

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : P250
Product code : 1-P250

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Adhesive

1.4. Supplier's details

Hottinger Brüel & Kjaer
19 Bartlett St.
Marlborough, MA 01590
USA
T 1-508-804-3268
support.@hbm.com

1.5. Emergency phone number

Emergency number : For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night: 1-800-424-9300 (Toll Free, USA) / 703-527-3887 (Virginia, USA)
CCN 1015295
Back-up Emergency Number: +1 703-741-5970 (Washington, DC)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquid, Category 2	H225	Highly flammable liquid and vapor.
Serious eye damage/eye irritation, Category 2A	H319	Causes serious eye irritation.
Skin sensitization, Category 1	H317	May cause an allergic skin reaction.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H225 - Highly flammable liquid and vapor
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

Precautionary statements (GHS US) :

Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment.

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Use explosion-proof electrical, lighting, ventilating equipment.
Avoid breathing mist, spray, vapors.
Wash hands, forearms and face thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves, protective clothing, eye and face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation or rash occurs: Get medical advice or attention.
Take off immediately all contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice or attention.
In case of fire: Use Dry chemical, CO₂, alcohol-resistant foam or waterspray to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Ethanol	CAS-No.: 64-17-5	50 – 70	Flam. Liq. 2, H225 Eye Irrit. 2A, H319
Formaldehyde, oligomeric reaction products with phenol	CAS-No.: 9003-35-4	30 – 50	Eye Irrit. 2A, H319 Skin Sens. 1, H317
Methenamine	CAS-No.: 100-97-0	< 5	Flam. Sol. 2, H228 Skin Sens. 1, H317

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, seek medical advice. First aider: Pay attention to self-protection. Never give anything by mouth to an unconscious person. Give artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device but not mouth-to-mouth.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If the victim is unconscious : Lay in a stable manner on victim's side. Induce artificial respiration with mask fitted with one-way valve or other suitable device; not mouth-to-mouth. Call a physician immediately.

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According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin areas with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: Inhalation of vapors may cause respiratory irritation.
Symptoms/effects after skin contact	: May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: Eye irritation. Redness, itching, tears.
Symptoms/effects after ingestion	: Burning sensation. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Most Important Symptoms/Effects	: Causes serious eye irritation. May cause an allergic skin reaction.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: IF exposed or concerned: Get medical advice/attention.
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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Dry chemical, CO ₂ , alcohol-resistant foam or waterspray.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: Highly flammable liquid and vapor.
Explosion hazard	: Vapors may form explosive mixture with air. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Carbon dioxide. Carbon monoxide. Sulfur oxides.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: For small fire: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Move containers from fire area if it can be done without personal risk. Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Withdraw immediately in case of rising sound from venting devices or discoloration from tank. ALWAYS stay away from tanks engulfed in fire. For a massive fire, use unmanned hose holders or monitor nozzles, or withdraw from the area and allow fire to burn. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Avoid all personal contact including breathing in the mist, spray, vapors. Do not take actions involving personal risks. Absorb spillage to prevent material-damage. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.
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For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
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According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Emergency procedures : Evacuate the danger area. If outdoors, move to an area upwind of the danger area. Avoid breathing mist, spray, vapors. Avoid contact with skin and eyes. If possible without taking personal risks, Remove ignition sources, ventilate area. Prevent other non-emergency personnel from entering the danger area. No open flames, no sparks, and no smoking.

For emergency responders

Protective equipment : Wear the recommended personal protective equipment. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Do not touch spilled material. Stop leak if safe to do so. Reduce vapor with vapor-suppression foam.

Environmental precautions : Avoid release to the environment. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.2. Methods and materials for containment and cleaning up

For containment : Contain with non-combustible inert absorbent. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk. For large spills, use water spray to disperse vapors, flush spill area.

Methods for cleaning up : Notify authorities if product enters sewers or public waters. Take up in non-combustible inert absorbent and place into container for disposal. Contaminated absorbent material may pose the same hazard as the spill product. Decontaminate surfaces and equipment with water. Until a sufficient level of dilution is achieved, the decontamination water may pose the same hazards as the product. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

For further information refer to section 8: "Exposure controls/personal protection", For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Avoid breathing mist, spray, vapors. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use only non-sparking tools. Use explosion-proof equipment. Flammable vapors may accumulate in the container.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

Additional hazards when processed : Proper grounding procedures to avoid static electricity should be followed.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions : Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Store in a cool, dry and well-ventilated area away from incompatible substances. Protect from sunlight. Use explosion-proof equipment. Ground and bond container and receiving equipment. Keep container tightly closed.

Incompatible materials : Oxidizing agents. Nitrates. Sodium hypochlorite. Strong acids.

Heat-ignition : No flames, no sparks. Eliminate all sources of ignition.

Packaging materials : Store always product in container of same material as original container.

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According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Use general ventilation, local exhaust ventilation, or process enclosure to keep the airborne concentrations below the permissible exposure limits. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment. Take measures to reduce or limit air emissions and releases to soil and the aquatic environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Personal protective equipment should be chosen according to national standards and in discussion with the supplier of the protective equipment. Wear recommended personal protective equipment.

Hand protection:

Wear protective gloves. Chemically impervious gloves as described by OSHA's hand protection regulations in 29 CFR 1910.138. The following materials are suitable for protective gloves: Butyl rubber, Fluorocarbon rubber. The following materials are unsuitable for protective gloves because of degradation, severe swelling or low permeation time: Natural rubber, Nitrile rubber, Polyvinylchloride (PVC)

Eye protection:

Wear safety glasses which protect from splashes

Skin and body protection:

Body protection should be chosen depending on activity and possible exposure. Wear fire/flammable resistant/retardant clothing. Antistatic clothing

Respiratory protection:

Use NIOSH approved respirator if ventilation is inadequate. SCBA for emergency responders. Must be used in accordance with an OSHA compliant respiratory protection program.

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Color	: Brown
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Flammability (solid, gas)	: Not applicable.

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According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions. Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Vapors may form flammable and explosive mixture with air.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Incompatible materials.

10.5. Incompatible materials

Oxidizing agents. Nitrates. Sodium hypochlorite. Strong acids.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Carbon dioxide. Carbon monoxide. Sulfur oxides.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Ethanol

LD50 oral rat	7060 mg/kg body weight
LD50 oral	6200 mg/kg
LD50 dermal rabbit	> 18000 mg/kg body weight
LD50 dermal	20000 mg/kg
LC50 Inhalation - Rat	124.7 mg/l/4h

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Methenamine	
LD50 oral rat	> 20000 mg/kg body weight
LD50 dermal rat	> 2000 mg/kg body weight
Formaldehyde, oligomeric reaction products with phenol	
LD50 oral rat	> 5000 mg/kg body weight
LD50 dermal rat	> 2000 mg/kg body weight
LC50 Inhalation - Rat	> 5 mg/l air
Skin corrosion/irritation	: Not classified
Ethanol	
Skin corrosion/irritation, rabbit	Not irritating to rabbits on cutaneous application
Formaldehyde, oligomeric reaction products with phenol	
Human Skin Model (HSM) test	Not irritating
Serious eye damage/irritation	: Causes serious eye irritation.
Ethanol	
Serious eye damage/irritation, rabbit	Moderately irritating
Formaldehyde, oligomeric reaction products with phenol	
Serious eye damage/irritation, rabbit	Irritating to eyes
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Ethanol	
Skin sensitization, mouse	Not sensitive
Formaldehyde, oligomeric reaction products with phenol	
Patch test, human	Sensitiser
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Ethanol	
IARC group	1 - Carcinogenic to humans
Methenamine	
NOAEL (chronic,oral,animal/male,2 years)	1500 – 2000 mg/kg body weight
NOAEL (chronic,oral,animal/female,2 years)	2000 – 2500 mg/kg body weight
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Ethanol	
NOAEL (subchronic,oral,animal/male,90 days)	< 9700 mg/kg body weight
NOAEL (subchronic,oral,animal/female,90 days)	> 9400 mg/kg body weight

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According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Formaldehyde, oligomeric reaction products with phenol

NOAEL (oral,rat,90 days)	1000 mg/kg body weight
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: Inhalation of vapors may cause respiratory irritation.
Symptoms/effects after skin contact	: May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: Eye irritation. Redness, itching, tears.
Symptoms/effects after ingestion	: Burning sensation. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Most Important Symptoms/Effects	: Causes serious eye irritation. May cause an allergic skin reaction.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects

Ethanol

LC50 - Fish [1]	11200 mg/l
EC50 - Crustacea [1]	5463 mg/l
ErC50 algae	1000 mg/l
NOEC (chronic)	9.6 mg/l
NOEC chronic crustacea	9.6 mg/l

Methenamine

LC50 - Fish [1]	41 g/l
LC50 - Fish [2]	49 g/l

12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
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Ethanol

Persistence and degradability	Rapidly degradable
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Methenamine

Persistence and degradability	Not rapidly degradable
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Formaldehyde, oligomeric reaction products with phenol

Persistence and degradability	>60 % biodegradation Not rapidly degradable.
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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

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According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations. Dispose of this material and its container at hazardous or special waste collection point. Refer to all applicable national, international and local regulations or provisions. U.S. - RCRA (Resource Conservation Recovery Act) - D Waste-Characteristic Waste Codes. D001: IGNITABLE WASTE.
Additional information : Flammable vapors may accumulate in the container. Do not re-use empty containers.
Ecological waste information : Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / IMDG / IATA

DOT	IMDG	IATA
14.1. UN number		
UN1170	1170	1170
14.2. Proper Shipping Name		
Ethyl alcohol solutions	ETHANOL (ETHYL ALCOHOL)	Ethanol solution
14.3. Transport hazard class(es)		
3	3	3
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
	Dangerous for the environment: No Marine pollutant: No	
No supplementary information available		

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
UN-No. (DOT) : UN1170
DOT Packaging Exceptions (49 CFR 173.xxx) : 4b;150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

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According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

IMDG

Special provision (IMDG) : 144
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1
EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage) : S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG) : A
Properties and observations (IMDG) : Colorless, volatile liquids. Pure ETHANOL: flashpoint 13°C c.c. Explosive limits: 3.3% to 19%. Miscible with water.

IATA

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
ERG code (IATA) : 3L

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Ethanol (64-17-5)

Listed on the Canadian DSL (Domestic Substances List)

Methenamine (100-97-0)

Listed on the Canadian DSL (Domestic Substances List)

Formaldehyde, oligomeric reaction products with phenol (9003-35-4)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

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According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

National regulations

Ethanol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Methenamine (100-97-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Formaldehyde, oligomeric reaction products with phenol (9003-35-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Ethanol(64-17-5)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Methenamine(100-97-0)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List

SECTION 16 Other information

According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date : 7/11/2025
Issue date : 12/13/2024

Full text of hazard classes and H-statements

H225	Highly flammable liquid and vapor
H228	Flammable solid
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

Indication of changes:

HazCom 2024.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.