Material Safety Data Sheet

SECTION 1. Identification of the Substance/Mixture and of the Company/Firm

1.1. Product Identifier

Name	**BACTRYL WIPES**

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

Description/Use	Cleaning, disinfecting product for disinfection and preservation of Medical Devices. Classification Medical Device Class IIb Directive 93/42/EEC, as ammended Cleaning and disinfecting wipes for medical devices. Professional use only.
Uses advised against	None in particular.

1.3 Details of the Supplier on the Safety Data Sheet

Company Name	CANTEL MEDICAL (ITALY) S.R.L.
Address	Via Laurentina, n. 169
Town and Country	00071 Pomezia (RM) ITALY telephone +39.06/9145399 E-mail: info@ cantelmedical.it
email address of the person responsible, person responsible for the safety data sheet	Technical Director/Qualified Person: direzionetecnica@cantelmedical.it

1.4. Emergency telephone number

For urgent inquiries refer to	Poison Centre Milan (CAV Niguarda Ca` Granda Hospital - Milan) Ph: 02 66101029 CANTEL MEDICAL (ITALY) S.R.L. Emergency telephone number of the company (24/24 hours): ph. +39.06/9145399 *(Technical Support)*

SECTION 2. Hazards Identification.

2.1. Classification of the Substance or Mixture

The product is classified as a dangerous substance pursuant to the provisions laid down in Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adjustments). The product requires therefore a safety data sheet in accordance with the provisions of Regulation (EC) 1907/2006 and subsequent amendments.
Any additional information concerning the risks posed to health and/or environment are specified in sections 11 and 12 of this data sheet.

Classification and hazard statements:

Flammable liquid, Category 2	H225	Liquid and vapours highly flammable.
Eye irritation, category 2	H319	Causes severe eye irritation.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic organisms with long-term effects.

2.2. Label elements.

Hazard labelling pursuant to Regulation (EC) 1272/2008 (CLP) and subsequent amendments.

Warnings: Danger

Hazard indications:

H225	Liquid and vapours highly flammable.
H319	Causes severe eye irritation.
H412	Harmful to aquatic organisms with long-term effects.

Safety phrases:

P210	Keep away from heat sources, hot surfaces, sparks, open flames or other ignition sources. Do not smoke.
P280	Wear protective gloves and eye protection/face protection.
P305+P351+P338	IF IN EYES: rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists, consult a physician.
P273	Do not dispose of it in the environment.

2.3. Other Hazards.

Based on the available data, the product does not contain substances classified as PBT or vPvB in percentage greater than 0.1 %.

SECTION 3. Composition/Information on Ingredients

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification.	**Conc. %.**	**1272/2008 (CLP) Classification.**
ISOPROPANOL CAS. 67-63-0 CE. 200-661-7 INDEX. 603-117-00-0 No Reg. 01-2119457558-25	15 - 16.5	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides CAS. 68424-85-1 CE. 270-325-2 INDEX. -	0.5 - 0.6	Met. Corr. 1 H290, Acute Tox. 4 H302, Skin Corr. 1B H314, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410

No Reg. -

D-gluconic acid, compound with N,N''-bis (4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanodiammidine (2:1)

CAS. 18472-51-0 — 0.1 - 0.2 — Eye Irrit. 2 H319, STOT SE 3 H335, Aquatic Acute 1 H400 M=10

CE. 242-354-0

INDEX. -

No Reg. -

DIDECYLDIMETHYLAMMONIUM CHLORIDE

CAS. 7173-51-5 — 0 - 0.1 — Acute Tox. 3 H301, Skin Corr. 1B H314, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410

CE. 230-525-2

INDEX. 612-131-00-6

No Reg. -

ETHYLENE GLYCOL

CAS. 107-21-1 — 0 - 0.1 — Acute Tox. 4 H302, STOT RE 2 H373

CE. 203-473-3

INDEX. 603-027-00-1

No Reg. 01-2119456816-28

Note: Value exceeding the excluded range.

The full text of hazard statements (H) is specified in section 16 of this data sheet.

SECTION 4. First Aid Measures.

4.1. Description of first aid measures.

EYES: Remove any contact lenses. Wash immediately and thoroughly with water for at least 30/60 minutes, with the eyes wide open. Consult a physician immediately.
SKIN: Take off contaminated clothing. Take a shower immediately. Consult a physician immediately.
INGESTION: Drink water as much as possible. Consult a physician immediately. Do not induce vomiting if not expressly authorized by the physician.
INHALATION: Seek medical advice immediately. Bring the subject outdoors, away from the place of the accident. If breathing stops, provide artificial respiration. Take adequate precautions to the responder.
PROTECTION MEASURES FOR THE FIRST AIDERS: for the PPE needed for first aid refer to section 8.2 of this safety data sheet.

4.2. Most Important Symptoms and Effects, both Acute and Delayed.

For the symptoms and effects due to the substances contained in it, see chap. 11.

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

Information not available.

SECTION 5. Fire-Fighting Measures.

5.1 Extinguishing Media.

SUITABLE EXTINGUISHING MEDIA
Extinguishing media are carbon dioxide, foam, chemical powder. Due to the losses and the sifting of the product that you have not burned down, the atomized water can be used to disperse the flammable vapours and protect the people involved to stop the leak.
UNSUITABLE EXTINGUISHING MEDIA
Do not use water jets. Water is not effective to extinguish the fire but can be used to cool close containers exposed to flames, thus preventing fires and explosions.

5.2. Special Hazards Arising from the Substance or Mixture.

DANGERS FROM EXPOSURE IN CASE OF FIRE
Excess pressure may form in containers exposed to fire with explosion hazard. Avoid breathing the products of combustion.

5.3. Advice for Fire-fighters.

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear personal protection devices including fire equipment. Collect contaminated fire fighting water separately. It must not be discharged into the drains. Dispose of the contaminated water used for fire fighting and the residue of the fire according to the rules in force.
EQUIPMENT
Normal equipment for fire fighting such as self-contained breathing apparatus (EN 137), flame retardant turnout gear (EN469), flame-retardant gloves (EN 659) and boots for firemen (HO A29 or A30).

SECTION 6. Measures in Case of Accidental Release.

6.1. Personal Precautions, Protective Equipment and Procedures in Case of Emergency.

Stop leak if without risk.
Wear appropriate protective devices (including the personal protective equipment referred to in section 8 of the safety data sheet) in order to prevent contamination of the skin, eyes and personal clothing. These guidelines apply to staff who works under both standard and emergency conditions.

6.2. Environmental Precautions.

Prevent the product from entering sewers, surface waters, and groundwater.

6.3. Methods And Material For Containment And Remediation.

Suck up the spilled product in appropriate container. Assess the compatibility of the container to use with the product, checking section 10. Absorb the remaining product with inert absorbent.
Ensure adequate ventilation of the area affected by the loss. Check any incompatibility for the material of the containers in section 7. Disposal of contaminated material must be carried out in accordance with the provisions of section 13.

6.4. References to Other Sections

Any information relating to personal protective equipment and disposal are given in sections 8 and 13.

SECTION 7. Handling And Storage.

7.1 Precautions for Safe Handling

Keep away from heat, sparks and flames, do not smoke or use matches or lighters. The vapors can be ignited with an explosion, so you must avoid accumulation holding open doors and windows and ensuring a cross ventilation. Without proper ventilation, the fumes can accumulate on the ground and ignite even from a distance, if ignited, with danger of backfiring. Avoid the accumulation of electrostatic charges. Connect to a grounded socket in the case of large packaging during the decanting process and wear anti-static shoes. The strong shaking and vigorous flow of liquid in the pipes and equipment may cause formation and accumulation of electrostatic charges. To avoid the danger of fire and explosion, never use compressed air in the movement. Open the containers with caution, because they may be pressurized. Do not eat, drink or smoke during use. Prevent the dispersion of the product into the environment.

7.2. Conditions for Safe Storage, Including any Incompatibilities.

Keep only in the original container. Keep the containers closed, in a well-ventilated place, sheltered from direct sunlight. Store in a cool, well-ventilated area away from heat sources, open flames, sparks and other sources of ignition. Store containers away from any incompatible materials, making sure the section 10.

7.3. End Uses specific.

No use other than those indicated in section 1.2 of this safety data sheet.

SECTION 8. Exposure controls/personal protection.

8.1. Control Parameters.

Reference Standards:

AUS	Österreich	Grenzwerteverordnung 2011 - GKV 2011
BEL	Belgique	AR du 11/3/2002. La liste est mise à jour pour 2010
BGR	България	МИНИСТЕРСТВО НА ТРУДА И СОЦИАЛНАТА ПОЛИТИКА МИНИСТЕРСТВО НА ЗДРАВЕОПАЗВАНЕТО НАРЕДБА No 13 от 30 декември 2003 г
CYP	Κύπρος	Κ.Δ.Π. 268/2001; Κ.Δ.Π. 55/2004; Κ.Δ.Π. 295/2007; Κ.Δ.Π. 70/2012
CZE	Česká Republika	Nařízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
EST	Eesti	Töökeskkonna keemiliste ohutegurite piirnormid 1. Vastu võetud 18.09.2001 nr 293 RT I 2001, 77, 460 - Redaktsiooni jõustumise kp: 01.01.2008
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveysministeriön julkaisuja 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102

GRB	United Kingdom	EH40/2005 Workplace exposure limits
GRC	Ελλάδα	ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ -ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 19 - 9 Φεβρουαρίου 2012
HRV	Hrvatska	NN13/09 - Ministarstvo gospodarstva, rada i poduzetništva
HUN	Magyarország	50/2011. (XII. 22.) NGM rendelet a munkahelyek kémiai biztonságáról
IRL	Éire	Code of Practice Chemical Agent Regulations 2011
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
LTU	Lietuva	DĖL LIETUVOS HIGIENOS NORMOS HN 23:2007 CHEMINIŲ MEDŽIAGŲ 2007 m. spalio 15 d. Nr. V-827/A1-287
LVA	Latvija	Ķīmisko vielu aroda ekspozīcijas robežvērtības (AER) darba vides gaisā 2012
NLD	Nederland	Databank of the social and Economic Concil of Netherlands (SER) Values, AF 2011:18
NOR	Norge	Veiledning om Administrative normer for forurensning i arbeidsatmosfære
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
SVK	Slovensko	NARIADENIE VLÁDY Slovenskej republiky z 20. júna 2007
SVN	Slovenija	Uradni list Republike Slovenije 15. 6. 2007
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
TUR	Türkiye	2000/39/EC sayılı Direktifin ekidir
EU	OEL EU	Direttiva 2009/161/UE; Direttiva 2006/15/CE; Direttiva 2004/37/CE; Direttiva 2000/39/CE.
	TLV-ACGIH	ACGIH 2014

ISOPROPANOL

Threshold value.

Type	Status	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	500	200	2000	800	
VLEP	BEL	500	200	1000	400	
TLV	BGR	980		1225		
TLV	CZE	500		1000		SKIN.
AGW	DEU	500	200	1000	400	
MAK	DEU	500	200	1000	400	
TLV	DNK	490	200			
VLA	ESP	500	200	1000	400	
TLV	EST	350	150	600	250	
VLEP	FRA			980	400	
WEL	GRB	999	400	1250	500	
TLV	GRC	980	400	1225	500	
GVI	HRV	999	400	1250	500	
AK	HUN	500		2000		
OEL	IRL		200		400	SKIN.
RD	LTU	350	150	600	250	
RV	LVA	350		600		
OEL	NLD	650				
TLV	NOR	245	100			
NDS	POL	900		1200		

NPHV	SVK	500	200	1000		
MV	SVN	500	200			
MAK	SWE	350	150	600	250	
TLV-ACGIH		492	200	983	400	

Concentration with no predicted effect on the environment - PNEC.

Reference value in fresh water.	140.9	mg/l
Reference value in seawater	140.9	mg/l
Reference value for sediments in fresh water	552	mg/kg
Reference value for sediments in seawater	552	mg/kg
Reference value for water, discontinuous release	140.9	mg/l
Reference value for STP microorganisms	2251	mg/l
Reference value for the food chain (secondary poisoning)	160	mg/kg
Reference value for ground compartment	28	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers.				Effects on workers			
Route of Exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	26 mg/kg bw/d				
Inhalation.			VND	89 mg/m3			VND	500 mg/m3
Dermal absorption.			VND	319 mg/kg bw/d			VND	888 mg/kg bw/d

ETHYLENE GLYCOL

Threshold value.

Type	Status	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	26	10	52	20	SKIN.
TLV	BGR	52		104		SKIN.
TLV	CYP	52	20	104	40	SKIN.
TLV	CZE	50		100		SKIN.
AGW	DEU	26	10	52	20	SKIN.
MAK	DEU	26	10	52	20	SKIN.
TLV	DNK	26	10			SKIN.
VLA	ESP	52	20	104	40	SKIN.
TLV	EST	52	20	104	40	SKIN.
HTP	FIN	50	20	100	40	SKIN.
VLEP	FRA	52	20	104	40	SKIN.
WEL	GRB	52	20	104	40	
TLV	GRC	125	50	125	50	
GVI	HRV	52	20	104	40	SKIN.
AK	HUN	52		104		
OEL	IRL	52	20	104	40	SKIN.
OEL	ITA	52	20	104	40	SKIN.
RD	LTU	25	10	50	20	SKIN.
RV	LVA	52	20	104	40	SKIN.
OEL	NLD	52		104		SKIN.
TLV	NOR		25			SKIN.
NPHV	SVK	52	20	104		SKIN.
MAK	SWE	25	10	50	20	SKIN.

ESD	TUR	52	20	104	40	SKIN.
OEL	EU	52	20	104	40	SKIN.
TLV-ACGIH				100 (C)		

Key:

(C) = CEILING ; INALAB = Inhalable fraction ; RESPIR = Breathable fraction ; TORAC = Thoracic fraction.

VND = danger identified but no DNEL/PNEC available ; NEA = negative exposure assessment ; NPI = no danger identified.

8.2. Exposure controls.

Considered that the use of appropriate technical measures should always prevail over personal protective devices, ensure good ventilation in the workplace using an effective local exhaust system. The personal protective equipment should bear the CE marking to certify their compliance with applicable standards.

Provide emergency shower and eye wash facilities.

HAND PROTECTION
Protect your hands with gloves of category III (ref. standard EN 374).
Final selection of glove material must be made taking into account these factors: compatibility, degradation, permeation and time to failure.
In the case of preparations the resistance of working gloves to chemical agents must be verified before use because it is not predictable. The gloves have a time to wear that depends on the duration and the mode of use.

SKIN PROTECTION
Wear work clothes with long sleeves and safety footwear for professional use of category I (Ref. Directive 89/686/EEC and standard EN iSO 20344). Wash with soap and water after removing protective clothing.

Assess the opportunity to provide antistatic clothing if the work area may present a risk of explosion.

EYE PROTECTION
It is recommended that you wear protective goggles (ref. standard EN 166).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) of the substance or of one or more of the substances present in the product is exceeded, it is recommended to wear a mask with filter type AX (ref. standard EN 14387) within the limitations on use defined by the manufacturer. In the case were present gases or vapours of a different nature and/or gas or vapors with particles (aerosols, fumes, mists, etc.) you should provide filters of the combined type.
The use of respiratory protection is necessary in the event the technical measures taken are not sufficient to limit the exposure of the worker to the threshold values taken into consideration. The protection provided by masks is in any case limited.
In the case where the substance in question is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in case of emergency, wear a self-contained breathing apparatus to compressed air to open circuit (ref. EN 137) or a respirator to outdoor air intake (ref. EN 138). For the proper choice of the device to protect the respiratory tract, refer to the standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS.

Emissions from manufacturing processes, including those from ventilation equipment, should be controlled for the purposes of compliance with the rules and regulations on environmental protection.

The product residues should not be disposed of uncontrollably in waste water or water courses.

SECTION 9. Physical And Chemical Properties.

9.1. Information on Basic Physical and Chemical Properties.

Physical State	Clear Liquid (referred to the cleaning solution) Solid (referring to the product marketed as "wet wipes")
Colour	light blue
Odour	citrus light
Olfactory threshold.	Not available.
pH	6.5 ± 1
Melting o Freezing Point.	Not available.
Initial boiling point.	> 35 °C.
Boiling point.	Not available.
Flash point.	38°C.
Evaporation rate	Not available.
Flammability of solids and gases	Not available.
Lower Flammability Limit.	Not available.
Upper Flammability Limit.	Not available.
Lower Explosive Limit.	Not available.
Upper Explosive Limit.	Not available.
Vapour pressure.	Not available.
Vapour Density.	Not available.
Relative density.	1.0 ± 0.05 kg/l
Solubility	Not available.
Partition coefficient: n-octanol/water:	Not available.
Ignition Temperature.	Not available.
Decomposition Temperature.	Not available.
Viscosity	Not available.
Explosive properties	non-explosive based on composition.
Oxidizing properties	Non-oxidizing based on composition.

9.2. Other Information.

Information not available.

SECTION 10. Stability and Reactivity.

10.1. Reactivity.

Under normal conditions of use there are no particular risk of reaction with other substances.

10.2. Chemical Stability.

The product is stable under normal conditions of use and storage.

10.3. Possibility of Hazardous Reactions.

Vapours may form explosive mixtures with air.

10.4. Conditions to Avoid.

Avoid overheating. Avoid the accumulation of electrostatic charges. Avoid any ignition source.

10.5. Incompatible Materials.

Information not available.

10.6. Hazardous Decomposition Products.

As a result of thermal decomposition, or in case of fire, gases and vapours dangerous to health can be released.

SECTION 11. Toxicological Information.

11.1. Information on Toxicological Effects.

In the absence of the toxicological data on experimental product itself, the possible dangers of the product for health were evaluated on the basis of the properties of the substances contained in it, according to the criteria provided by the legislation of reference for the classification. Consider therefore the concentration of each hazardous substances possibly mentioned in sect. 3 to assess the toxicological effects resulting from exposure to the product.
Acute effects: contact with eyes causes irritation; symptoms may include: redness, swelling, pain and tearing. Ingestion may cause health problems, including stomach pain and heartburn, nausea and vomiting.

Data referring to the mixture:

ACUTE TOXICITY INHALATION: Data not available.
ACUTE TOXICITY ORAL: Data not available.
ACUTE TOXICITY SKIN: Data not available.
CORROSION/ SKIN IRRITATION: Data not available.
SEVERE EYE LESIONS/SEVERE EYE IRRITATIONS: it causes severe eye irritation due to its composition specified in section 3.2.
RESPIRATORY SENSITISATION OR SKIN: Data not available;
MUTAGENICITY OF GERM CELLS: Data not available.
CANCEROGENICITÀ: Data not available.
TOXICITY FOR PLAYBACK: Data not available.
SPECIFIC TOXICITY TO TARGET ORGANS (STOT) - SINGLE EXPOSURE: Data not available;
SPECIFIC TOXICITY TO TARGET ORGANS (STOT)- REPEATED EXPOSURE: Data not available.
DANGER IN THE CASE OF SUCTION: Data not available.

Data referred to the hazardous substances in the mixture:

ISOPROPANOL
SEVERE EYE DAMAGE/SEVERE EYE IRRITATION: irritating, rabbit, OECD TG 405 data available in the MSDS of the manufacturer);
SPECIFIC TOXICITY TO TARGET ORGANS (STOT) - SINGLE EXPOSURE: may cause drowsiness or dizziness as per harmonized classification in Annex VI Reg. CLP.

D-GLUCONIC ACID, COMPOUND WITH N,N''-BIS (4-CHLOROPHENYL)-3,12-DIIMINO-2,4,11,13-TETRAAZATETRADECANODIAMMIDINE (2:1)
SEVERE EYE DAMAGE/SEVERE EYE IRRITATION: irritating, rabbit, equivalent or similar to OECD TG 405;
SPECIFIC TOXICITY TO TARGET ORGANS (STOT)- SINGLE EXPOSURE: it may irritate the respiratory tract, classification data available in the MSDS of the supplier.

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES
ACUTE TOXICITY
LD50 (Oral).795 mg/kg Rat, data available in the MSDS of the supplier.
SKIN CORROSION/IRRITATION: corrosive, rabbit, OECD TG 404;
SEVERE EYE DAMAGE/SEVERE EYE IRRITATION: causes severe eye damage.

DIDECYLDIMETHYLAMMONIUM CHLORIDE
LD50 (Oral) > 238 mg/kg Rat (Method: OECD TG 401)
SKIN CORROSION/ IRRITATION: corrosive, in vivo test on rabbit (Method: OECD TG 404).

ETHYLENE GLYCOL
If swallowed, it initially stimulates the CNS that enters a depression phase. Kidney damage, with anuria and uremia may also appear. The symptoms of overexposure are: vomiting, drowsiness, difficulty breathing, seizures. Penetration pathways: inhalation and ingestion.
Lethal doses for humans are of 1000-2000 mg/kg bw (100 mL). [Source: Sheftel, V.O.; Indirect Food Additives and Polymers. Migration and Toxicology. Lewis Publishers, Boca Raton, FL. 2000., p. 726]
ACUTE TOXICITY: Harmful if swallowed. (Harmonised classification, Annex VI of Reg. CLP)
SPECIFIC TOXICITY TO TARGET ORGANS (STOT) - REPEATED EXPOSURE: may cause damage to organs (Harmonised classification, Annex VI of Reg. CLP)

SECTION 12. Ecological Information.

The product is considered dangerous to the environment and is harmful to aquatic organisms with long-term adverse effects on the aquatic environment.

12.1. Toxicity.

ISOPROPANOL	
LC50 - Fish.	> 100 mg/l/96h Pimephales promelas (Method equivalent or similar to OECD TG 203)
EC50 - Shellfish.	> 100 mg/l/24h Daphnia magna (Method equivalent or similar to OECD TG 202)
EC50 - Algae / Aquatic plants.	> 100 mg/l/7d Scenedesmus quadricauda (Published on ECHA website, no reference guidelines)

ETHYLENE GLYCOL	
LC50 - Fish.	> 10000 mg/l/96h Pimephales promelas, method: US-EPA.
EC50 - Shellfish.	> 10000 mg/l/48h Daphnia Magna; method: US-EPA.
EC50 - Algae / Aquatic plants.	6500 mg/l/72h 13000 Pseudokirchnerella subcapitata, method US-EPA.
EC10 Algae / Aquatic plants.	> 10000 mg/l/72h Desmodesmus subspicatus (7d)
Chronic NOEC fish.	> 10000 mg/l/96h Pimephales promelas, method: US-EPA.
Chronic NOEC Algae / Aquatic plants.	8590 mg/l 7d Ceriodaphnia sp. (Source: Environ. Toxicology and Chemistry, Vol. 14, No 2: 311-315)

D-GLUCONIC ACID, COMPOUND WITH N,N''-BIS (4-CHLOROPHENYL)-3,12-DIIMINO-2,4,11,13-TETRAAZATETRADECANODIAMMIDINE (2:1)	
LC50 - Fish.	2.08 mg/l/96h zebrafish, OECD TG 203.
EC50 - Shellfish.	0.087 mg/l/48h Daphnia magna, OECD TG 202.
EC50 - Algae / Aquatic plants.	> 0.081 mg/l/72h Desmodesmus subspicatus, OECD TG 201.

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES	
LC50 - Fish.	> 0.085 mg/l/96h Onchorhynchus mykiss , OECD 203 (information available in the MSDS of the supplier)
EC50 - Shellfish.	0.016 mg/l/48h Daphnia magna (information available in the MSDS of the supplier)

EC50 - Algae / Aquatic plants.	0.025 mg/l/72h Selenastrum capricornutum OECD 201 (information available in the MSDS of the supplier)
NOEC Chronic shellfish.	0.025 mg/l Daphnia magna, OECD 211.

DIDECYLDIMETHYLAMMONIUM CHLORIDE

LC50 - Fish.	0.19 mg/l/96h Pimephales promelas (Method: US-EPA)
EC50 - Shellfish.	0.062 mg/l/48h Daphnia Magna (Method: EPA-FIFRA)
EC50 - Algae / Aquatic plants.	0.026 mg/l/96h Pseudokirchneriella subcapitata (Information available in the SDS of the supplier9
Chronic NOEC fish.	0.032 mg/l/34 d Danio Rerio (Method: OECD TG 210)
NOEC Chronic shellfish.	0.01 mg/l/21 d Daphnia Magna (Reproductive test, method: OECD TG 211)

12.2. Persistence and Degradability.

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES
Rapidly Biodegradable (OECD TG 301 D).

ISOPROPANOL: degradability > 70% in 10 days (data available in the MSDS of the manufacturer).

DIDECYLDIMETHYLAMMONIUM CHLORIDE
Stability in water: abiotic degradation, hydrolytically stable (Method EPA-FIFRA)
Modified Sturn essay: 72%, rapidly degradable, Duration of the experiment: 28 d, Method: OECD TG 301 B
Die-Away test: 93.3%, Experiment duration: 28 d, OECD Confirmatory Test: 91%, Experiment duration: 24 - 70 d, Method: OECD TG 303 A.

D-GLUCONIC ACID, COMPOUND WITH N,N''-BIS (4-CHLOROPHENYL)-3,12-DIIMINO-2,4,11,13-TETRAAZATETRADECANODIAMMIDINE (2:1)
Rapidly Biodegradable (OECD TG 301 A).

ETHYLENE GLYCOL: readily biodegradable Passes OECD test (s) for ready biodegradability. The material is basically biodegradable. Reaches more than 70% of mineralization in OECD test due to inherent biodegradability.
90 - 100 % 10 d Test OECD 301A.

12.3. Potential for bio-accumulation.

ETHYLENE GLYCOL: no potential to bio-accumulate (log Ko/w<1)Bioaccumulation: The bio-concentration potential is low (FBC< 100 or Log Pow<3)
Partition coefficient n-octanol/water (log Pow): -1.36 Measured. (Source: Washington, DC: American Chemical Society., 1995., p. 5. cited in HSDB 20.9.2006)
.

D-GLUCONIC ACID, COMPOUND WITH N,N''-BIS (4-CHLOROPHENYL)-3,12-DIIMINO-2,4,11,13-TETRAAZATETRADECANODIAMMIDINE (2:1)

Partition coefficient: n-octanol/water.	-1,81 Log Kow OECD Guideline 107.
BCF.	42 - (l/Kg) Leuciscus idus melanotus, (Source: publ. on ECHA website)

12.4. Mobility in Soil.

Information not available.

12.5. Results of PBT and vPvB Assessment.

Based on the available data, the product does not contain substances classified as PBT or vPvB in percentage greater than 0.1 %.

12.6. Other Adverse Effects

Information not available.

SECTION 13. Disposal Considerations.

13.1. Methods of Waste Treatment.

Reuse, when possible. Product residues should be considered special hazardous waste. The dangerousness of the wastes that contain part of this product should be evaluated according to the legislative provisions proposed in the Legislative Decree no. 152/2006 and subsequent amendments.
Disposal should be entrusted to an authorized waste management firm, in compliance with national and local regulations.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport Information.

14.1. UN Number.

ADR / RID, IMDG, IATA: 3175

14.2. UN shipping name

ADR / RID: SOLIDS CONTAINING FLAMMABLE LIQUID, N.A.S. (ISOPROPANOL)
IMDG: SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)
IATA: SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)

14.3. Danger Classes connected to the transport.

ADR / RID:	Class: 4.1	Label: 4.1
IMDG:	Class: 4.1	Label: 4.1
IATA:	Class: 4.1	Label: 4.1

14.4. Packaging group.

ADR / RID, IMDG, IATA: II

14.5. Dangers for the environment.

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for users.

ADR / RID:	HIN - Kemler: 40 Special Provision: -	Limited Amounts 1 Kg	Code of restriction in tunnels (E)
IMDG:	EMS: F-A, S-I	Limited Amounts 1 Kg	
IATA:	Cargo:	Maximum quantity: 50 Kg	Packaging Instructions: 448
	Pass.:	Maximum quantity: 15 Kg	Packaging Instructions: 445
	Special instructions:	A46	

14.7. Bulk transport according to Annex II of MARPOL and the IBC code

Information not relevant.

SECTION 15 Regulatory Information.

15.1. Standards and Legislation on Health, Safety and Environmental Specifications for the Substance or Mixture.

Seveso Category.	7b	LIQUID HIGHLY FLAMMABLE

Restrictions concerning the product or substances contained as per Annex XVII Regulation (EC) 1907/2006.

Product:

Point.	**3.** *The substances or the liquid mixtures that are considered dangerous pursuant to Directive 1999 /45/CE or that match the criteria for one of the following classes or categories of danger referred to in Annex I of Regulation (EC) no. 1272/2008:* *a) classes of danger from 2.1 to 2.4 , 2.6 and 2.7 , 2.8 types A and B, 2.9 , 2.10 , 2.12 , 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;* *b) classes of danger from 3.1 to 3.6 , 3.7 harmful effects on sexual function and fertility or development, 3.8 effects other than narcotic effects, 3.9 and 3.10;* *c) hazard class 4.1 ; d) hazard class 5.1 .*
Point.	**40** *Substances classified as flammable gases of category 2 or 1, 2, flammable liquids of category 3 or 1, flammable solids of category 2 or 1, 2, substances and mixtures which, in contact with water, release flammable gases of category 3 or 1, pyrophoric liquids category 1 or pyrophoric solids of category 1, even if not listed in Annex VI, part 3 of Regulation (EC) n. 1272/2008.*

Candidate List Substances (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

None.

Substances subject to export notification Reg. (EC) 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Public health control.

Workers exposed to this chemical agent must undergo health checks for the health surveillance carried out in accordance with the provisions of art. 41 of the Legislative Decree 81 of 9 April 2008, unless the risk to the safety and health of the worker has been assessed irrelevant, in accordance with art. 224 paragraph 2.

Law Decree 152/2006 and subsequent amendments.

Emissions:

TAB. D Class 3 00.02 %
TAB. D Class 4 15.00 %

15.2. Chemical Safety Assessment.

A chemical safety assessment for the mixture and substances contained therein was not prepared.
At the time of drafting of this safety data sheet, the exposure scenario of the substance was not available:
ISOPROPANOL Registration number: 01-2119457558-25.

SECTION 16. Other Information.

Text of hazard indications (H) mentioned in sections 2-3 of this sheet:

Flam. Liq. 2	Flammable liquid, Category 2
Met. Corr. 1	Substance or mixture corrosive for metals, category 1
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1B	Skin corrosion, category 1B
Eye Irrit. 2	Eye irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Liquid and vapours highly flammable.
H290	Can be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.

H373	It may damage the organs in case of prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H319	Causes severe eye irritation.
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic organisms.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic organisms with long-term effects.

Training for workers:
Training of workers must provide content, updates, and duration relating to the types of risks assigned to the specific work areas, according to the regulations laid down in Legislative Decree 81/2008.

LEGEND:
- ADR: European Agreement concerning the transport of dangerous goods by road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Concentration that has effect on 50% of the population subject to test
- EC NUMBER: identification number in ESIS (european archive of existing substances)
- CLP: Regulation EC 1272/2008
- DNEL: derivative level without effect
- EMS: Emergency Schedule
- GHS: Harmonized System overall for the classification and labelling of chemicals
- IATA DGR: Regulation for the transport of dangerous goods of international air transport association
- IC50: Concentration of immobilization of 50% of the population subject to test
- IMDG Code: international maritime transport of dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: identification number in the Annex VI of the CLP
- LC50: lethal concentration 50%
- LD50: lethal dose 50%
- OEL: Level of occupational exposure
- PBT: Persistent, bioaccumulative and toxic according to REACH
- PEC: - PEC environmental concentration predictable
- PEL: anticipated level of exposure
- PNEC: foreseeable concentration without effects
- REACH: Regulation CE 1907/2006
- RID: Regulation for the international carriage of dangerous goods by train
- TLV: threshold Value
- TLV CEILING: Concentration that must not be exceeded during any time of the working exposure.
- TWA STEL: short term exposure limit
- TWA: weighted average exposure limit
- VOC: volatile organic compound
- VPVB: very persistent and very bioaccumulative according to the REACH
- WGK: hazard class aquatic (Germany).

GENERAL BIBLIOGRAPHY:
1. European Parliament Regulation (EC) 1907/2006 (REACH)
2. European Parliament Regulation (EC) 1272/2008 (CLP)
3. European Parliament Regulation (EC) 790/2009 (I Atp. CLP)
4. European Parliament Regulation (EC) 2015/830
5. European Parliament Regulation (EC) 286/2011 (II Atp. CLP)
6. European Parliament Regulation (EC) 618/2012 (III Atp. CLP)
7. European Parliament Regulation (UE) 487/2013 (IV Atp. CLP)
8. European Parliament Regulation (EC) 944/2013 (V Atp. CLP)
9. European Parliament Regulation (EC) 605/2014 (VI Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)

- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA Agency Website

Note for user:
The information contained in this sheet is based on knowledge achieved on the date of the last version. User must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, the user must, under his own responsibility, comply with the current health and safety laws and regulations.. We accept no liability for any unauthorised or improper use.
Provide adequate training for personnel assigned to use chemical products.

Current	Rev.	Date	STATUS AND REASON OF REVISIONS
1	0	25.06.2019	Change of Notified Body (CE0051)