Safety data sheet

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

1.1. Product identifier.

Product name. **PRODUCT PER PDR**

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

Intended use. **Industrial Textile auxiliary.**

1.3. Details of the supplier of the safety data sheet.

Name. **GARMON S.p.A.**
Full address. **Via Acquasalata 7 D/E**
District and Country. **47899 Serravalle**
Repubblica di San Marino
Tel. 0549-907549
Fax. 0549-904913

e-mail address of the competent person.
responsible for the Safety Data Sheet. **garmon@garmonchemicals.it**

Product distribution by: **GARMON S.p.A.**

1.4. Emergency telephone number.

For urgent inquiries refer to. **(+39) 348-8517670 - From Other Countries: cell. (+378) 904579 - Fax (+378) 904913**
From Monday to Friday: 9-13, 14-18

SECTION 2. Hazards identification.

2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Substance or mixture corrosive to metals, category 1	H290	May be corrosive to metals.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
Acute toxicity, category 4	H302	Harmful if swallowed.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements.

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

Hazard pictograms:

Signal words: Warning

SECTION 2. Hazards identification. ... / >>

Hazard statements:

H290	May be corrosive to metals.
H351	Suspected of causing cancer.
H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements:

P273	Avoid release to the environment.
P280	Wear protective gloves / clothing and eye / face protection.
P301+P310	IF SWALLOWED: immediately call a POISON CENTER / doctor
P302+P352	IF ON SKIN: wash with plenty of water / . . .
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Contains: BIS(HYDROXYLAMMONIUM) SULPHATE

2.3. Other hazards.

On the basis of available data, the product does not contain any 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.	**x = Conc. %.**	**Classification 1272/2008 (CLP).**
BIS(HYDROXYLAMMONIUM) SULPHATE		
CAS. 10039-54-0	67 ≤ x < 71	Met. Corr. 1 H290, Carc. 2 H351, Acute Tox. 4 H302, Acute Tox. 4 H312, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 3 H412
EC. 233-118-8		
INDEX. 612-123-00-2		
Reg. no. 01-2119485971-25-0001; 01-2119485971-25-0000		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures.

4.1. Description of first aid measures.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.
INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.
For symptoms and effects caused by the contained substances, see chap. 11.

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

Treatment: Treat according to symptoms (decontamination, vital functions); treat with tolonium chloride to reverse methemoglobinemia.

SECTION 5. Firefighting measures.

5.1. Extinguishing media.

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

5.3. Advice for firefighters.

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 full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures.

If there are no contraindications, spray powder with water to prevent the formation of dust.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up.

Collect the leaked product and place it in containers for recovery or disposal. If the product is flammable, use explosion-proof equipment.

If there are no contraindications, use jets of water to eliminate product residues.

Make sure the leakage site is well aired. Evaluate the compatibility of the container to be used, by checking section 10. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage.

7.1. Precautions for safe handling.

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities.

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed.

Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s).

Information not available.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

BIS(HYDROXYLAMMONIUM) SULPHATE								
Predicted no-effect concentration - PNEC.								
Normal value in fresh water						0,031	mg/l	
Normal value in marine water						0,0031	mg/l	
Normal value for fresh water sediment						0,112	mg/kg	
Normal value for marine water sediment						0,0112	mg/kg	
Normal value for water, intermittent release						0,0072	mg/l	
Normal value of STP microorganisms						0,07	mg/l	
Normal value for the terrestrial compartment						0,00422	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
Inhalation.					VND	0,032 mg/m3	VND	0,008 mg/m3

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must be CE marked, showing that it complies with applicable standards.
Provide an emergency shower with face and eye wash station.
Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).
HAND PROTECTION
In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).
Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.
SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.
EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).
In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.
RESPIRATORY PROTECTION
If the operator is exposed to a carcinogenic or mutagenic agent, wear a type FFP3 facemask, (see standard EN 149).
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate not otherwise classified (PNOC respirable fraction: 3 mg/m3; PNOC inhalable fraction: 10 mg/m3). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment.
ENVIRONMENTAL EXPOSURE CONTROLS.
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	powder
Colour	white
Odour	odourless
Odour threshold.	Not applicable.
pH.	Not applicable.
Melting point / freezing point.	Not applicable.
Initial boiling point.	Not applicable.
Boiling range.	Not applicable.
Flash point.	Not applicable.
Evaporation Rate	Not applicable.

SECTION 9. Physical and chemical properties. ... / >>

Flammability of solids and gases	not applicable
Lower inflammability limit.	Not applicable.
Upper inflammability limit.	Not applicable.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not applicable.
Vapour density	Not applicable.
Relative density.	2,078
Solubility	soluble in water
Partition coefficient: n-octanol/water	-3,6 (CAS:10039-54-0)
Auto-ignition temperature.	Not applicable.
Decomposition temperature.	> 120°C
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidising properties	not applicable

9.2. Other information.

Information not available.

SECTION 10. Stability and reactivity.

10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use, but the product may be corrosive to metals.

BIS(HYDROXYLAMMONIUM) SULPHATE
Decomposes at temperatures above 120°C/248°F.

10.2. Chemical stability.

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

10.3. Possibility of hazardous reactions.

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

BIS(HYDROXYLAMMONIUM) SULPHATE
May react violently with: oxidising substances.Decomposes under the effect of heat.Possibility of explosion.Risk of explosion on contact with: alkalis.May react dangerously with: bases,nitrites,nitrates,powders,metal salts,aldehydes,ketones,water.

10.4. Conditions to avoid.

High Temperature (>80°C).

10.5. Incompatible materials.

Oxidizing agents, metal salts, salts of heavy metals.

10.6. Hazardous decomposition products.

BIS(HYDROXYLAMMONIUM) SULPHATE
May develop: nitric oxide,ammonia,sulphur oxides,hydroxylamine.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

ACUTE TOXICITY.

LC50 (Inhalation - vapours) of the mixture:	Not classified (no significant component).
LC50 (Inhalation - mists / powders) of the mixture:	Not classified (no significant component).
LD50 (Oral) of the mixture:	917,143 mg/kg
LD50 (Dermal) of the mixture:	2143,000 mg/kg

BIS(HYDROXYLAMMONIUM) SULPHATE

LD50 (Oral).	642 mg/kg Rat
LD50 (Dermal).	> 1500 mg/kg Rabbit

SECTION 11. Toxicological information. ... / >>

SKIN CORROSION / IRRITATION.
Causes skin irritation.

SERIOUS EYE DAMAGE / IRRITATION.
Causes serious eye irritation.

RESPIRATORY OR SKIN SENSITISATION.
Sensitising for the skin.

GERM CELL MUTAGENICITY.
Does not meet the classification criteria for this hazard class.

CARCINOGENICITY.
Suspected of causing cancer.

REPRODUCTIVE TOXICITY.
Does not meet the classification criteria for this hazard class.

STOT - SINGLE EXPOSURE.
Does not meet the classification criteria for this hazard class.

STOT - REPEATED EXPOSURE.
May cause damage to organs.

ASPIRATION HAZARD.
Does not meet the classification criteria for this hazard class.

SECTION 12. Ecological information.

This product is dangerous for the environment and highly toxic for aquatic organisms.
This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity.

BIS(HYDROXYLAMMONIUM) SULPHATE

LC50 - for Fish.	7,2 mg/l/96h Pimephales promelas
EC50 - for Crustacea.	1,62 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	0,72 mg/l Scenedesmus subspicatus
Chronic NOEC for Crustacea.	> 0,616 mg/l Daphnia Magna - 21 days

12.2. Persistence and degradability.

BIS(HYDROXYLAMMONIUM) SULPHATE

Solubility in water.	> 10000 mg/l

12.3. Bioaccumulative potential.

BIS(HYDROXYLAMMONIUM) SULPHATE

Partition coefficient: n-octanol/water.	-3,6

12.4. Mobility in soil.

BIS(HYDROXYLAMMONIUM) SULPHATE

Partition coefficient: soil/water.	-0,85

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.

Information not available.

SECTION 13. Disposal considerations.

13.1. Waste treatment 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.
Waste transportation may be subject to ADR restrictions.
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: 2865

14.2. UN proper shipping name.

ADR / RID: HYDROXYLAMINE SULPHATE
IMDG: HYDROXYLAMINE SULPHATE
IATA: HYDROXYLAMINE SULPHATE

14.3. Transport hazard class(es).

ADR / RID: Class: 8 Label: 8

IMDG: Class: 8 Label: 8

IATA: Class: 8 Label: 8

14.4. Packing group.

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards.

ADR / RID: Environmentally Hazardous.

IMDG: Marine Pollutant.

IATA: NO

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user.

ADR / RID:	HIN - Kemler: 80 Special Provision: -	Limited Quantities: 5 kg	Tunnel restriction code: (E)
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 kg	
IATA:	Cargo:	Maximum quantity: 100 Kg	Packaging instructions: 864
	Pass.:	Maximum quantity: 25 Kg	Packaging instructions: 860
	Special Instructions:	A803	

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

Information not relevant.

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.
None.

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 authorisarion (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 must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information.

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Carc. 2	Carcinogenicity, category 2
Acute Tox. 4	Acute toxicity, category 4
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
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 3	Hazardous to the aquatic environment, chronic toxicity, category 3
Aquatic Chronic 4	Hazardous to the aquatic environment, chronic toxicity, category 4
H290	May be corrosive to metals.
H351	Suspected of causing cancer.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH044	Risk of explosion if heated under confinement.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)

SECTION 16. Other information. ... / >>

- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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

- 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 website

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users 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, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

SECTION 16. Other information. ... / >>

Changes to previous review:
The following sections were modified:
01 / 02 / 03 / 04 / 05 / 09 / 10 / 11 / 15 / 16.