

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

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

1.1. Product identifier

Product name : HYDRANAL™ Titrant 2
SDS-number : 00000020614
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.
115 Tabor Road
Morris Plains, NJ 07950-2546
USA

Telephone :
Telefax :
For further information,
please contact: : PMTEU Product Stewardship:
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

Flammable liquids Category 2
H225 Highly flammable liquid and vapour.
Acute toxicity Category 3 - Oral
H301 Toxic if swallowed.
Acute toxicity Category 3 - Inhalation

HYDRANAL™ Titrant 2

34811-500ML


Version 1.2

Revision Date 03.07.2018

H331 Toxic if inhaled.
Acute toxicity Category 3 - Dermal
H311 Toxic in contact with skin.
Specific target organ toxicity - single exposure Category 1
H370 Causes damage to organs.
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	:	H225 Highly flammable liquid and vapour. H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled. H370 Causes damage to organs. H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	:	P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. 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. P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Hazardous components which must be listed on the label	:	methanol iodine

2.3. Other hazards

Do not breathe vapours or spray mist.

SECTION 3: Composition/information on ingredients

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

3.1. Substance

Not applicable

3.2. Mixture

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
methanol	67-56-1 603-001-00-X 01-2119433307-44 200-659-6	Flam. Liq. 2; H225 Acute Tox. 3; H331 Acute Tox. 3; H311 Acute Tox. 3; H301 STOT SE 1; H370	>= 60 % - < 100 %	1*
iodine	7553-56-2 053-001-00-3 01-2119485285-30 231-442-4	Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 STOT RE 1; H372 Aquatic Acute 1; H400	>= 1 % - < 10 %	1*

1* - For specific concentration limits see Annexes of 1272/2008

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

Inhalation:

Call a physician immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present.

Skin contact:

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

Ingestion:

Call a physician immediately. Do NOT induce vomiting. Immediate medical attention is required. Never give anything by mouth to an unconscious person.

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

no data available

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
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry powder

Extinguishing media which shall not be used for safety reasons:

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Flammable.
Vapours may form explosive mixtures with air.
Vapours are heavier than air and may spread along floors.
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.
In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO₂)
Formaldehyde

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.
Use water spray to cool unopened containers. 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

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

Ensure adequate ventilation. Remove all sources of ignition. Wear personal protective equipment. Unprotected persons must be kept away.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Use explosion-proof equipment.

Soak up with inert absorbent material.

Pick for disposal in tightly closed containers

Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus.

Use only non-sparking tools.

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:

Wear personal protective equipment. Use only in well-ventilated areas.

Advice on protection against fire and explosion:

Keep product and empty container away from heat and sources of ignition. No smoking. Take precautionary measures against static discharges. Vapours may form explosive mixtures with air.

Hygiene measures:

Separate rooms are required for washing, showering and changing clothes. When using, do not eat, drink or smoke. Keep working clothes separately. 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

Further information on storage conditions:

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.

Product is hygroscopic. Do not leave vessels/containers open. Keep locked up or in an area accessible only to qualified or authorised persons.

7.3. Specific end use(s)

no additional data available

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
methanol	EH40 WEL STEL	333 mg/m3 250 ppm		
methanol	EH40 WEL TWA	266 mg/m3 200 ppm		
methanol	EH40 WEL SKIN_DES			Can be absorbed through the skin.
methanol	EU ELV SKIN_DES			Can be absorbed through the skin.
methanol	EU ELV TWA	260 mg/m3 200 ppm		Indicative
iodine	EH40 WEL			Listed
iodine	EH40 WEL STEL	1,1 mg/m3 0,1 ppm		

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

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
methanol	Consumers / Acute systemic effects		8mg/kg bw/d	Skin contact	
methanol	Workers / Acute systemic effects		40mg/kg bw/d	Skin contact	
methanol	Consumers / Long-term systemic effects		8mg/kg bw/d	Skin contact	
methanol	Workers / Long-term systemic effects		40mg/kg bw/d	Skin contact	

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

methanol	Consumers / Acute local effects		50 mg/m3	Inhalation	
methanol	Workers / Acute local effects		260 mg/m3	Inhalation	
methanol	Consumers / Acute systemic effects		50 mg/m3	Inhalation	
methanol	Workers / Acute systemic effects		260 mg/m3	Inhalation	
methanol	Consumers / Long-term local effects		50 mg/m3	Inhalation	
methanol	Workers / Long-term local effects		260 mg/m3	Inhalation	
methanol	Consumers / Long-term systemic effects		50 mg/m3	Inhalation	
methanol	Workers / Long-term systemic effects		260 mg/m3	Inhalation	
iodine	Workers / Long-term systemic effects		0,07 mg/m3	Inhalation	
iodine	Workers / Long-term systemic effects		0,01 mg/kg bw/d	Skin contact	

Component	Environmental compartment / Value	Remarks
methanol	Sewage treatment plant: 100 mg/l	
methanol	Fresh water: 20,8 mg/l	
methanol	Marine water: 2,08 mg/l	
methanol	Fresh water sediment: 77 mg/kg	
methanol	Marine sediment: 7,7 mg/kg	
methanol	Soil: 3,18 mg/kg	

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

iodine	Fresh water sediment: 0,01813 mg/l	
iodine	Marine water: 0,06001 mg/l	
iodine	Sewage treatment plant: 11 mg/l	Assessment factor: 10
iodine	Fresh water sediment: 3,99 mg/kg dw	
iodine	Marine sediment: 20,22 mg/kg dw	
iodine	Soil: 5,95 mg/kg dw	

8.2. Exposure controls

Occupational exposure controls

Do not breathe vapours/dust.

Take off all contaminated clothing immediately.

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.

Engineering measures

Use with local exhaust ventilation.

Electrical equipment should be protected to the appropriate standard.

Personal protective equipment

Respiratory protection:

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

Hand protection:

Glove material: butyl-rubber

Break through time: > 480 min

Glove thickness: 0,7 mm

Butoject® 898

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

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

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

Form	:	liquid
Colour	:	brown
Odour	:	aromatic
Melting point/range	:	-98 °C
Boiling point/boiling range	:	65 °C at 1.013 hPa
Flash point	:	11 °C
Ignition temperature	:	450 °C
Lower explosion limit	:	5,5 %(V)
Upper explosion limit	:	31 %(V)
Vapour pressure	:	128 hPa at 20 °C
Density	:	ca. 0,800 g/cm ³ at 20 °C
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
pH	:	neutral
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water	:	no data available

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

Relative vapour density : no data available

Evaporation rate : no data available

9.2 Other Information

The physical data is that of the main component.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.
Vapours may form explosive mixture with air.

10.4. Conditions to avoid

Heat, flames and sparks.
Keep away from direct sunlight.

10.5. Incompatible materials

Oxidizing agents

10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO₂)
Formaldehyde

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:
no data available

Acute dermal toxicity:
no data available

Acute inhalation toxicity:

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

no data available

Skin irritation:

no data available

Eye irritation:

no data available

Respiratory or skin sensitisation:

no data available

Aspiration hazard:

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

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. Other adverse effects

Do not flush into surface water or sanitary sewer system.

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

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

ADR/RID

UN Number : 1230
Description of the goods : METHANOL SOLUTION
Class : 3
Packaging group : II
Classification Code : FT1
Hazard Identification : 336
Number
ADR/RID-Labels : 3 (6.1)
Environmentally hazardous : no

IATA

UN Number : 1230
Description of the goods : Methanol solution
Class : 3
Packaging group : II
Hazard Labels : 3 (6.1)

IMDG

UN Number : 1230
Description of the goods : METHANOL SOLUTION
Class : 3
Packaging group : II
Hazard Labels : 3 (6.1)
EmS Number : F-E, S-D
Marine pollutant : no

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

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 : H2: ACUTE TOXIC	Amount 1: 50.000 kg Amount 2: 200.000 kg	

Basis	Value	Remarks
Directive 2012/18/EC Listed in Regulation : P5c: FLAMMABLE LIQUIDS	Amount 1: 5.000.000 kg Amount 2: 50.000.000 kg	

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	no data available
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	no data available
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	no data available
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240

Country	Phone Number
Liechtenstein	no data available
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	no data available
Netherlands	030-2748888
Norway	22591300
Poland	no data available
Portugal	808250143
Romania	no data available
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	no data available
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	no data available

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

	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. The Toxic Substances and Hazardous and Nuclear Waste Control Act
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances
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

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

Methanol	:	H225	Highly flammable liquid and vapour.
		H331	Toxic if inhaled.
		H311	Toxic in contact with skin.
		H301	Toxic if swallowed.
		H370	Causes damage to organs.

HYDRANAL™ Titrant 2

34811-500ML

Version 1.2

Revision Date 03.07.2018

Iodine	:	H302 + H312 + H332	Harmful if swallowed, in contact with skin or if inhaled.
		H315	Causes skin irritation.
		H319	Causes serious eye irritation.
		H335	May cause respiratory irritation.
		H372	Causes damage to organs through prolonged or repeated exposure.
		H400	Very toxic to aquatic life.

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 biaccumulative substance
PBT Persistent, bioaccumulative und 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.

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