revvity

Safety Data Sheet
acc. to OSHA HCS

Printing date 11/29/2023 Reviewed on 11/29/2023

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1 Identification

· **Product identifier**

· **Trade name: Hydroxide of Hyamine 10-X**

· **Article number:** 6003005
· **Application of the substance / the mixture** Laboratory chemicals

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Revvity Health Sciences B.V.
Rigaweg 22
9723 TH Groningen
The Netherlands
Phone: 0031 50 5445900
www.revvity.com

· **Information department:**
Quality Assurance, Environment, Safety & Health (QA/ESH)
SDS.Groningen@revvity.com
· **Emergency telephone number:**
+31 50 5445971
CHEMTREC (within U.S.A. and Canada) 1-800-424-9300
CHEMTREC (from outside U.S.A. and Canada) +1703-527-3887

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2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS02 Flame

Flammable Liquids 2	H225 Highly flammable liquid and vapor.

GHS06 Skull and crossbones

Acute Toxicity - Oral 3	H301 Toxic if swallowed.
Acute Toxicity - Dermal 3	H311 Toxic in contact with skin.
Acute Toxicity - Inhalation 3	H331 Toxic if inhaled.

GHS08 Health hazard

Specific Target Organ Toxicity - Single Exposure 1	H370 Causes damage to the central nervous system and the visual organs.

GHS05 Corrosion

Skin Corrosion 1B	H314 Causes severe skin burns and eye damage.
Eye Damage 1	H318 Causes serious eye damage.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**

GHS02 GHS05 GHS06 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
methanol
Quaternary Ammonium Hydroxide
· **Hazard statements**
H225 Highly flammable liquid and vapor.
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H370 Causes damage to the central nervous system and the visual organs.
· **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:**
Mixture: consisting of the following components.
~ 1M Benzethonium hydroxide in methanol

· **Dangerous components:**		
67-56-1	methanol Flammable Liquids 2, H225 Acute Toxicity - Oral 3, H301; Acute Toxicity - Dermal 3, H311; Acute Toxicity - Inhalation 3, H331 Specific Target Organ Toxicity - Single Exposure 1, H370	40-60%
498-77-1	Quaternary Ammonium Hydroxide Acute Toxicity - Oral 3, H301 Skin Corrosion 1B, H314; Eye Damage 1, H318	40-60%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
· **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
Do not induce vomiting; immediately call for medical help.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Prevent seepage into sewage system, workpits and cellars.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
67-56-1	methanol	530 ppm

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· **PAC-2:**		
67-56-1	methanol	2,100 ppm

· **PAC-3:**		
67-56-1	methanol	7200* ppm

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
· **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
67-56-1 methanol	
PEL	260 mg/m³, 200 ppm
REL	Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm Skin
TLV	Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm Skin; BEI

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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· **Protection of hands:**

Protective gloves

EN ISO 374-1/Type B

· **Material of gloves**
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.2 mm
Breakthrough time: > 120 minutes
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	Colorless
· **Odor:**	Characteristic
· **Change in condition**	
Melting point/Melting range:	Undetermined. -95 ° C (-139 ° F)
Boiling point/Boiling range:	65 °C (149 °F)
· **Flash point:**	18 °C (64.4 °F)
· **Auto igniting:**	470 °C (878 °F)
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	5.5 Vol %
Upper:	44.0 Vol %
· **Vapor pressure at 20 °C (68 °F):**	95 hPa (71.3 mm Hg)
· **Density at 20 °C (68 °F):**	0.93 g/cm³ (7.76085 lbs/gal)
· **Solubility in / Miscibility with**	
Water:	Fully miscible.

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· ***Solvent content:***	
VOC content:	*40-60 %*
· ***Other information***	*No further relevant information available.*

10 Stability and reactivity

· ***Reactivity*** *No further relevant information available.*
· ***Chemical stability***
· ***Thermal decomposition / conditions to be avoided:*** *No decomposition if used according to specifications.*
· ***Possibility of hazardous reactions*** *No dangerous reactions known.*
· ***Conditions to avoid*** *No further relevant information available.*
· ***Incompatible materials:*** *No further relevant information available.*
· ***Hazardous decomposition products:***
Nitrogen oxides
Carbon monoxide

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11 Toxicological information

· ***Information on toxicological effects***
· ***Acute toxicity:***

· ***LD/LC50 values that are relevant for classification:***		
67-56-1 methanol		
Dermal	*LD50*	*5628 mg/kg (Rabbit)*

· ***Primary irritant effect:***
· ***on the skin:*** *Strong caustic effect on skin and mucous membranes.*
· ***on the eye:*** *Strong caustic effect.*
· ***Sensitization:*** *No sensitizing effects known.*
· ***Additional toxicological information:***
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· ***Carcinogenic categories***

· ***IARC (International Agency for Research on Cancer)***
None of the ingredients is listed.

· ***NTP (National Toxicology Program)***
None of the ingredients is listed.

· ***OSHA-Ca (Occupational Safety & Health Administration)***
None of the ingredients is listed.

12 Ecological information

· ***Toxicity***
· ***Aquatic toxicity:*** *No further relevant information available.*

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· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

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13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** Must be specially treated adhering to official regulations.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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14 Transport information

· **UN-Number**	
· **ADR, IMDG, IATA**	UN2924
· **UN proper shipping name**	
· **ADR**	2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (METHANOL, quaternary ammonium hydroxide)
· **IMDG**	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (METHANOL, quaternary ammonium hydroxide)
· **IATA**	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (METHANOL, QUATERNARY AMMONIUM HYDROXIDE)
· **Transport hazard class(es)**	
· **ADR**	

· **Class**	3 (FC) Flammable liquids
· **Label**	3+8
· **IMDG, IATA**	

· **Class**	3 Flammable liquids

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· **Label**	3+8
· **Packing group** · **ADR, IMDG, IATA**	II
· **Environmental hazards:** · **Marine pollutant:**	No
· **Special precautions for user** · **Hazard identification number (Kemler code):** · **EMS Number:**	Warning: Flammable liquids 368 F-E,S-C
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S. (METHANOL, quartenary ammonium hydroxide), ENVIRONMENTALLY HAZARDOUS, 3 (8), II

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

67-56-1	methanol

· **TSCA (Toxic Substances Control Act):**

67-56-1	methanol	ACTIVE

· **Hazardous Air Pollutants**

67-56-1	methanol

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

67-56-1	methanol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value)**
None of the ingredients is listed.

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· **MAK (German Maximum Workplace Concentration)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS02 GHS05 GHS06 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
methanol
Quaternary Ammonium Hydroxide
· **Hazard statements**
H225 Highly flammable liquid and vapor.
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H370 Causes damage to the central nervous system and the visual organs.
· **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapor.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H370 Causes damage to organs.

· **Department issuing SDS:** Quality Assurance, Environment, Safety & Health (QA/ESH)
· **Contact:** SDS.Groningen@revvity.com
· **Date of preparation / last revision** 11/29/2023
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flammable Liquids 2: Flammable liquids – Category 2
Acute Toxicity - Oral 3: Acute toxicity – Category 3
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
Eye Damage 1: Serious eye damage/eye irritation – Category 1
Specific Target Organ Toxicity - Single Exposure 1: Specific target organ toxicity (single exposure) – Category 1

· **** Data compared to the previous version altered.***