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

1.1 Product identifier
Trade Name: Mykov CD80
Article n°: 519XXXX

1.2 Relevant identified uses of the substance or mixture and uses advised against
Laboratory Chemistry – For use as cleaning reagent for equipment.
For professional use only.

1.3 Details of the supplier of the safety data sheet
Kovalent do Brasil Ltda.
Rua Cristóvão Sardinha, 110 – Jd. Bom Retiro – São Gonçalo – RJ – Brasil.
Tel: +(55 21) 2623-1367
e-mail: kovalent@kovalent.com.br

1.4 Emergency telephone number
Tel: +(55 21) 2623-1367 – Costumer service 8AM to 5PM.
0800 015 1414

In case of emergency
24 hours service
0800-722-6001 – RENACIAT (Rede Nacional de Centros de Informação e Assistência Toxicológica)

2 Hazards Identification

2.1 Classification of the substance or mixture
Skin corrosion/irritation 1B; H314
Serious eye damage/eye irritation 1; H318.

2.2 Label elements

Labelling (GHS)

Signal word:	Danger
Hazard statements:	H314 – Causes severe skin burns and eye damage.
Precautionary statements:	P260 – Do not breathe dust/fume/gas/mist/vapors/spray. P264 – Wash exposed body parts thoroughly after handling. P280 – Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 – IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water [or 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. P310 – Immediately call a POISON CENTER/doctor/rescuer. P363 – Wash contaminated clothing before reuse. P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. P405 – Store locked up. P501 – Dispose of contents/container at an authorized collection point for hazardous or special waste, in accordance with local regulations.

2.3 Other hazards
The mixture does not contain substances of very high concern.

3 Composition/information on ingredients

3.1 Substances
Not applicable

3.2 Mixtures
Chemical characterization: Aqueous solution

Ingredient	CAS	Content	Classification
Potassium Hydroxide	1310-58-3	2%	Skin corrosion 1A; H314. Acute oral toxicity 4; H302.
EDTA	6381-92-6	1%	Acute oral toxicity 4; H302. Skin irritation 2; H315. Eye irritation 2A; H319. STOT SE 3; H335. Hazardous to aquatic environment – chronic 3; H412.
Surfactant	9005-64-5	3%	Not applicable.

4 First aid measures

4.1 Description of first aid measures
In case of inhalation: If fumes or combustion products are inhaled, remove from contaminated area. Lay the patient down. Keep warm and at rest. Dentures such as false teeth, which may block airways, should be removed whenever possible before starting first aid procedures. Apply artificial respiration if not breathing, preferably using a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Transport to hospital or doctor immediately.

Following skin contact: Immediately wash body and clothing with plenty of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair under running water. Continue rinsing. If symptoms persist, consult a doctor.

After eye contact: Immediately keep eyelids open and rinse eyes continuously with running water. Ensure complete irrigation of the eye, keeping eyelids apart and away from the eyes and moving eyelids by occasionally lifting upper and lower lids. Removal of contact lenses after an eye injury should only be performed by qualified personnel. Continue rinsing. If symptoms persist, consult an ophthalmologist.

After swallowing: For advice, contact a Poison Information Center or a doctor immediately. Urgent hospital treatment is likely to be required. If swallowed DO NOT induce vomiting. If vomiting occurs, lean the patient forward or place on the left side (head down position if possible) to maintain airway and prevent aspiration. Observe the patient carefully. Never give liquids to a person showing signs of drowsiness or reduced consciousness; that is, becoming unconscious. Give water to rinse mouth and then provide liquid slowly and as much as the victim can comfortably drink. Transport to hospital or doctor without delay.

4.2 Most important symptoms and effects, both acute and delayed
See section 11.

4.3 Indication of any immediate medical attention and special treatment needed
Notes for the doctor: Treat symptomatically.

5 Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media: There are no restrictions on the type of fire extinguisher that can be used. Use extinguishing agents appropriate for the surrounding area.

5.2 Special hazards arising from the substance or mixture
Incompatibility with fire: None known.

5.3 Advice for firefighters
Alert the fire brigade and inform them of the location and nature of the hazard. Use respiratory protection and gloves in case of fire. Prevent, by any means available, spills from entering drains or waterways. Use appropriate firefighting procedures for the surrounding area. DO NOT approach containers suspected of being hot. Cool containers exposed to fire with water spray from a protected location. If it is safe to do so, remove containers from the path of the fire. Equipment must be fully decontaminated after use.

Non-combustible.

Not considered a significant fire hazard, however, containers may burn.

Decomposition may produce toxic fumes. May emit corrosive fumes.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Refer to section 8.

6.2 Environmental precautions
Refer to section 12.

6.3 Methods and material for containment and cleaning up
Clean up all spills immediately. Avoid breathing vapors and contact with skin and eyes. Control personal contact with the substance using protective equipment. Contain and absorb the spill with sand, earth, inert material, or vermiculite. Clean up. Place in a suitable container labeled for waste disposal. Moderate hazard. Move personnel away from the area and move upwind. Prevent, by any means available, the spill from entering drains or bodies of water. Stop the leak if it is safe to do so. Wash the area and prevent runoff into drains. After cleanup operations, decontaminate and wash all clothing and protective equipment before storing and reusing them. If contamination of drains or bodies of water occurs, notify emergency services.

7 Handling and storage

7.1 Precautions for safe handling
Avoid all personal contact, including inhalation. Wear protective clothing when there is a risk of exposure. Use in a well-ventilated area. Avoid contact with moisture. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers tightly closed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be washed separately. Wash contaminated clothing before reuse. Use good occupational work practices. Follow the manufacturer's recommendations on storage and handling contained in this safety data sheet. Do not allow clothing soaked with the material to remain in contact with the skin.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:	Keep containers tightly closed, leak-proof, properly labeled, and stored at the appropriate temperature.
Storage incompatibility:	None known.

8 Exposure controls/personal protection

8.1 Control parameters

Ingredient	DNELs Worker Exposure	PNECs Compartment
Potassium Hydroxide	Inhalation 1 mg/m³ (Local, chronic) Inhalation 1 mg/m³ (Local, chronic)*	Not available
EDTA	Inhalation 1.5 mg/m³ (Local, chronic) Inhalation 3 mg/m³ (Local, acute) Oral 25 mg/kg (systemic, chronic)* Inhalation 0.6 mg/m³ (Local, chronic)* Inhalation 1.2 mg/m³ (Local, acute)*	2.2 mg/L (water) 0.22 mg/L (water – intermittent release) 1.2 mg/L (marine water) 0.72 (soil) 43 mg/L (STP – treated sewage)

*Values for general population

Occupational Exposure Limits (OEL):
Not available.

Emergency Limits:

Ingredient	TEEL-1	TEEL-2	TEEL-3
Potassium Hydroxide	0.18 mg/m³	2 mg/m³	54 mg/m³
EDTA	11 mg/m³	120 mg/m³	730 mg/m³
EDTA	30 mg/m³	330 mg/m³	2000 mg/m³

Ingredient	TEEL-1	TEEL-2
Potassium Hydroxide	Not available	Not available
EDTA	Not available	Not available

8.2 Engineering control measures
Employers may need to use multiple types of controls to prevent overexposure. Local exhaust ventilation is generally required. If risk of overexposure exists, use an approved respirator. Provide adequate ventilation in warehouses or enclosed storage areas.

8.3 Personal protective measures

Eye and face protection: Safety goggles with non-perforated side shields may be used where continuous eye protection is desirable, such as in laboratories; prescription glasses are not sufficient when complete eye protection is required, such as when handling large volumes where splash risk exists. Chemical splash goggles must always be worn whenever there is a risk of the material contacting the eyes; goggles must be properly fitted. A full face shield (minimum 20 cm, 8 inches) may be required as supplementary protection, but never as primary eye protection; these provide face protection. Alternatively, a gas mask may replace splash goggles and face shields. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document describing the use of lenses or restrictions on their use should be developed for each workplace or task. This should include a review of absorption and adsorption of lenses for the class of chemicals in use and a report of injury experience. Medical and first aid personnel should be trained in their removal and appropriate equipment should be readily available.

Hand and foot protection: When handling corrosive liquids, wear trousers or coveralls over boots to prevent splashes from entering boots. Personal hygiene is a key element for effective hand care. Gloves should only be worn on clean hands. After glove use, hands should be washed and dried thoroughly. Manufacturer's technical data should always be considered to ensure selection of the most appropriate glove for the task.

Glove material: Nitrile rubber (Nitrile rubber layer thickness: 0.11 mm)
Breakthrough time: > 480 min.
Follow manufacturer's instructions regarding penetration and break time.
Butyl rubber or Neoprene.

Skin and body protection: Lab coat.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Physical state at 20 °C and 101.3 kPa: Liquid

Colour: Colorless to milky white

Odour: No data available

Odour threshold: No data available

pH: > 12.00 at 25°C

Melting point/freezing point: No data available

Initial boiling point and boiling range: No data available

Flash point:	> 70°C
Evaporation rate:	No data available
Flammability (solid/gas):	> 100°C, non-combustible
Lower/upper flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	No data available
Water solubility:	At 20°C: Miscible
Partition coefficient n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

10 Stability and reactivity

10.1 Reactivity
See section 7.2.

10.2 Chemical stability
Unstable in the presence of incompatible materials. The product is considered stable.
Hazardous polymerization will not occur.

10.3 Possibility of hazardous reactions
See section 7.2.

10.4 Conditions to avoid
See section 7.2.

10.5 Incompatible materials
See section 7.2.

10.6 Hazardous decomposition products
See section 5.3.

11 Toxicological information

The instructions are derived from the properties of individual components. No toxicological data available for the product as such.

Acute toxicity:	Not available.
Skin corrosion/irritation:	The material may produce severe chemical burns after direct contact with the skin. Contact with skin is not considered harmful to health (as classified under EC Guidelines); however, the material may still cause health damage after entry through wounds, lesions, or abrasions. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the bloodstream, through cuts, abrasions, or lesions, may cause systemic injury with harmful effects. Examine skin before using the material and ensure any external damage is adequately protected.

Serious eye damage/irritation:	The material may cause severe chemical burns to the eyes after direct contact. Vapors or mists may be extremely irritating. If applied to the eyes, this material causes serious eye damage.
Respiratory sensitization:	Not available.
Germ cell mutagenicity/Genotoxicity:	Not available.
Carcinogenicity:	Not available.
Reproductive toxicity:	Not available.
Specific target organ toxicity: (single exposure)	Not available.
Specific target organ toxicity: (repeated exposure)	Not available.
Aspiration hazard:	Not available.
Symptoms:	Repeated or prolonged exposure to corrosives may result in erosion of teeth, inflammatory and ulcerative changes in the mouth, and necrosis (rarely) of the jaw. Bronchial irritation with cough and frequent attacks of bronchial pneumonia may occur. Prolonged exposure to respiratory irritants may result in airway disease involving breathing difficulties and systemic problems. Accumulation of substances in the human body may occur and may cause concern after repeated or prolonged occupational exposure.

12 Ecological information

12.1 Toxicity
No data available.

12.2 Persistence and degradability
Methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential – Partition coefficient n-octanol/watter:
No data available.

12.4 Mobility in soil
No data available.

12.5 Other adverse effects – General information:
Do not allow entry into groundwater, surface water, or drains.

13 Disposal considerations

13.1 Waste treatment methods

Product:	Dispose of waste according to applicable legislation.
Package:	Dispose of waste according to applicable legislation.
Additional information:	Do not reuse empty containers.

14 Transport information

14.1 UN number

ADR/RID, IMDG, IATA, ANTT	UN1814

14.2 UN proper shipping name

ADR/RID, IMDG, IATA, ANTT	UN1814, POTASSIUM HYDROXIDE, SOLUTION

14.3 Hazard class

ADR/RID:	Class 8, Code: C5
IMDG:	Class 8, Subsidiary risk –
IATA:	Class 8
ANTT:	Class 8

14.4 Risk Number

-

14.5 Packing group

ADR/RID, IMDG, IATA, ANTT: See section 14.7

14.6 Environmental hazards

Marine pollutant: No

14.6 Special precautions for user

Road Transport (ADR/RID/ANTT)

Warning plate:	ADR/RID: Kemmler number 80, UN number 1814
Hazard label:	8
Packaging Group:	III
Limited quantities:	5L
Contaminated packaging (Instructions):	P001 IBC03 LP01
Mobile tanks (Instructions):	T4
Mobile tanks (special forecasts):	TP1
Tunnel restriction code:	3E

Maritime Transport (IMDG)

Packing Group:	II
EMS:	F-A, S-B
Special provisions:	Not applicable
Limited quantities:	1L
EQ:	E1
Contaminated packaging (Instructions):	P001, LP01
IBC (Instructions):	IBC03
Tank instructions – UN:	T4
Tank instructions (Provisions):	TP1
Stowage and Handling:	Category A
Segregation:	SG35
Properties and Observations:	Colorless liquid. Corrosive to aluminum, zinc, and tin. Reacts with ammonium salts, releasing ammonia gas. Causes burns to skin, eyes, and mucous membranes. Reacts violently with acids.
Segregation Group:	18

Air Transport (IATA)

Hazard:	Corrosive
Packing Group:	II
Passenger and cargo aircraft, Ltd. Qty.:	Pack. Instr. Y840 – Max. Qty / Pkg Net: 0.5 L
Passenger and cargo aircraft:	Pack. Instr. 851 – Max. Qty / Pkg Net: 1 L
Cargo aircraft:	Pack. Instr. 855 – Max. Qty / Pkg Net: 30 L
Special provisions:	A3
ERG:	8L

15 Regulatory information

• Product produced in accordance with the requirements established by RDC 665 of 30/03/2022 and with labeling information in accordance with RDC 206 of 17/11/2006.

• For more details on product disposal refer to RDC 222 of 28/03/2018 and NBR 10004.

• This safety data sheet was prepared in accordance with ABNT/NBR 14725:23.

16 Other information

The above information is considered correct but is not intended to be complete and should be used only as a guide. Kovalent is not responsible for any damage resulting from handling or use.

In article XXX: The three X are for the volume.

Wording of H phrases in items 2 and 3:
H302 = Harmful if swallowed
H314 = Causes severe skin burns and serious eye damage
H315 = Causes skin irritation
H319 = Causes serious eye irritation
H335 = May cause respiratory irritation
H412 = Harmful to aquatic life with long-lasting effects

Abbreviations and acronyms:
ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route
CAS: Chemical Abstracts Service
EC: European Community
PPE: Personal Protective Equipment
GHS: Globally Harmonized System
IATA: International Air Transport Association
IATA-DGR: IATA – Dangerous Goods Regulations
IMDG: International Maritime Dangerous Goods
NBR: Brazilian Technical Standard
UN: United Nations
pH: Hydrogen Potential
RDC: Resolution of the Collegiate Board
STEL: Short-term Exposure Limit
TLV: Threshold Limit Value
TWA: Time Weighted Average
WEL: Workplace Exposure Limit
DNEL: Derived No-Effect Levels
PNEC: Predicted No-Effect Concentrations
TEEL: Temporary Emergency Exposure Limit
IDLH: Immediately Dangerous to Life or Health