MATERIAL SAFETY DATA SHEET

Revision: 06.09.2019
Version: 02

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

1.1. Product identifier

CONCENTRATED DETERGENT B (12 x 1L) (Cat.no 3-117)
CONCENTRATED DETERGENT B (1 x 1L) (Cat.no 3-118)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Laboratory reagents. For professional use only.

1.3. Details of the supplier of the safety data sheet

Manufacturer:

PZ CORMAY S.A.
ul. Wiosenna 22
05-092 Łomianki
phone: +48 22 751 79 10
fax +48 22 751 79 11

e-mail: msds@cormay.pl

1.4. Emergency telephone number

The local/in-country emergency telephone number.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP):

Skin Corr. 1A, H314
Eye Dam. 1, H318
Met. Corr. 1, H290
Flam. Liq. 3, H226

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP):

 	Contains sodium hydroxide. *Signal word:* Danger *Hazard statement(s):* H314 – Causes severe skin burns and eye damage. H290 – May be corrosive to metals. H226 - Flammable liquid and vapour. *Precautionary statement(s):* 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): Take off immediately all contaminated clothing. Rinse skin with water. 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 or doctor. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed.

2.3. Other hazards

This mixture does not meet the criteria for PBT and vPvB.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

sodium hydroxide Contains: < 6%
CAS number: 1310-73-2
EC number: 215-185-5
Index number: 011-002-00-6
Registration number: 01-2119457892-27-XXXX
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]:
Skin Corr. 1A; H314
Eye Dam.1; H318

citric acid, monohydrate Contains: < 5%
CAS number: 5949-29-1
EC number: 201-069-1
Index number -
Registration number: 01-2119457026-42-0000
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]:
Eye Irrit. 2, H319

propan-2-ol Contains: < 3%
CAS number: 67-63-0
EC number: 200-661-7

Index number 603-117-00-0
Registration number: 01-2119457558-25-0000
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]:
Flam. Liq. 2, H225
Eye Irrit. 2, H319
STOT SE 3, H336

Dodecan-1-ol, ethoxylated (thesit) Contains: < 2%
CAS number: 9002-92-0
EC number: -
Index number -
Registration number: -
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]:
STOT SE 3, H335

The full text of H code(s) is given in section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation: Remove exposed individual to fresh air. Keep the affected person warm and at rest. Loosen tight clothing such as a collar, tie or belt. When natural breathing has ceased or when it is very irregular or weak, qualified personnel should provide artificial respiration or deliver oxygen. Consult a physician. In case of transient loss of consciousness due to syncope, put the person in the recovery position and seek medical attention immediately.
After skin contamination: Immediately remove all contaminated clothing. Rinse skin with water / shower. Consult a physician if alarming symptoms appear.
After contamination of eyes: Rinse opened eye for 15 minutes under running water. Remove contact lenses (if present). Consult a physician if alarming symptoms appear.
After consumption: Rinse mouth with water (only if the person is conscious). Move exposed person to fresh air. Keep the affected person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting (risk of perforation). If exposed person feel unwell, contact a doctor immediately, show the container or label. Never give anything by mouth to an unconscious person. In case of transient loss of consciousness due to syncope, put the person in the recovery position and seek medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

Eye contact: Causes serious eye irritation. Risk of vision loss or blindness. Pain or eye redness; eye irritation; eye pain.
Inhalation: May cause drowsiness or dizziness. Headache. Nausea or vomiting. Exposure can irritate the eyes, nose, throat, and lungs, with cough and shortness of breath. loss of consciousness.
Ingestion: Swallowing may cause injury to the lips, mouth, throat and stomach.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Contact poison treatment specialist immediately if swallowed or inhaled large quantities.

SECTION 5: Firefighting measures

5.1. Extinguishing media

In the case of fire use extinguishing media suitable for materials stored in immediate vicinity. Water, CO_2, dry powder can be used as the extinguish media.
Extinguishing media not suitable: strong water jet.

5.2. Special hazards arising from the substance or mixture

Flammable liquid and vapour. During a fire thermal decomposition of the substances contained in the mixture may occur. As a result of that toxic fumes and gases may be formed, which contain among others: oxides / metal and non-metal oxides.
In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Leaking into the sewage system may cause fire or explosion hazard.

5.3. Advice for firefighters

The rescuers must be equipped with protective clothing and respiratory tract isolating equipment, irrespective of ambient air (in the case of large fire).
Move containers from fire area if this can be done without risk. Cool fire-exposed containers with water spray to prevent container weakening and rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Notify the effected individuals of the emergency, to be aware of the issues associated. No action shall be taken involving any personal risk or without suitable training.
Do not inhale vapours/ aerosols. Provide adequate ventilation.
Avoid contact of the mixture with skin and eyes. Avoid product contamination. Remove contaminated clothing and wash before reuse. Shut off all ignition sources. Fire and sparks, flares and smoking in dangerous areas are prohibited.
6.1.2. For emergency responders
Wear protective clothing and rubber gloves. If specialized clothing is required to deal with the spillage, refer to information in Section 8 on suitable and non-suitable materials.

6.2. Environmental precautions

Dilute with plenty of water. Avoid entering the product into drains, surface water and groundwater, reservoirs and waterways.

6.3. Methods and material for containment and cleaning up

Stop leak if it can safely be done. Collect small quantities with the use of an absorbing agent (sand, diatomite, acid binders, universal binders, sawdust), rinse with large amount of water if necessary.Provide material collected for recycling.

Contaminated absorbent material may pose the same hazard as the spilled product.

6.4. Reference to other sections

Use the control measures and personal protective equipment described in section 8 of this card. The released material to follow the rules described in section 13 of this MSDS - Disposal consideration.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep away from heat, hot surfaces, sparking objects, open flames and other ignition sources. No smoking. Take appropriate measures to prevent electrostatic discharge. Flammable vapors may collect in the container. Use in well-ventilated area.
While working with the preparation, one should use appropriate means of personal protection (see pt. 8). Avoid contact of the preparation with skin and eyes, as well as inhaling its mist / dust / smoke / gas / vapors / spray. Secure efficient local ventilation.
Industrial hygiene:
Eating, drinking or smoking of tobacco is prohibited while working with the preparation, except in places. Wash your hands after work with the substance carefully with soapy water. Apply skin-protective barrier cream. Provide a source of running water near the workplace, eye wash station and safety shower. Ensure efficient local ventilation.

7.2. Conditions for safe storage, including any incompatibilities

In accordance with the general accepted for chemicals in laboratories.
Store in original manufacturer containers. Store in closed containers at temperatures compatible with the information provided on the label.
Protect from direct sunlight and heat source, and avoid contamination! Eliminate all ignition sources.
Protect containers from damage. Do not store in unlabeled containers.
Do not store with food or animal feed. Use only with adequate ventilation.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available.

Derived no-effect level (DNEL)

Component	Type	Exposure	Value	Population	Disorder
propan-2-ol	DNEL	Long-term Skin	888 mg/kg bw/day	Employees	-
	DNEL	Long-term Inhalation	500 mg/m³	Employees	-
	DNEL	Long-term Skin	319 mg/kg bw/day	Consumers	-

	DNEL	Long-term Inhalation	89 mg/m³	Consumers	-
	DNEL	Long-term Orally	26 mg/kg bw/dzień	Consumers	-
sodium hydroxide	DNEL	Long-term Inhalation	1 mg/m³	Employees	-
	DNEL	Long-term Inhalation	1 mg/m³	Consumers	-

Predicted No Effect Concentration (PNEC)

Component name	Type	Details of medium compartment	Value	Method details
propan-2-ol	PNEC	Sweet water	140.9 mg/l	-
	PNEC	Maritime	140.9 mg/l	-
	PNEC	Freshwater sediment	552 mg/kg	-
	PNEC	Sediment in sea water	552 mg/kg	-
	PNEC	Soil	28 mg/kg	-

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Use only with adequate ventilation.

8.2.2. Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier. Do not eat, drink or smoke when working. Ensure proper ventilation at the place of use.

a) Eye / Face protection*:*

Avoid direct contact of the product with eyes. Eye protection in accordance with an approved standard should be used when an assessment of the situation indicates it is necessary. Provide eye wash stations near the work place.

b) personal protection:

- hand protection:

Avoid direct contact of the product with skin. Protective gloves resistant to chemicals made of nitrile rubber or other approved by the manufacturer of gloves for contact with this product. The material durability time is determined by the glove manufacturer. Gloves should be reviewed before use. Use the correct technique for removing gloves (without touching the outside of the glove) to avoid skin contact with this product. Removal of contaminated gloves after use in accordance with applicable regulations and good laboratory practice. Wash and dry your hands.

- skin protection:

After contact with the product, all contaminated skin areas should be thoroughly washed. Take off contaminated clothing immediately - wash before reuse.

c) Respiratory protection:

Apply in rooms with efficiently working ventilation, avoid inhaling product mists. Respiratory tract-protective agents are not required for efficient ventilation;

d) Thermal hazards:

Not applicable.

8.2.3. Environmental exposure controls

Avoid entering the product into drains, surface water and groundwater, reservoirs and waterways.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance :- -The physical state : -Colour:	*clear liquid, foaming* *colourless*
b) Odour:	*slight odour of propan-2-ol*
c) Odour threshold :	*no data available*
d) pH (21 ±1°C):	*13.5*
e) Melting point/freezing point	*no data available*
f) Initial boiling point and boiling range	*no data available*
g) Flash point:	*no data available*
h) Evaporation rate:	*no data available*
i) Flammability (solid, gas)	*not applicable*
j) Upper/lower flammability or explosive limits:	*no data available*
k) Vapour pressure :	*no data available*
l) Vapour density :	*no data available*
m) Relative density:	*1.0597 g/cm3 (20°C)*
n) Solubility(ies)	*miscible with water*
o) Partition coefficient: n-octanol/water	*no data available*
p) Auto-ignition temperature	*no data available*
q) Decomposition temperature:	*no data available*
r) Viscosity:	*no data available*
s) Explosive properties:	*no data available*
t) Oxidising properties :	*no data available*

9.2. Other information

No other relevant information.

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.The product is stable in conditions provided by the manufacturer.

10.2. Chemical stability

The product is stable when normal handling in accordance with conditions provided by the manufacturer. Do not expose containers to heat or sources of ignition.

10.3. Possibility of hazardous reactions

In case of strong heating in a container a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The ignitable vapors formation is possible when mixture is heated above the flash point and / or when mixture sprayed in air.

10.4. Conditions to avoid

Avoid all possible sources of ignition, including hot surfaces, heat sources, sparks, or flame. Protect from direct sunlight and avoid contamination!

10.5. Incompatible materials

Strong oxidizers, metals, light metals, bases, reducers, nitrates, aluminum, brass, metal alloys, zinc, tin.

10.6. Hazardous decomposition products

Under normal conditions of storage, transport and use, hazardous decomposition products should not be produced. In the event of fire, hazardous decomposition products are formed - carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

No data for the mixture. Toxicological problems should not be expected if the product were used and applied appropriately. The product should be handled with the care usual when dealing with chemicals. The mixture toxicity evaluation is based on evaluation of the toxicity of particular components.

a) acute toxicity:
Data for citric acid, monohydrate:
LD_{50} (Intraperitoneal - Rat) - 375 mg/kg

Data for sodium hydroxide:
Ingestion: If ingested, may cause serious injuries of the upper gastrointestinal tract: severe mouth and throat burns as well as the risk of perforation of the esophagus and stomach.
Respiratory: burns of mucous membranes; Symptoms: Cough, Shortness of breath, Possible damage to the airway of respiratory tract;

Data for propan-2-ol:
LD_{50} (Skin - Rabbit) - 12800 mg/kg
LD_{50} (Oral - Rat) - 5000 mg/kg

b) irritation:
Propan-2-ol:
Eyes - Rabbit - Result: Irritating to eyes.
Skin - Rabbit - Causes slight irritation

c) corrosivity:
No data available.
d) sensitisation:
No data available.
e) repeated dose toxicity:
No data available.
f) carcinogenicity:
No data available.
g) mutagenicity:
No data available.
h) toxicity for reproduction:
No data available.
i) specific target organ toxicity - single exposure
propan-2-ol: inhalation can cause depression of the central nervous system. May cause drowsiness or dizziness.
Dodecan-1-ol, ethoxylated: inhalation may cause irritation of the respiratory tract;

SECTION 12: Ecological information

12.1. Toxicity

Quantitative data on the ecological effect of this mixture are not available The mixture toxicity evaluation is based on evaluation of the toxicity of particular components.

Ecotoxicity:
Data for sodium hydroxide:
Acute toxicity to daphnia *(Ceriodaphnia dubia)* – EC_{50}: 40.40 mg/l/48 h
Fish acute toxicity *Gambusia affinis* - LC_{50}: 125000 µg /l/96 h,
Toxicity to bacteria *(Photobacterium phosphoreum)* – EC_{50}: 22 mg/l/15 min

Data for propan-2-ol:
Acute toxicity to crustaceans *(Crangon crangon)* – LC_{50}: 1400000 µg/l/48 h
Fish acute toxicity *Gambusia affinis* - LC_{50}: >1400000 µg /l/96 h,

Ecological problems should not be expected if you use and apply the product appropriately.

Further ecological data:
Do not allow for penetration into waters, sewage or soil.

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

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:
Chemical residues, in general, are included into special waste. Disposing of the latter is regulated by

appropriate laws and ordinances. We recommend contacting the appropriate authorities, or waste disposal enterprises that will advise you on how to dispose of special waste.

Packing:
Empty the container completely. Keep the label(s) on the container. Remove in accordance with official regulations. Treat contaminated packages in the same way as the substance itself. If the regulations do not provide otherwise, non-contaminated packages can be treated like household waste or forward them to be utilized.

Reagent	Waste classification	UE waste code of the reagent	UE waste code of direct packaging
Concentrated Detergent B	dangerous	18 01 06*	15 01 10*

EU Waste Disposal Code (EWC):
18 01 06* chemicals consisting of or containing dangerous substances
15 01 10* packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

14.1. UN number

(ADR) UN 2920

14.2. UN proper shipping name

(ADR) Flammable liquid, corrosive N.O.S. (propan-2-ol, sodium hydroxide)

14.3. Transport hazard class(es)

(ADR) 8/CF1

14.4. Packing group

(ADR) II

14.5. Environmental hazards

The mixture does not pose a threat to the aquatic environment.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

No data available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Material Safety Data Sheet was prepared in accordance with:

Regulation (EC) No 1907/2006 of European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

Regulation (EC) No 1272/2008 of the European Parliament and Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Commission Regulation (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives Text with EEA relevance.

Council Regulation (EU) 2017/997 of 8 June 2017 amending Annex III to Directive 2008/98/EC of the European Parliament and of the Council as regards the hazardous property HP 14 Ecotoxic.

15.2. Chemical safety assessment

Chemical safety assessment has been no carried out for the product.

SECTION 16: Other information

Full text of abbreviations and acronyms:

Skin Corr. 1A - Skin corrosion (category 1A)
Eye Dam. 1 - Serious eye damage (category 1)
Flam. Liq. 2 - Flammable liquids (category 2)
Flam. Liq. 3 - - Flammable liquid and vapour (category 3)
Met. Corr. 1 - May be corrosive to metals (category 1)
Eye Irrit. 2 - Eye irritation (category 2)
STOT SE 3 - Specific target organ toxicity - single exposure [narcotic effect] (category 3)

PBT – Persistent, Bioaccumulative and Toxic substances
vPvB - very Persistent and very Bioaccumulative substances

Text of H-code(s):

H225 - Highly flammable liquid and vapour.
H226 - Flammable liquid and vapor.
H290 - May be corrosive to metals.
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.

Methods of evaluating information for the purpose of classification: calculation method.

The foregoing information is based on the present state of our knowledge. It characterizes the product with respect to the appropriate safety measures. They do not guarantee the properties of the product. We do not take responsibility for damage and losses that may result from inappropriate use of the mixture.
Reason of changes: Changing of classification (section 2.2). Data of flash point of the mixture (section 9.1 g). Introducing data related to the property of the mixture (Flam. Liq. 3, Met.Corr.1) into sections: 4, 5, 6, 7, 8, 10. Introduction of transport information (section 14).