HAIR BIOLOGIC SYSTEM since 1975

SAFETY DATA SHEET

COSMETIC PRODUCT - PERMANENT WAVE
ONE-COMPONENT BASED ON REDUCING AGENTS

TWIST&TWIST PERMANENT WAVE
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This safety data sheet replaces all previous versions.

1. SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

Product code	**PL1908**
Product name	**TWIST&TWIST PERMANENT WAVE**

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

Description/Use	**cosmetic product – permanent waving lotion** **one-component based on reducing agents**

Relevant identified uses	**Industrial use**	**Professional use**	**Consumer use**
Use only as permanent waving lotion for hair	-	✓	-

Uses advised against
Do not use for any purpose other than those listed above

1.3 Details of the supplier of the Safety Data Sheet
HAIR BIOLOGIC SYSTEM SRL - VIA PADRE ANTONIO CASAMASSA, 87 - 00119 ROMA
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2. SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the substance/mixture

This product is classified as hazardous under the Regulation (EC) 1272/2008 (CLP) and subsequent amendments. The product thus requires a Safety Data Sheet in compliance with Regulation (EC) 1907/2006 and subsequent amendments. Any additional information concerning health risks and/or risks to the environment can be found in sections 11 and 12 of this sheet.

Classification and hazard statements:

Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin irritation.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long-lasting effects.

2.2 Label elements

Hazard labelling in accordance with Regulation (EC) 1272/2008 (CLP) and subsequent amendments.

Hazard pictograms:

Signal word: Danger

Hazards statements:

H315	Causes skin irritation.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long-lasting effects.
EUH208	Contains: PARFUM
	May cause an allergic reaction.

Precautionary statements:

P264	Wash … thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/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 POISON CENTER or doctor/physician.
P362 + P364	Take off contaminated clothing and wash it before reuse.
Contains:	SODIUM HYDROXIDE C12-13 PARETH-9

2.3 Other Hazards

According to the available data, the product does not contain PBT or vPvB substances in a percentage higher than 0.1%.

3. SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Information not relevant

3.2 Mixtures

Contains:

Identification	**x= Conc. %.**	**Classification 1272/2008 (CLP)**
CYSTEAMINE HCL		
CAS 156-57-0 CE 205-858-1 INDEX -	5 ≤ x < 10	Acute Tox. 4 H302
SODIUM HYDROXIDE		
CAS 1310-73-2 CE 215-185-5 INDEX 011-002-00-6	1 ≤ x < 5	Met. Corr. 1 H290, Skin Corr. 1A H314
C12-13 PARETH-9		
CAS 160901-19-9 CE 931-954-4 INDEX - Reg. Number Not needed (polymer)	1 ≤ x < 5	Acute Tox. 4 H302, Eye Dam. 1 H318
PARFUM		
CAS CE INDEX -	0.1 ≤ x < 1	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1

See section 16 for full list of hazardous statements (H).

4. SECTION 4 - FIRST AID MEASURES

4.1 Description of First Aid Measures

EYE CONTACT: remove contact lenses, if present. Rinse immediately and thoroughly with water for at least 30/60 minutes, lifting the upper and lower eyelids. Seek immediate medical advice.
SKIN CONTACT: remove any contaminated clothing. Shower immediately. Seek immediate medical advice.
INGESTION: give plenty of water to drink. Seek immediate medical advice. Never induce vomiting unless ordered by the doctor.
INHALATION: seek immediate medical advice. Move person to fresh air, far from source of contamination. If breathing stops, administer artificial respiration, using appropriate precautions for emergency responders.

4.2 Most important symptoms and effects, both acute and delayed

No specific effects and/or symptoms are known.

4.3 Indication of any immediate medical attention and special treatment needed

Information not available

5. SECTION 5 - FIREFIGHTING MEASURES

5.1 Extinguishing media

SUITABLE EXTINGUISHING MEDIA

Use conventional extinguishing media: carbon dioxide, dry powder, foam or water spray.

UNSUITABLE EXTINGUISHING MEDIA

None in particular.

5.2 Special hazards arising from the substance or mixture

HAZARDOUS COMBUSTION PRODUCTS

Avoid inhaling any combustion products. Product is combustible in that dust dispersed in air in sufficient concentrations, and in the presence of an ignition source, is a potential explosion hazard. Fire may develop or be fed back by the solid possibly released from the container when it reaches high temperatures or by contact with sources of ignition.

5.3 Advice for firefighters and protective equipment

GENERAL INFORMATION

Cool the containers with jets of water to prevent product decomposition and the development of substances that are potentially hazardous for the health. Always wear full fire protection equipment. Collect all water used to extinguish the fire; this must not be drained into sewers. Dispose of contaminated water used to extinguish the fire and other fire residues in compliance with the laws in force.

EQUIPMENT

Normal firefighting clothing, such as self-contained, open-circuit compressed air breathing apparatus (EN 137), flameproof suit (EN469), flameproof gloves (EN 659) and Fire Brigade boots (HO A29 or A30).

6. SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Block spillage if safe to do so. Use suitable protective clothing (as described in Section 8 of this safety data sheet) so as to avoid contamination of eyes, skin or personal clothing. These indications apply both for processing staff and those involved in emergency procedures.

6.2 Environmental precautions

Prevent the product from entering drains, surface water and ground water.

6.3 Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. If the product is flammable, use an explosion-proof device. Evaluate the compatibility of the container to be used with the product, verifying section 10. Absorb the remainder with inert absorbent material. Make sure the leakage site is well-aired. Dispose of contaminated material in compliance with the provisions set forth in Section 13.

6.4 Reference to other sections

Any reference to personal protection and disposal is given in sections 8 and 13.

7. SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide adequate electrical earthing for equipment and persons. Avoid contact with eyes and skin. Do not inhale vapours, dust or mist. Do not eat, drink or smoke while handling product. Wash hands after use. Avoid dispersion in the environment.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original containers. Keep containers tightly closed and clearly labelled. Store in a well - ventilated place, far from sources of ignition. Avoid overheating and violently banging containers. Keep containers away from any incompatible materials, see section 10 for details.

7.3 Specific end uses

Information not available

8. SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Normative references:

TLV-ACGIH ACGIH 2016

SODIUM HYDROXIDE

Threshold limit value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH				2	

Legend:

(C) = CEILING; INALAB = Inhalable Fraction; RESPIR = Respirable Fraction; TORAC = Thoracic Fraction.

8.2 Exposure controls
Adequate technical measures should always take priority over personal protective equipment. Ensure good ventilation in the workplace through effective local exhaust ventilation or air vent. When choosing personal protective equipment, ask your chemical substance supplier for advice. Personal protective equipment must be EC marked, showing that it complies with applicable standards. Emergency shower and face/eye wash facilities should be provided.

HAND PROTECTION
Protect hands with Category III (ref. Standard EN 374) work gloves. Compatibility, degradation, breakthrough times and permeation should be considered when choosing work glove material. Work glove resistance to preparations/mixtures should be checked prior to use, as it can be unpredictable. Glove limit resistance depends on the duration of exposure and type of use.

SKIN PROTECTION
Wear Category II professional long-sleeved overalls and safety footwear (ref. Directive 89/686/EEC and Standard EN ISO 20344). Wash skin with soap and water after removing protective clothing.

EYE PROTECTION
Wear a hood visor or protective visor combined with tight-fitting goggles (ref. Standard EN 166).

RESPIRATORY PROTECTION
Should the threshold value of one or more of the substances present in the product be exceeded, then wear a mask with a B type filter. The Category (1,2 or 3) must be chosen according to concentration limit of use (ref. Standard EN 14387). Use combined filter suitable for gases, vapours and particles (smoke, mist, aerosol).
The use of breathing protection equipment is necessary in the absence of technical measures limiting worker exposure. The protection provided by masks is in any case limited.
If the substance in question is odourless or if its olfactory threshold is higher than the corresponding TLV-TWA relative exposure limit and in case of an emergency, then wear self-contained open-circuit compressed air breathing apparatus (ref. Standard EN 137) or external air-intake breathing apparatus (ref. Standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residue must not be poured into drains or waterways without checking.

9. SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	White
Odour	Characteristic
Odour threshold	Not available
pH	8.42
Melting point/freezing point	Not available
Initial boiling point	100°C
Boiling range	Not available
Flash point	>100°C
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Upper flammability limits	Not available
Lower flammability limits	Not available
Upper explosives limits	Not available
Lower explosives limits	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	1.000 – 1.040 g/ml g/ml
Solubility(ies)	Soluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not applicable
Oxidising properties	Not applicable

9.2 Other information

VOC (Directive 2010/75/EC):	0
VOC (volatile carbon):	0

10. SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity
No hazardous reactions with other substances under normal conditions of use.

10.2 Chemical stability
This product is stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions
No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4 Conditions to avoid
None in particular. However, the usual precautions used for handling chemical products should be followed.

10.5 Incompatible materials
No available information.

10.6 Hazardous decomposition products
No available information.

11. SECTION 11 - TOXICOLOGICAL INFORMATION

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1 Information on toxicological effects
Metabolism, kinetics, mechanism of action and other information
Information not available
Information on likely routes of exposure
Information not available
Delayed and immediate effects as well as chronic effects from short and long-term exposure
Information not available

Interactive effects
Information not available
ACUTE TOXICITY
LC50 (Inhalation) of the mixture: Not classified (no significant component)
LD50 (Oral) of the mixture: > 2000 mg/kg
LD50 (Dermal) of the mixture: Not classified (no significant component)

CYSTEAMINE HCL
LD50 (Oral): 1352 mg/kg Mouse

LAURETH-23
LD50 (Oral): > 2000 mg/kg Rat

SODIUM HYDROXIDE
LD50 (Oral): 1350 mg/kg Rat
LD50 (Dermal): 1350 mg/kg Rat

C12-13 PARETH-9
LD50 (Oral): 300 mg/kg

SKIN CORROSION / IRRITATION
Causes skin irritation.
SERIOUS EYE DAMAGE / IRRITATION
Causes serious eye damage.
RESPIRATORY OR SKIN SENSITISATION
May cause an allergic reaction.
Contains: PARFUM

GERM CELL MUTAGENICITY
Does not meet the classification criteria for this hazard class
CARCINOGENICITY
Does not meet the classification criteria for this hazard class
REPRODUCTIVE TOXICITY
Does not meet the classification criteria for this hazard class

Specific target organ toxicity (STOT) - SINGLE EXPOSURE
Does not meet the classification criteria for this hazard class
Specific target organ toxicity (STOT) - REPEATED EXPOSURE
Does not meet the classification criteria for this hazard class
ASPIRATION HAZARD
Does not meet the classification criteria for this hazard class

12. SECTION 12 - ECOLOGICAL INFORMATION

The product is regarded as dangerous for the environment and toxic to aquatic life and may cause long-term adverse effects in the aquatic environment.

12.1 Toxicity

SODIUM HYDROXIDE			
LC50 Fish	> 72	mg/l	Gambusia affinis
C12-13 PARETH-9			
LC50 Fish	> 1	mg/l/96h	Cyprinus carpio
EC50 Crustacea	> 1	mg/l/48h	Daphnia magna
EC50 Algae/ aquatic plants	> 1	mg/l/72h	Desmodesmus subspicatus

12.2 Persistence and degradability
LAURETH-23
Rapidly degradable

SUCROSE
Degradability: data not available

PARFUM
Degradability: data not available

C12-13 PARETH-9
Rapidly degradable

12.3 Bioaccumulative potential
No available information

12.4 Mobility in soil
No available information.

12.5 Results of PBT and vPvB assessment
On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0.1%.

12.6 Other adverse effects
No available information.

13. SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Disposal methods
Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised 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 regulation.

14. SECTION 14 - TRANSPORT INFORMATION

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1 UN No.
Not applicable

14.2 UN Proper shipping name
Not applicable

14.3 Transport hazard class(es)
Not applicable

14.4 Packing group
Not applicable

14.5 Environmental hazards
Not applicable

14 .6 Special precautions for users
Not applicable

14 .7 Transport in bulk according to Annex II of MARPOL and the IBC Code
Information not relevant

15. SECTION 15 - REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Seveso category. - Directive 2012/18/EC: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product
Point 3

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage greater than 0.1%

Substances subject to authorisation (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012
None

Substances subject to the Rotterdam Convention
None

Substances subject to the Stockholm Convention
None

Healthcare controls
Workers exposed to this chemical agent regarded as dangerous to health must undergo health surveillance carried out according to the provisions of art. 41 of Legislative Decree 81 of 9th April 2008, unless the risk for the safety and health of the worker has been assessed as irrelevant, according to the provisions of art. 224 paragraph 2.

15.2 Chemical safety assessment
No chemical safety assessment has been carried out for the mixture and the substances it contains.

16. SECTION 16 - OTHER INFORMATION

List of Hazard statements (H) mentioned in sections 2 and 3 of this Safety Data Sheet:

Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1A	Skin corrosion, category 1A
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
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
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

KEY/LEGEND TO ABBREVIATIONS AND ACRONYMS:

- ADR: European agreement concerning the International carriage of dangerous goods by Road
- CAS NUMBER: Chemical abstracts service number
- EC50: concentration of a compound where 50% of the population tested exhibit a response after a specified exposure duration
- EC NUMBER: identifier number stored in the European Inventory of Existing Chemical Substances
- CLP: European Regulation 1272/2008
- DNEL: Derived No-effect Level
- EMS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labelling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Half maximal inhibitory concentration
- IMDG: International Maritime Dangerous Goods Code
- IMO: International Maritime Organization
- INDEX NUMBER: Identification number of Annex VI to the CLP Regulation
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- OEL: Occupational Exposure Limit
- PBT: Persistent, Bioaccumulative and Toxic
- PEC: Predicted Environmental Concentration
- PEL: Permissible Exposure Limit
- PNEC: Predicted No Effect Concentration
- REACH: EC Regulation 1907/2006
- RID: International carriage of dangerous goods by Rail
- TLV: Threshold limit value
- TLV CEILING: Maximum exposure concentration that should not be exceeded under any circumstances during any part of the working process
- TWA STEL: Time Weighted Average Short Term Exposure
- TWA: Time Weighted Average Exposure
- VOC: Volatile Organic Compound
- vPvB: very persistent and very bioaccumulative according to REACH
- WGK: Water hazard classes (Germany)

KEY LITERATURE REFERENCES AND SOURCES FOR DATA

- 1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
- 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
- 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
- 4. Regulation (EU) 2015/830 of the European Parliament
- 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
- 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
- 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
- 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
- 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
- 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- 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 Ed., 1989 Edition
- IFA GESTIS website
- ECHA Agency website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Information for the user:
The information provided herein is offered in good faith, based on our knowledge as of the issue date (or subsequent revision date, if any).
Users must verify the suitability and completeness of the information in relation to the specific use of the product.
This document does not constitute a guarantee of any kind or for any specific properties of the product. Since the use of this product is beyond our direct control, users must, under their own responsibility, comply with all existing and applicable laws and provisions concerning hygiene and safety.
We accept no responsibility and disclaim all liability for any harmful effects and damages resulting from improper handling or use of the product.
Staff handling chemical substances must be provided with adequate training.