SAFETY DATA SHEET REGULATION (EC) No: 1907/2006 (REACH)

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

1.1. Product identifier:

Product name: Bradoclear aldehyde-free surface disinfectant concentrate

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

Biocidal product. Biocidal product type: PT2.
Liquid surface disinfectant concentrate.
For cleaning and disinfecting the washable floor and walls, as well as the surfaces of furnishes and fitting.
The product should be used in the dilution on the label, the working solution should always be prepared immediately before use.
The product is marketed to professional users.
Do not mix with other cleaning agents and disinfectants.

1.3. Details of the supplier of the safety data sheet

Manufacturer:	Florin Ltd
Address:	17. Kenyérgyári út, Szeged, 6725
Phone Number:	0062 592 100
Fax:	0062 592 145
E-mail:	info@florin.hu

1.4. Emergency telephone number

Health Toxicology Information Service (HTIS)

Address:	2. Nagyvárad tér, Budapest, 1096, Hungary
Telephone:	+36 80 201 199
	+36 1 476 6464

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Determination of the product: mixture
Classification according to 1272/2008/EC regulation

Aquatic Acute 1	H400
Aquatic Chronic 1	H410
Carc.2	H351
Eye Dam. 1	H318
Skin Corr. 1B	H314
Skin Sens. 1	H317
STOT SE 2	H371

The full text for all Classification and Hazard Statements is displayed in Section 16.

2.2. Label elements

Hazard pictogram:

Word of caution: Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer
H371 May cause respiratory damage if inhaled prolonged or repeatedly.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P260 Do not breathe vapours spray.
P273 Avoid release to the environment.
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 [or shower].
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor/...

Other statements:

Do not mix with other cleaning and disinfecting agents. Keep away from food, drink and animal feedings.

Hazardous ingredients: Benzalkonium chloride; Polyhexamethylene biguanidine hydrochloride; Alcohols, C10-16, ethoxylated, propoxylated.

2.3. Other hazards:

None known. Results of PBT and vPvB assessment: not prepared for the product.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Ingredients	EU-number	CAS-number	Conc. (%)	Classification 1272/2008/EK	Type
Alkyldimethylbenzyl ammonium chloride, Quaternary ammonium compound	270-325-2	68424-85-1	≤ 10	Acute Tox. 4 H302 Skin Corr. 1B H314 Eye Dam 1 H318 Aquatic Acute 1 H400 (M: 10) Aquatic Chronic 1 H410 (M: 1)	(1)
Polyhexamethylene biguanide hydrochloride	polymer	27083-27-8	<1	Acute Tox. 4 H332 Eye Irrit. 2 H319 Skin Sens. 1 H317 Carc. 2 H351 STOT RE 1 H372 Aquatic Chronic 1 H410 (M=10) Aquatic Acute 1 H400 (M=10)	(1)
Alcohols, C10-16 ethoxylated propoxylated	-	69227-22-1	≤5	Acute Tox. 4 (orális) H302 Eye Dam. 1 H318	(1)

Type:

(1) Material classified according to health or environmental danger
(2) Material has occupational exposure limit
(3) Material meets the PBT criteria according to XIII. Annex of 1907/2006/EC decree
(4) Materials meet the vPvB criteria according to XIII. Annex of 1907/2006/EC decree

REACH registration number:

Alkyldimethylbenzyl ammonium chloride: 01-2119983287-23-0000

The full text for all Classification and Hazard Statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Remove victim to fresh air, keep at rest in a position comfortable for breathing and loosen tight clothing. If unconscious, place in recovery position and get medical attention.

Skin contact: Remove contaminated clothing and footwear, wash affected skin area thoroughly with plenty of water. Chemical burns should be treated immediately by a physician. Avoid further exposure if symptoms occur.

Eye contact: Wash eyes immediately, rinse immediately with running water for at least 10 minutes, holding eyelids apart and moving the eyeball constantly. Make sure whether the injured person is wearing contact lenses, if so remove them. Contact a specialist immediately.

Ingestion: Seek medical attention immediately. The oral cavity should be rinsed with water and water should be drunk. Do not induce vomiting unless directed to do so by medical personnel. Remove victim to fresh air, keep at rest in a position comfortable for breathing and loosen tight clothing.

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

For preparation:

Eye contact: Corrosive to the eyes. Causes burns

Skin contact: Causes skin contact. Causes burns. May cause sensitization by skin contact.

Conditionally carcinogenicity

See SECTION 11. for information on ingredients.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: water spray, dry powder, foam, carbon dioxide.

Unsuitable extinguishing media: strong jet water.

5.2. Special hazards arising from the substance or mixture

Special hazards arising during firefighting:

The preparation is not flammable.

Decomposition products on combustion may include: carbon dioxide, carbon monoxide, nitrogen oxides and halogenated compounds.

5.3. Advice for firefighters

In case of fire, immediately isolate the scene and remove all persons from the scene of the accident. If possible, containers should be removed from the fire area.

The preparation is toxic to aquatic organisms, and contaminated fire extinguishing water must be retained and prevented from entering drains, sewers or drains.

Firefighters must wear appropriate protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Only emergency services personnel may be present at the site, other persons must be removed. Do not touch or enter spilled material. Do not breathe vapor or mist. Ensure adequate ventilation Wear respiratory protection if ventilation is inadequate.

6.2. Environmental precautions

Do not allow product to reach ground water, water course or sewage system without dilution or treatment.

6.3. Methods and material for containment and cleaning up

Absorb large spills or spillage with inert absorbent material (sand, ground) and collect in closed, labelled container. Contaminated material must be disposed of in accordance with regulations.

6.4. Reference to other sections

Personal protection: Check SECTION 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with eyes or clothing. Do not swallow. Avoid release to the environment. Do not mix with other cleaning and disinfecting agents. Store in the original container, tightly closed. Eating, drinking and smoking should be prohibited in areas where this material is stored and handled.

7.2. Conditions for safe storage, including any incompatibilities

Store in original, intact, unopened container in a dry, cool but frost-free, well-ventilated place. Store away from food, out of reach of children. Keep containers closed until use, after use carefully close containers that have already been opened and keep them with the opening facing up to prevent leakage.

7.3. Specific end use(s).

The 1.2. uses specified in point. Instructions can be found on the label.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits: No data to be reported.

DNEL:

Alkyldimethylbenzyl ammonium chloride

Population	Route of exposure	Potential health effects	Value
Workers	Inhalation	Long-lasting, systematic effect	3,96mg/m^3
	Dermal	Long-lasting, systematic effect	5,7mg/kg bw/day

Population	Route of exposure	Potential health effects	Value
Consumers	Inhalation	Long-lasting, systematic effect	1,64mg/m^3
	Dermal	Long-lasting, systematic effect	3,4mg/kg bw/day
	Oral	Long-lasting, systematic effect	3,4mg/kg bw/day

PNEC:

Alkyldimethylbenzyl ammonium chloride

Environment	Value
Fresh water	0,0009mg/l
Sea water	0,00096mg/l
Periodic use/release	0,00016mg/l
Fresh water sediment	12,27mg/kg dry weight
Marine sediment	13,09 mg/kg dry weight
Sewage treatment plant	0,4mg/l
Soil	7mg/kg dry weight

8.2. Exposure controls

Personal protective equipment: Personal protective equipment is determined by the task to be performed with the product. The preparation is a concentrate that must be diluted for use as described in the instructions for use.
Protective equipment must be selected according to the task to be performed and the risks involved and must be approved by a specialist before using the product.

General protective and hygienic measures: Avoid contact with eyes, ingestion and inhalation of vapors.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash hands, forearms and face thoroughly after handling the product, before eating, smoking and using the lavatory and at the end of the working period.
Make sure there are eyewash stations near the workplace.

Hand protection: Protective gloves.
The glove material has to be impermeable and resistant to the product/the substance/the preparation. Impenetrable glove, material: Nitrile rubber.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686 / EEC and the standard EN 374 derived from it. 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. The breakthrough time depends on, among other things, the glove material, thickness and type and must therefore be measured in all cases. Gloves should be inspected before use.
Replace in case of wear. Leather gloves should not be worn.

Respiratory protection: For work with concentrate: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or prolonged exposure use self-contained breathing apparatus. Recommended: combined filter, e.g. DIN 3181ABEK.

Eye protection: face shield, well-fitting goggles when performing dilution.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance: colorless liquid

b) Odour:	perfumed
c) Odour threshold:	not specified for the mixture
d) pH:	4,0-6,5 (conc.)
e) Melting point/freezing point:	Danger of freezing below 0°C
f) Initial boiling point and boiling range:	not specified for the mixture
g) Flash point:	not applicable
h) Evaporation rate:	not specified for the mixture
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:	~1,0g/cm^3
n) Solubility(ies):	Soluble with water in any concentration.
o) Partition coefficient n-octanol/water:	no data available
p) Auto-ignition temperature:	not self-igniting
q) Decomposition temperature:	not specified for the mixture
r) Viscosity:	~1 mPas
s) Explosive properties:	not explosive
t) Oxidising properties:	does not show oxidizing properties

9.2. Other information: propane-butane propellant, the container is pressurized.

SECTION 10: Stability and reactivity

10.1. Reactivity

No specific test data related to reactivity available for this product or its ingredients. No hazardous reaction if stored and handled as prescribed/indicated.

10.2. Chemical stability

The product is stable at the required storage temperature under normal working conditions.

10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4. Conditions to avoid

Temperatures below 0°C (danger of freezing).

10.5. Incompatible materials

Solvents, other cleaning and disinfecting products.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Targeted toxicological studies have not been performed on the product. The human health assessment was made solely on the basis of its composition, the toxicological data for each component, the concentrations and classifications given in section 3, and the concentration limits of Regulation (EC) No 1272/2008.

11.1. Information on toxicological effects

a) Acute toxicity: not specified for the mixture.

Substance(s):

Ingredients	Information
Alkyldimethylbenzyl ammonium chloride	Akut toxicitás (oral): 1590mg/kg –calc.method LD_{50} (oral, rat): 795mg/kg – OECD 401 LD_{50} (dermal, rat): 3412mg/kg – OECD 401
Polyhexamethylene biguanide hydrochloride	LD_{50} (oral, rat): 2504 mg/kg LD_{50} (inhalation, 4h): 1,85mg/l LD_{50} (dermal, rat): >2000mg/kg
Alcohols, C10-16 ethoxylated propoxylated	LD_{50} (oral, rat): >300 - 2000 mg/kg

b) Skin corrosion/irritation: the preparation is irritating to the skin.

Substance(s):

Ingredients	Information
Alkyldimethylbenzyl ammonium chloride	Causes severe burns and eye damage
Alcohols, C10-16 ethoxylated propoxylated	May cause mild skin irritation

c) Serious eye damage/eye irritation: the preparation is harmful to the eyes.

Substance(s):

Ingredients	Information
Alkyldimethylbenzyl ammonium chloride	Causes serious eye damage
Polyhexamethylene biguanide hydrochloride	Causes eye irritation. (rabbit)
Alcohols, C10-16 ethoxylated propoxylated	May cause serious eye damage

d) Respiratory or skin sensitization: no specific information available.

e) Germ cell mutagenicity: no specific information available.

f) Carcinogenicity: the mixture is not carcinogenic.

g) Reproductive toxicity: no data is available on the product

Substance(s):

Ingredients	Information
Alkyldimethylbenzyl ammonium chloride	NOAEL (rat, oral): 61 mg/ttkg/day (18 weeks) NOAEL (rat, oral): 96 mg/ttkg/day (10 weeks)

h) Specific target organ toxicity - single exposure (STOT): no specific information available.

i) Specific target organ toxicity - repeated exposure (STOT): no data is available on the product.

Substance(s):

Ingredients	Information
Polyhexamethylene biguanide hydrochloride	Causes damage to the respiratory tract through prolonged or repeated inhalation.

j) Aspiration hazard: no specific information available.

SECTION 12: Ecological information

Ecological studies have not been performed on the product. It has been assessed solely on the basis of its composition, the data for each component, the concentrations and classifications given in section 3, and the concentration limits of Regulation (EC) No 1272/2008.

12.1. Toxicity: not specified for the mixture.

Substance(s):

Ingredients	Information
Alkyldimethylbenzyl ammonium chloride	Acute LC_{50} (fish, 96h) 0,515 mg/l – EPA OPP 72-1 Acute LC_{50} (daphnia, 48h) 0,016 mg/l – 440/2008/EK C.2. annex Acute EC_{50} (alga, 96h) 0,03 mg/l – OECD 201 NOEC (Pseudokirchneriella subcapitata, 96h): 0,0025mg/l – OECD 201 Acute Chronic NOEC (Pimephales promelas, 28 days): 0,0322mg/l – U.S. EPA FIFRA 74-4(a) Acute Chronic NOEC (Daphnia magna, 21 days): 0,0125mg/l – OECD 211
Polyhexamethylene biguanide hydrochloride and hexamethylene diamin polimer	IC_{10} (bacterium, inhalation): 40mg/l LC_{50} (rainbow trout, 96 h): 0,026 mg/l EC_{50} (Daphnia magna, 48h): 0,09 mg/l – OECD 202 EC_{50} (green algae, 72h) 0,0191 mg/l – OECD 201 NOEC (Daphnia magna, 21days): 0,0084mg/l – OECD 211 EC_{50} (bacterium, 4h) 38 mg/l
Alcohols, C10-16 ethoxylated propoxylated	LC_{50} (Brachydanio rerio, 96h): >1 - 10 mg/l EC_{50} (Daphnia magna, 24h): >1 - 10 mg/l EC_{50} (Desmodesmus subspicatus, 72h): >1 - 10 mg/l EC_{10} (Desmodesmus subspicatus, 72h): >1 - 10 mg/l EC_0 (Pseudomonas putida, 30mins): > 100 mg/l

12.2. Persistence and degradability: not specified for the mixture.

Substance(s):

Ingredients	Information
Alkyldimethylbenzyl ammonium chloride	Readily biodegradable Biodegradation: 95.5%, exposure time: 28 days - OECD 301 B

12.3. Bioaccumulative potential: not specified for the mixture.

Substance(s):

Ingredients	Information
Alkyldimethylbenzyl ammonium chloride	Log Pow 0,004 – OECD 107

12.4. Mobility in soil: not specified for the mixture.

Substance(s):

Ingredients	Information
Polyhexamethylene biguanide hydrochloride and hexamethylene diamin polimer	Absorbs in soil
Alcohols, C10-16 ethoxylated propoxylated	Volatility: from the surface of water the product does not evaporate into the atmosphere. Adsorption binding on a solid phase is possible

12.5. Results of PBT and vPvB assessment: no specific information available.

12.6. Other adverse effects: No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal of residues and packaging containing residues of the substance may be carried out in accordance with the relevant regulations.

The owner of the waste is responsible for the proper management of the waste generated and for compliance with the applicable legal regulations.

SECTION 14: Transport information

14.1. UN-number	1903
14.2. UN proper shipping name	DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (quaternary ammonium compound)
14.3. Transport hazard class(es)	8
14.4. Packing group	II.
14.5. Environmental hazards	yes
14.6. Special precautions for user	none
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	not applicable

Other informations:

LQ (1L)
Tunnel restriction code: F
Classification code: C9
Delivery category: 2

SECTION 15: Regulatory information

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

Considered European Union laws and regulations:

- Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of substances and mixtures (CLP Regulation)
- Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- REGULATION 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) (Text with EEA relevance)
- Regulation (EU) 528/2012 on the marketing and use of biocidal products

Related Hungarian laws and regulations:

- 2000. year XXV. Act on Chemical Safety
- Decree 44/2000 (XII.27.) EüM on the detailed rules of certain procedures and activities related to dangerous substances and dangerous preparations
- Joint Decree 38/2003 (VII.7.) ESzCsM-FVM-KvVM on the conditions for the production and placing on the market of biocidal products
- 5/2020. (II. 6.) ITM Decree on the protection of the health and safety of workers exposed to chemical pathogens
- CLXXXV of 2012. Act on Waste Management
- Decree 72/2013 VM KöM on the list of wastes
- 225/2015 Government Decree on the conditions for carrying out activities related to hazardous waste
- 2015 LXXXIX. Act promulgating the consolidated text of Annexes A and B of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), as amended and supplemented in 2011

15.2. Chemical safety assessment No chemical safety report was prepared for the mixture.

SECTION 16: Other information

Abbreviations used in the safety data sheet:

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
BCF	Bioconcentration factor
CAS:	Chemical Abstracts Service
EC_{20}:	20% effective concentration. The concentration at which any adverse effect is detected in 20% of the organisms tested.
EC_{50}:	Half maximal effective concentration. The concentration of a drug, antibody or toxicant which induces a response halfway between the baseline and maximum after a specified exposure time
HTIS:	Health Toxicology Information Service
Koc:	Organic carbon-water partition coefficient
LC_{50}:	Lethal Concentration for the 50% of living organism.
LD_{50}:	Lethal Dose the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals
LogPow:	Octanol-water partition coefficient
NOAEL:	No-Observed-Adverse-Effect Level
NOEC:	No Observed Effect Concentration
OECD:	Organisation for Economic Cooperation and Development
PBT:	Persistent, Bioaccumulative, Toxic
Poc:	Particulate organic carbon content
REACH:	Registration, Evaluation, Authorisation and Restriction of Chemicals
UN:	four-digit numbers that identify hazardous materials, and articles (such as explosives, flammable liquids, oxidizers, toxic liquids, etc.) in the framework of international transport. Given by the United Nations
vPvB:	very Persistent, very Bioaccumulative

Full text of classifications:

Acute Tox.	Acute toxicity
Aquatic Acute	Hazardous to the aquatic environment (acute)
Aquatic Chronic	Hazardous to the aquatic environment (chronic)
Carc.	Carcinogenicity
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Skin Corr.	Skin corrosion
Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity — repeated exposure

Full text of H-statements:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.

H371 May cause damage to organs through prolonged or repeated exposure.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Information for readers:
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The safety data sheet describes the product in terms of safety requirements. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.

End of safety data sheet.