H351 Suspected of causing cancer.
Reproductive toxicity Category 2
H361d Suspected of damaging the unborn child.
Specific target organ toxicity - repeated exposure Category 1
H372 Causes damage to organs through prolonged or repeated exposure if swallowed and inhaled.
Long-term (chronic) aquatic hazard Category 2
H411 Toxic to aquatic life with long lasting effects.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms : 

Signal word : Danger

Hazard statements : H300 + H310 + H330 Fatal if swallowed, in contact with skin or if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H361d Suspected of damaging the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure if swallowed and inhaled.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

P284	In case of inadequate ventilation wear respiratory protection.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable 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.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.

Hazardous components : trichloromethane; chloroform
which must be listed on the label 2-chloroethanol; ethylene chlorohydrin

2.3. Other hazards

Avoid exposure - obtain special instructions before use. Do not breathe vapours or spray mist. Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
trichloromethane; chloroform	67-66-3 602-006-00-4 200-663-8	Acute Tox. 4; H302; Oral Acute Tox. 3; H331; Inhalation Skin Irrit. 2; H315 Eye Irrit. 2; H319 Carc. 2; H351 Repr. 2; H361d STOT RE 1; H372 STOT SE 3; H336	>= 30 % - < 60 %	

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

2-chloroethanol; ethylene chlorohydrin	107-07-3 603-028-00-7 203-459-7	Flam. Liq. 3; H226 Acute Tox. 2; H300; Oral Acute Tox. 2; H330; Inhalation Acute Tox. 1; H310; Dermal Eye Dam. 1; H318 Aquatic Chronic 2; H411	>= 30 % - < 50 %	
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Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

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:

Move to fresh air. Keep patient warm and at rest. Call a physician immediately.

Skin contact:

Wash off immediately with plenty of water. If skin irritation persists, call a physician.

Eye contact:

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

Ingestion:

When swallowed, allow water to be drunk. Do NOT induce vomiting. Call a physician immediately.

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

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.

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

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:
Phosgene

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. Ensure adequate ventilation.

6.2. Environmental precautions

Should not be released into the environment.

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.

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

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. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:

Keep only in the original container, tightly closed, in a well ventilated place. Store at room temperature. (Ambient temperature: $> 0 < 35^{\circ}\text{C}$) Protect from atmospheric moisture and water.

7.3. Specific end use(s)

no additional data available

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
trichloromethane; chloroform	EH40 WEL TWA	9,9 mg/m3 2 ppm		
trichloromethane; chloroform	EH40 WEL SKIN_DES			Can be absorbed through the skin.
trichloromethane; chloroform	EH40 WEL			Listed
trichloromethane; chloroform	EU ELV SKIN_DES			Can be absorbed through the skin.
trichloromethane; chloroform	EU ELV TWA	10 mg/m3 2 ppm		Indicative
2-chloroethanol; ethylene chlorohydrin	EH40 WEL SKIN_DES			Can be absorbed through the skin.
2-chloroethanol; ethylene chlorohydrin	EH40 WEL STEL	3,4 mg/m3 1 ppm		

TWA - Time weighted average
SKIN_DES - Skin designation:
STEL - Short term exposure limit

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
trichloromethane; chloroform	Workers / Long-term systemic effects		2,5 mg/m3	Inhalation	
trichloromethane; chloroform	Workers / Acute systemic effects		333 mg/m3	Inhalation	
trichloromethane; chloroform	Workers / Long-term local effects		2,5 mg/m3	Inhalation	
trichloromethane;	Workers /		0,94mg/kg	Skin contact	

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

chloroform	Long-term systemic effects		bw/d		
trichloromethane; chloroform	Consumers / Long-term systemic effects		0,18 mg/m ³	Inhalation	
2-chloroethanol; ethylene chlorohydrin					No data available

Component	Environmental compartment / Value	Remarks
trichloromethane; chloroform	Fresh water: 0,146 mg/l	Assessment factor: 10
trichloromethane; chloroform	Marine water: 0,015 mg/l	Assessment factor: 100
trichloromethane; chloroform	Sewage treatment plant: 0,048 mg/l	Assessment factor: 10
trichloromethane; chloroform	Fresh water sediment: 0,45 mg/kg dw	Assessment factor: 10
trichloromethane; chloroform	Marine sediment: 0,09 mg/kg dw	Assessment factor: 50
trichloromethane; chloroform	Soil: 0,56 mg/kg dw	
2-chloroethanol; ethylene chlorohydrin	Fresh water: 0,006 mg/l	Assessment factor: 1000
2-chloroethanol; ethylene chlorohydrin	Marine water: 0,001 mg/l	Assessment factor: 500
2-chloroethanol; ethylene chlorohydrin	Fresh water sediment: 0,021 mg/kg dw	
2-chloroethanol; ethylene chlorohydrin	Marine sediment: 0,002 mg/kg dw	
2-chloroethanol; ethylene chlorohydrin	Sewage treatment plant: 20 mg/l	Assessment factor: 100

8.2. Exposure controls

Occupational exposure controls

Avoid exposure - obtain special instructions before use.

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140,

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Personal protective equipment

Respiratory protection:

In case of insufficient ventilation wear suitable respiratory equipment.

Hand protection:

Glove material: Viton®

Break through time: > 480 min

Glove thickness: 0,7 mm

Vitoject® 890

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 .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:

Safety goggles

Skin and body protection:

Protective suit

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 : aromatic

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

Melting point/range	:	No data available
Boiling point/boiling range	:	ca. 60 °C at 1.013 hPa
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Flash point	:	> 100 °C
Auto-ignition temperature	:	No data available
pH	:	neutral
Viscosity, kinematic	:	No data available
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Density	:	1,350 g/cm ³ at 20 °C
Relative vapour density	:	No data available

9.2 Other Information

Evaporation rate	:	No data available
Viscosity, dynamic	:	No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Protect from moisture.

10.5. Incompatible materials

Strong bases
Strong oxidizing agents
Magnesium
Lithium

10.6. Hazardous decomposition products

Phosgene

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

The product has not been tested. The information is derived from the properties of the individual components.

Acute dermal toxicity:

The product has not been tested. The information is derived from the properties of the individual components.

Acute inhalation toxicity:

The product has not been tested. The information is derived from the properties of the individual components.

Skin irritation:

The product has not been tested. The information is derived from the properties of the individual components.

Eye irritation:

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

The product has not been tested. The information is derived from the properties of the individual components.

Respiratory or skin sensitisation:

No data available

Repeated dose toxicity:

Note: The product has not been tested. The information is derived from the properties of the individual components.

Carcinogenicity:

Note: The product has not been tested. The information is derived from the properties of the individual components.

Germ cell mutagenicity:

Note: No data available

Reproductive toxicity:

Remarks: The product has not been tested. The information is derived from the properties of the individual components.

Aspiration hazard:

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information:

No data available

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

No data available

Toxicity to aquatic plants:

No data available

Toxicity to aquatic invertebrates:

No data available

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

12.2. Persistence and degradability

No data available

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

No data available

12.7. Other adverse effects

The product should not be allowed to enter drains, water courses or the soil.

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:3382

IMDG:3382

IATA:3382

14.2 UN proper shipping name

ADR/RID:TOXIC BY INHALATION LIQUID, N.O.S.(CHLOROFORM, ETHYLENE CHLOROHYDRIN)

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

IMDG: TOXIC BY INHALATION LIQUID, N.O.S. (CHLOROFORM, ETHYLENE CHLOROXYDRIN)

14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

14.4 Packaging group

ADR/RID: I

IMDG: I

14.5 Environmental hazards

ADR/RID: no

Marine pollutant: no

14.6 Special precautions for user

IMDG Code segregation group 10 – Liquid halogenated hydrocarbons,

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Directive 2012/18/EC Listed in Regulation : H1: ACUTE TOXIC	Quantity: 5.000 kg Quantity: 20.000 kg	
Regulation (EC) No. 1907/2006, Annex XVII		This product contains an ingredient according to Annex XVII of the REACH Regulation 1907/2006/EC.

VOC:

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control), 100 %

VOC:

Directive 2004/42/EC, 100 %

Poison Control Center

Country	Phone Number
Austria	+4314064343

Country	Phone Number
Liechtenstein	+41 442515151

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

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
Ireland	+353(1)8092166
Italy	0382 24444
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	
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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 Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

Other inventory information

Note

Note: Because of the potential specific inventory listing of components of this product line, further, more detailed information can be requested from SafetyDataSheet@Honeywell.com.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

SECTION 16: Other information

Text of H-statements referred to under heading 3

trichloromethane; chloroform	:	H302	Harmful if swallowed.
		H331	Toxic if inhaled.
		H315	Causes skin irritation.
		H319	Causes serious eye irritation.
		H351	Suspected of causing cancer.
		H361d	Suspected of damaging the unborn child.
		H372	Causes damage to organs through prolonged or repeated exposure if swallowed and inhaled.
		H336	May cause drowsiness or dizziness.
2-chloroethanol; ethylene chlorohydrin	:	H226	Flammable liquid and vapour.
		H300	Fatal if swallowed.
		H330	Fatal if inhaled.
		H310	Fatal in contact with skin.
		H318	Causes serious eye damage.
		H411	Toxic to aquatic life with long lasting effects.

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

HYDRANAL™ Working Medium K

34817-1L

Version 1.10

Revision Date 03.06.2021

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.

This information should not constitute a guarantee for any specific product properties.
