



# halosperm

## PRODUCT INFORMATION

### DEVICE INFORMATION

Product name: halosperm  
REF: HT-HS10  
Document code: HTHS10\_MSDS\_EN/01  
Last revision date: 02-12-2024  
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### COMPONENTS

MSDS kit contains the following:  
- Solution 1 (DA) Denaturant Agent  
- Solution 2 (LS) Lysis Solution

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# SOLUTION 1 (DA) DENATURANT AGENT

## SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 PRODUCT IDENTIFIER

Product form : Mixture  
Trade name : Solution 1 (DA) Denaturant Agent

### 1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

#### 1.2.1 RELEVANT IDENTIFIED USES

Main use category : Professional use  
Use of the substance/mixture : halosperm component

#### 1.2.2 USES ADVISED AGAINST

### 1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Halotech DNA SL  
C/FARADAY 7  
1º PLANTA CAMPUS DE CANTOBLANCO  
28049 MADRID, SPAIN  
T +34 912 79 69 50  
[altea.gosalbez@halotechdna.com](mailto:altea.gosalbez@halotechdna.com)

### 1.4 EMERGENCY TELEPHONE NUMBER

Emergency number : +34 912 79 69 50  
From monday to friday (9:00-16:00h)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Met. Corr. 1	H290
Skin Corr. 1	H314
Eye Dam. 1	H318
STOT SE 3	H335

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

#### Adverse physicochemical, human health and environmental effects

May cause respiratory irritation. Causes severe skin burns and eye damage. Causes serious eye damage.

### 2.2 LABEL ELEMENTS

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS07

Signal word (CLP) :

Danger

Contains :

hydrochloric acid

Hazard statements (CLP) :

H290 - May be corrosive to metals.  
H314 - Causes severe skin burns and eye damage.  
H335 - May cause respiratory irritation.



Precautionary statements (CLP) : P260 - Do not breathe vapours.  
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
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.  
P310 - Immediately call a doctor.  
P390 - Absorb spillage to prevent material damage.  
P501 - Dispose of contents and container to an authorised waste collection point.

### 2.3 OTHER HAZARDS

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII  
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII  
Contains no PBT and/or vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 SUBSTANCES

Not applicable

### 3.2 MIXTURES

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
hydrochloric acid substance with a Community workplace exposure limit	EC-No.: 231-595-7 EC Index-No.: 017-002-01-X REACH-no: 01-2119484862-27	40 – 50	Met. Corr. 1, H290 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

Specific concentration limits:		
Name	Product identifier	Specific concentration limits (%)
hydrochloric acid	EC-No.: 231-595-7 EC Index-No.: 017-002-01-X REACH-no: 01-2119484862-27	(10 $\leq$ C < 100) STOT SE 3, H335 (10 $\leq$ C < 25) Eye Irrit. 2, H319 (10 $\leq$ C < 25) Skin Irrit. 2, H315 (25 $\leq$ C < 100) Skin Corr. 1B, H314

Full text of H- and EUH-statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1 DESCRIPTION OF FIRST AID MEASURES

First-aid measures general : Call a physician immediately.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.



- |                                       |  |
|---------------------------------------|--|
| First-aid measures after skin contact | : Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.  |
| First-aid measures after eye contact  | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. |
| First-aid measures after ingestion    | : Rinse mouth. Do not induce vomiting. Call a physician immediately.   |

#### 4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| Symptoms/effects after inhalation   | : May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Burns.                            |
| Symptoms/effects after eye contact  | : Serious damage to eyes.           |
| Symptoms/effects after ingestion    | : Burns.                            |

#### 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 | : Do not use a heavy water stream.               |

#### 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

- |  |   |
|--|---|
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. Carbon oxides (CO, CO <sub>2</sub> ). Hydrogen chloride. |
|--|---|

#### 5.3 ADVICE FOR FIREFIGHTERS

- |                                |  |
|--------------------------------|--|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |
|--------------------------------|--|

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

##### 6.1.1 FOR NON-EMERGENCY PERSONNAL

- |                      |  |
|----------------------|--|
| Emergency procedures | : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe vapours. |
|----------------------|--|

##### 6.1.2 FOR EMERGENCY RESPONDERS

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

#### 6.2 ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment.

#### 6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

- |                         |   |
|-------------------------|---|
| Methods for cleaning up | : Take up liquid spill into absorbent material.                 |
| Other information       | : Dispose of materials or solid residues at an authorized site. |

#### 6.4 REFERENCE TO OTHER SECTIONS



For further information refer to sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING

Precautions for safe handling	: Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not breathe vapours. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage conditions	: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Incompatible products	: Metals.
Incompatible materials	: Moisture.
Storage temperature	: 15 – 25 °C

### 7.3 SPECIFIC END USE(S)

See section 1.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

#### 8.1.1 NATIONAL OCCUPATIONAL EXPOSURE AND BIOLOGICAL LIMIT VALUES

hydrochloric acid	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Hydrogen chloride
IOEL TWA	8 mg/m <sup>3</sup>
	5 ppm
IOEL STEL	15 mg/m <sup>3</sup>
	10 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC

#### 8.1.2 RECOMMENDED MONITORING PROCEDURES

No additional information available

#### 8.1.3 AIR CONTAMINANTS FORMED

No additional information available

#### 8.1.4 DNEL AND PNEC

hydrochloric acid	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	15 mg/m <sup>3</sup>
Long-term - local effects, inhalation	8 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Acute - local effects, inhalation	15 mg/m <sup>3</sup>

hydrochloric acid	
Long-term - local effects, inhalation	8 mg/m <sup>3</sup>

### 8.1.5 CONTROL BANDING

No additional information available

## 8.2 EXPOSURE CONTROLS

### 8.2.1 APPROPRIATE ENGINEERING CONTROLS

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

### 8.2.2 PERSONAL PROTECTION EQUIPMENT

**Personal protective equipment:**

Avoid all unnecessary exposure.

**Personal protective equipment symbol(s):**



#### 8.2.2.1 EYE AND FACE PROTECTION

**Eye protection:**

Safety glasses (EN 166)

#### 8.2.2.2 SKIN PROTECTION

**Skin and body protection:**

Wear suitable protective clothing

**Hand protection:**

Protective gloves against chemicals (EN 374)

Hand protection				
Type	Material	Permeation	Thickness (mm)	Penetration
	Nitrile rubber (NBR)		0.12	6 (> 480 minutes)
	Nitrile rubber (NBR)		0.38	6 (> 480 minutes)

#### 8.2.2.3 RESPIRATORY PROTECTION

**Respiratory protection:**

Respiratory protection is required for: Aerosol and mist formation: mask (full face/medium/fourth part (DIN EN 136/140)

#### 8.2.2.4 THERMAL HAZARDS

No additional information available

### 8.2.3 ENVIRONMENTAL EXPOSURE CONTROLS



**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Do not eat, drink or smoke during use.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid
Colour	: Transparent.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: < 1 20 °C
Viscosity, kinematic	: 1.949 mm <sup>2</sup> /s
Viscosity, dynamic	: 2.3 mPa·s
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour Pressure 20°C	: 190 hPa
Vapour pressure at 50 °C	: Not available
Density	: 1.18 g/cm <sup>3</sup>
Relative density	: Not available
Vapour density	: Not available
Particle characteristics	: Not applicable

### 9.2 OTHER INFORMATION

#### 9.2.1 INFORMATION WITH REGARD TO PHYSICAL HAZARD CLASSES

No additional information available

#### 9.2.2 OTHER SAFETY CHARACTERISTICS

No additional information available

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 REACTIVITY

Corrosive to metals.

### 10.2 CHEMICAL STABILITY

Stable under normal conditions.

### 10.3 POSSIBILITY OF HAZARDOUS REACTIONS



Explosive reaction(s) with:  
Alkali metals  
Alkali earth metals  
Alkalis (lye)  
Strong reaction(s) with:  
light metal  
Powdered metals  
Exothermic reaction with:  
Water  
Substance, organic.

#### 10.4 CONDITIONS TO AVOID

Moisture.

#### 10.5 INCOMPATIBLE MATERIALS

Metal.

#### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

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

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 INFORMATION ON HAZARD CLASSES AS DEFINED IN REGULATION (EC) NO 1272/2008

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met.)  
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met.)  
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met.)

hydrochloric acid	
LD50 oral rat	> 5010 mg/kg bodyweight
LD50 dermal rabbit	> 5010 mg/kg

Skin corrosion/irritation : Causes severe skin burns.  
pH: < 1 20 °C  
Serious eye damage/irritation : Causes serious eye damage.  
pH: < 1 20 °C  
Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met.)  
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met.)  
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met.)  
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met.)  
STOT-single exposure : May cause respiratory irritation.

hydrochloric acid	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met.)  
Aspiration hazard : Not classified (Based on available data, the classification criteria are not met.)



Solution 1 (DA) Denaturant Agent	
Viscosity, kinematic	1.949 mm <sup>2</sup> /s

## 11.2 INFORMATION ON OTHER HAZARDS

### 11.2.1 ENDOCRINE DISRUPTING PROPERTIES

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

### 11.2.2 OTHER INFORMATION

No additional information available

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 TOXICITY

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.  
 Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met.)  
 Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met.)

### 12.2 PERSISTENCE AND DEGRADABILITY

Solution 1 (DA) Denaturant Agent	
Persistence and degradability	Rapidly degradable
hydrochloric acid	
Persistence and degradability	Rapidly degradable

### 12.3 BIOACCUMULATIVE POTENTIAL

No additional information available

### 12.4 MOBILITY IN SOIL

No additional information available

### 12.5 RESULTS OF PBT AND VPVB ASSESSMENT

Solution 1 (DA) Denaturant Agent
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## 12.6 ENDOCRINE DISRUPTING PROPERTIES

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

## 12.7 OTHER ADVERSE EFFECTS






No additional information available

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 WASTE TREATMENT METHODS

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: TRANSPORT INFORMATION

ADR	IMDG	IATA	ADN	RID
<b>14.1 UN NUMBER OR ID NUMBER</b>				
UN 1789	UN 1789	UN 1789	UN 1789	UN 1789
<b>14.2 UN PROPER SHIPPING NAME</b>				
HYDROCHLORIC ACID	HYDROCHLORIC ACID	Hydrochloric acid	HYDROCHLORIC ACID	HYDROCHLORIC ACID
<b>Transport document description</b>				
UN 1789 HYDROCHLORIC ACID, 8, II, (E)	UN 1789 HYDROCHLORIC ACID, 8, II	UN 1789 Hydrochloric acid, 8, II	UN 1789 HYDROCHLORIC ACID, 8, II	UN 1789 HYDROCHLORIC ACID, 8, II
<b>14.3 TRANSPORT HAZARD CLASS(ES)</b>				
8	8	8	8	8
				
<b>14.4 PACKING GROUP</b>				
II	II	II	II	II
<b>14.5 ENVIRONMENTAL HAZARDS</b>				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

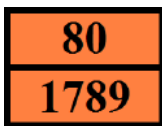
### 14.6 SPECIAL PRECAUTIONS FOR USER

#### Overland transport

Classification code (ADR) : C1  
 Special provisions (ADR) : 520  
 Limited quantities (ADR) : 1I  
 Excepted quantities (ADR) : E2  
 Packing instructions (ADR) : P001, IBC02  
 Mixed packing provisions (ADR) : MP15  
 Portable tank and bulk container instructions (ADR) : T8  
 Portable tank and bulk container special provisions (ADR) : TP2  
 Tank code (ADR) : L4BN  
 Vehicle for tank carriage : AT



Transport category (ADR) : 2  
Hazard identification number (Kemler No.) : 80  
Orange plates :



Tunnel restriction code (ADR) : E

#### Transport by sea

Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
IBC special provisions (IMDG) : B20  
Tank instructions (IMDG) : T8  
Tank special provisions (IMDG) : TP2  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-B  
Stowage category (IMDG) : C  
Segregation (IMDG) : SGG1A, SG36, SG49  
Properties and observations (IMDG) : Colourless liquid. An aqueous solution of the gas hydrogen chloride. Highly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

#### Air transport

PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y840  
PCA limited quantity max net quantity (IATA) : 0.5L  
PCA packing instructions (IATA) : 851  
PCA max net quantity (IATA) : 1L  
CAO packing instructions (IATA) : 855  
CAO max net quantity (IATA) : 30L  
Special provisions (IATA) : A3, A803  
ERG code (IATA) : 8L

#### Inland waterway transport

Classification code (ADN) : C1  
Special provisions (ADN) : 520  
Limited quantities (ADN) : 1 L  
Excepted quantities (ADN) : E2  
Carriage permitted (ADN) : T  
Equipment required (ADN) : PP, EP  
Number of blue cones/lights (ADN) : 0

#### Rail transport

Classification code (RID) : C1  
Special provisions (RID) : 520  
Limited quantities (RID) : 1L  
Excepted quantities (RID) : E2  
Packing instructions (RID) : P001, IBC02  
Mixed packing provisions (RID) : MP15  
Portable tank and bulk container instructions (RID) : T8  
Portable tank and bulk container special provisions (RID) : TP2  
Tank codes for RID tanks (RID) : L4BN  
Special provisions for RID tanks (RID) : TU42  
Transport category (RID) : 2  
Colis express (express parcels) (RID) : CE6  
Hazard identification number (RID) : 80



## 14.7 MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

Not applicable

## SECTION 15: REGULATORY INFORMATION

### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

#### 15.1.1 EU-REGULATIONS

##### REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	DA G1 1 ml ; hydrochloric acid	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

##### Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2 NATIONAL REGULATIONS

No additional information available



## 15.2 CHEMICAL SAFETY ASSESSMENT

No chemical safety assessment has been carried out

**For the following substances of this mixture a chemical safety assessment has been carried out:**

hydrochloric acid

## SECTION 16: OTHER INFORMATION

ABBREVIATIONS AND ACRONYMS :	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
DNEL	Derived-No Effect Level
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LD50	Median lethal dose
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE 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. SDS EU format according to COMMISSION REGULATION (EU) 2020/878.

Other information : Refer to the safety data sheet before handling or disposing.

FULL TEXT OF H- AND EUH-STATEMENTS :	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation



CLASSIFICATION AND PROCEDURE USED TO DERIVE THE CLASSIFICATION FOR MIXTURES ACCORDING TO REGULATION (EC) 1272/2008 [CLP]:		
Met. Corr. 1	H290	Expert judgement
Skin Corr. 1	H314	On basis of test data
Eye Dam. 1	H318	On basis of test data
STOT SE 3	H335	Calculation method

Safety Data Sheet (SDS), EU

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

## SOLUTION 2 (LS) LYSIS SOLUTION

### SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 PRODUCT IDENTIFIER

Product form : Mixture  
Trade name : Solution 2 (LS) Lysis Solution

#### 1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

##### 1.2.1 RELEVANT IDENTIFIED USES

Main use category : Professional use  
Use of the substance/mixture : halosperm component

##### 1.2.2 USES ADVISED AGAINST

No additional information available

#### 1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Halotech DNA SL  
C/FARADAY 7  
1º PLANTA CAMPUS DE CANTOBLANCO  
28049 MADRID, SPAIN  
T +34 912 79 69 50  
[altea.gosalbez@halotechdna.com](mailto:altea.gosalbez@halotechdna.com)

#### 1.4 EMERGENCY TELEPHONE NUMBER

Emergency number : +34 912 79 69 50  
From monday to friday (9:00-16:00h)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Eye Dam. 1 H318  
Full text of hazard classes, H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

Causes serious eye damage.

#### 2.2 LABEL ELEMENTS

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger  
Contains : (R\*,R\*)-1,4-dimercaptobutane-2,3-diol  
Hazard statements (CLP) : H318 - Causes serious eye damage.  
Precautionary statements (CLP) : P280 - Wear protective clothing, eye protection, face protection.  
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 doctor.

### 2.3 OTHER HAZARDS

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT and/or vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 SUBSTANCES

Not applicable

### 3.2 MIXTURES

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
(R*,R*)-1,4-dimercaptobutane-2,3-diol	CAS-No.: 3483-12-3 EC-No.: 222-468-7	3 – 3.5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318
2-((1-((2-ethylhexyl)poly-oxy)poly-propan-2-yl)oxy)ethanol	CAS-No.: 64366-70-7 EC-No.: 613-582-1	1 – 1.5	Eye Irrit. 2, H319

Full text of H- and EUH-statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1 DESCRIPTION OF FIRST AID MEASURES

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

### 4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Symptoms/effects after eye contact : Serious damage to eyes.

### 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 : Do not use a heavy water stream.

## 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon oxides (CO, CO<sub>2</sub>).

## 5.3 ADVICE FOR FIREFIGHTERS

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

#### 6.1.1 FOR NON-EMERGENCY PERSONNAL

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

#### 6.1.2 FOR EMERGENCY RESPONDERS

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

### 6.2 ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment.

### 6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

For containment : Collect spillage.  
Methods for cleaning up : Take up liquid spill into absorbent material.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4 REFERENCE TO OTHER SECTIONS

For further information refer to sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage conditions : Store in a well-ventilated place. Keep cool.  
Incompatible products : Strong bases. Strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3 SPECIFIC END USE(S)

See section 1.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

#### 8.1.1 NATIONAL OCCUPATIONAL EXPOSURE AND BIOLOGICAL LIMIT VALUES

No additional information available

#### 8.1.2 RECOMMENDED MONITORING PROCEDURES

No additional information available

#### 8.1.3 AIR CONTAMINANTS FORMED

No additional information available

#### 8.1.4 DNEL AND PNEC

No additional information available

#### 8.1.5 CONTROL BANDING

No additional information available

## 8.2 EXPOSURE CONTROLS

### 8.2.1 APPROPRIATE ENGINEERING CONTROLS

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

### 8.2.2 PERSONAL PROTECTION EQUIPMENT

**Personal protective equipment:**

Avoid all unnecessary exposure.

**Personal protective equipment symbol(s):**



#### 8.2.2.1 EYE AND FACE PROTECTION

**Eye protection:**

Safety glasses

#### 8.2.2.2 SKIN PROTECTION

**Skin and body protection:**

Wear suitable protective clothing

**Hand protection:**

Protective gloves

#### 8.2.2.3 RESPIRATORY PROTECTION

**Respiratory protection:**

In case of insufficient ventilation, wear suitable respiratory equipment

#### 8.2.2.4 THERMAL HAZARDS



No additional information available

### 8.2.3 ENVIRONMENTAL EXPOSURE CONTROLS

**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Do not eat, drink or smoke during use.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid
Colour	: Colourless.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 7
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour Pressure 20°C	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Vapour density	: Not available
Particle characteristics	: Not applicable

### 9.2 OTHER INFORMATION

#### 9.2.1 INFORMATION WITH REGARD TO PHYSICAL HAZARD CLASSES

No additional information available

#### 9.2.2 OTHER SAFETY CHARACTERISTICS

No additional information available

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 REACTIVITY

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2 CHEMICAL STABILITY

Stable under normal conditions.



### 10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reactions known under normal conditions of use.

### 10.4 CONDITIONS TO AVOID

None under recommended storage and handling conditions (see section 7).

### 10.5 INCOMPATIBLE MATERIALS

See section 7.2.

### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

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

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 INFORMATION ON HAZARD CLASSES AS DEFINED IN REGULATION (EC) NO 1272/2008

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met.)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met.)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met.)

#### (R\*,R\*)-1,4-dimercaptobutane-2,3-diol (3483-12-3)

LD50 oral rat	300 – 2000 mg/kg OECD 423
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met.) pH: 7
Serious eye damage/irritation	: Causes serious eye damage. pH: 7
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met.)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met.)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met.)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met.)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met.)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met.)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met.)

### 11.2 INFORMATION ON OTHER HAZARDS

#### 11.2.1 ENDOCRINE DISRUPTING PROPERTIES



Adverse health effects caused by endocrine disrupting properties

: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

### 11.2.2 OTHER INFORMATION

No additional information available

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 TOXICITY

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.  
Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met.)  
Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met.)

<b>(R*,R*)-1,4-dimercaptobutane-2,3-diol (3483-12-3)</b>	
EC50 - Crustacea [1]	34.8 mg/l 48h; Daphnia magna, OECD 202
ErC50 algae	24.3 mg/l 72h; Pseudokirchneriella subcapitata, OECD 201
NOEC chronic crustacea	25 mg/l 48h; Daphnia magna; OECD 202

### 12.2 PERSISTENCE AND DEGRADABILITY

<b>Solution 2 (LS) Lysis Solution</b>	
Persistence and degradability	No information available.
<b>(R*,R*)-1,4-dimercaptobutane-2,3-diol (3483-12-3)</b>	
Persistence and degradability	No information available.
<b>2-((1-((2-ethylhexyl)poly-oxy)poly-propan-2-yl)oxy)ethanol (64366-70-7)</b>	
Persistence and degradability	No information available.

### 12.3 BIOACCUMULATIVE POTENTIAL

No additional information available

### 12.4 MOBILITY IN SOIL

No additional information available

### 12.5 RESULTS OF PBT AND VPVB ASSESSMENT

<b>Solution 2 (LS) Lysis Solution</b>
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6 ENDOCRINE DISRUPTING PROPERTIES



Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

## 12.7 OTHER ADVERSE EFFECTS

No additional information available

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.2 WASTE TREATMENT METHODS

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: TRANSPORT INFORMATION

ADR	IMDG	IATA	ADN	RID
<b>14.1 UN NUMBER OR ID NUMBER</b>				
Not regulated for transport				
<b>14.2 UN PROPER SHIPPING NAME</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3 TRANSPORT HAZARD CLASS(ES)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4 PACKING GROUP</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5 ENVIRONMENTAL HAZARDS</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

### 14.6 SPECIAL PRECAUTIONS FOR USER

#### Overland transport

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

#### Inland waterway transport

Not regulated

#### Rail transport

Not regulated

### 14.7 MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

Not applicable



## SECTION 15: REGULATORY INFORMATION

### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

#### 15.1.1 EU-REGULATIONS

##### REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	LS 10 ml; LS 110 ml; ; 2-((1-((2-ethylhexyl)polyoxy)poly-propan-2-yl)oxy)ethanol	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

##### Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2 NATIONAL REGULATIONS

No additional information available

### 15.2 CHEMICAL SAFETY ASSESSMENT

No chemical safety assessment has been carried out



## SECTION 16: OTHER INFORMATION

### ABBREVIATIONS AND ACRONYMS :

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BLV	Biological limit value
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE 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. SDS EU format according to COMMISSION REGULATION (EU) 2020/878.

Other information : Refer to the safety data sheet before handling or disposing.

### FULL TEXT OF H- AND EUH-STATEMENTS :

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

### CLASSIFICATION AND PROCEDURE USED TO DERIVE THE CLASSIFICATION FOR MIXTURES ACCORDING TO REGULATION (EC) 1272/2008 [CLP]:

Eye Dam. 1	H318	Calculation method
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Safety Data Sheet (SDS), EU

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