

HYDRANAL™ Titrant 5

34801-1L


Version 1.7

Revision Date 27.04.2022

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

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Hazardous components : methanol
which must be listed on the iodine
label

2.3. Other hazards

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
methanol	67-56-1 603-001-00-X 200-659-6	Flam. Liq. 2; H225 Acute Tox. 3; H331; Inhalation Acute Tox. 3; H311; Dermal Acute Tox. 3; H301; Oral STOT SE 1; H370	>= 90 % - < 95 %	STOT SE 2; H371:3 - < 10 % STOT SE 1; H370:>= 10 % STOT SE 1; H370:>= 10 % STOT SE 2; H371:3 - < 10 %
iodine	7553-56-2 053-001-00-3 231-442-4	Acute Tox. 4; H302; Oral Acute Tox. 4; H332; Inhalation Acute Tox. 4; H312; Dermal Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335; Respiratory system STOT RE 1; H372 Aquatic Acute 1; H400	>= 5 % - < 10 %	

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

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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.

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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:

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

5.2. Special hazards arising from the substance or mixture

In case of fire hazardous decomposition products may be produced such as:

Carbon monoxide
Carbon dioxide (CO₂)
Hydrogen halides

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. Remove all sources of ignition.

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

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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:

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°C) Protect from atmospheric moisture and water.

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
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
methanol	EH40 WEL STEL	333 mg/m3 250 ppm	15 minutes	
methanol	EH40 WEL STEL	333 mg/m3 250 ppm	15 minutes	
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	

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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	
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	
methanol	Consumers /		8mg/kg	Ingestion	

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	Acute systemic effects		bw/d		
methanol	Consumers / Long-term systemic effects		8mg/kg bw/d	Ingestion	
iodine	Workers / Long-term systemic effects		0,07 mg/m3	Inhalation	
iodine	Workers / Long-term systemic effects		0,01mg/kg bw/d	Skin contact	

Component	Environmental compartment / Value	Remarks
methanol	Sewage treatment plant: 100 mg/l	
methanol	Fresh water: 20,8 mg/l	Assessment factor: 10
methanol	Marine water: 2,08 mg/l	Assessment factor: 100
methanol	Fresh water sediment: 77 mg/kg	
methanol	Marine sediment: 7,7 mg/kg	
methanol	Soil: 100 mg/kg	Assessment factor: 100
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	

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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.

Do not breathe vapours or spray mist.

Engineering measures

Use with local exhaust ventilation.

Prevent vapour buildup by providing adequate ventilation during and after use.

Personal protective equipment

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment.

Recommended Filter type:

Organic gas and low boiling vapour type

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

Eye protection:

Safety goggles

Skin and body protection:

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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	: brown
Odour	: aromatic
Melting point/range	: -98 °C
Boiling point/boiling range	: 65 °C at 1.013 hPa
Upper explosion limit	: 31 %(V)
Lower explosion limit	: 5,5 %(V)
Flash point	: 11 °C
Auto-ignition temperature	: 450 °C
Decomposition temperature	: No decomposition if used as directed.
pH	: neutral
Viscosity, kinematic	: No data available
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: No data available
Vapour pressure	: 128 hPa at 20 °C

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Density : ca. 0,850 g/cm³
at 20 °C

Relative vapour density : No data available

9.2 Other Information

Sensitive to air. Decomposes when moist. The physical data is that of the main component.

Evaporation rate : No data available

Viscosity, dynamic : No data available

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.

10.4. Conditions to avoid

Protect from atmospheric moisture and water.

Heat, flames and sparks.

10.5. Incompatible materials

Oxidizing agents

Acid chlorides

Acid anhydrides

Reducing agents

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Acids

10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:

Carbon monoxide
Carbon dioxide (CO₂)
Hydrogen halides

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:
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

11.2. Information on other hazards

Endocrine disrupting properties
No data available

Other information:
No data available

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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

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Should not be released into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

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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:1230

IMDG:1230

IATA:1230

14.2 UN proper shipping name

ADR/RID:METHANOL SOLUTION

IMDG:METHANOL SOLUTION

IATA:Methanol solution

14.3 Transport hazard class(es)

ADR/RID: 3 (6.1)

IMDG: 3 (6.1)

IATA: 3 (6.1)

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID:no

Marine pollutant: no

14.6 Special precautions for user

IMDG Code segregation group according chapter 3.1.4.4 : NONE,

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
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Directive 2012/18/EC Listed in Regulation : H2: ACUTE TOXIC	Quantity: 50.000 kg Quantity: 200.000 kg	
Directive 2012/18/EC Listed in Regulation : H3: Specific target organ toxicity	Quantity: 50.000 kg Quantity: 200.000 kg	
Directive 2012/18/EC Listed in Regulation : P5c: FLAMMABLE LIQUIDS	Quantity: 5.000.000 kg Quantity: 50.000.000 kg	
Regulation (EC) No. 1907/2006, Annex XVII		This product contains an ingredient according to Annex XVII of the REACH Regulation 1907/2006/EC.
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).

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

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	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051

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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	
Latvia	+37167042473

Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Industrial Chemicals Act (AIC), as amended
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

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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.
iodine	:	H302	Harmful if swallowed.
		H332	Harmful if inhaled.
		H312	Harmful in contact with skin.
		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:

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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 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.
