

# SAFETY DATA SHEET

Issuing Date 12-Dec-2017 Revision Date 08-Nov-2017 Revision F

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier** 

Product Name VeroDentPlus, MED690

Other means of identification

Product Code(s) SDS-06158 EN A

UN/ID no. UN3082

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Printing inks

Uses advised against This product is a cartridge containing ink. Under normal conditions of use, the substance is

released from a cartridge only inside an appropriate printing system, and therefore,

exposure is limited

## Details of the supplier of the safety data sheet

## **Manufacturer Address**

Stratasys Corporate headquarters United States 9600 West 76th Street Suite #108 Eden Prairie, MN 55344

**United States** 

Local: +1 952-294-3900 Phone: +1 952-937-3000

## Emergency telephone number

• +44 1865 407333 - Global – English Language response

+44 1235 239670 - Europe - Multi lingual response
+1 215 207 0061 - USA - Multi-lingual response
+65 3158 1074 - Asia Pacific - Multi lingual response
+61 2 8014 4558 - Australia - English Language response

+86 512 8090 3042 - China - Chinese response

E-mail address info@Stratasys.com

## 2. HAZARDS IDENTIFICATION

## Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1B
Carcinogenicity	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3

EN / AGHS Page 1/11

\_\_\_\_\_

Specific target organ toxicity (repeated exposure)

Category 2

#### Label elements

#### Danger

#### Hazard statements

Harmful if swallowed

Causes serious eve damage

May cause an allergic skin reaction

Suspected of causing cancer

Suspected of damaging fertility or the unborn child

May cause respiratory irritation

May cause damage to organs through prolonged or repeated exposure



**Appearance** Ink cartridge

Physical state liquid

**Odor** Characteristic

Page 2/11

### **Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

## **Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

## **Precautionary Statements - Storage**

Store locked up

Store in a well-ventilated place. Keep container tightly closed

## **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

## Hazards not otherwise classified (HNOC)

Not applicable

### Other Information

May be harmful in contact with skin. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

\_\_\_\_\_

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Mixture

Chemical name	CAS No.	Weight-%	Proprietary
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	10 - 30	*
4-(1-Oxo-2-propenyl)-morpholine	5117-12-4	10 - 30	*
Proprietary	Proprietary	10 - 30	*
Proprietary	Proprietary	10 - 30	*
Proprietary	Proprietary	3 - 10	*
Proprietary	Proprietary	1 - 3	*
Proprietary	Proprietary	1 - 3	*
Titanium dioxide	13463-67-7	0.3-1	*
Glycerol, propoxylated, esters with acrylic acid	52408-84-1	0.1-0.3	*
2-Propenoic acid	79-10-7	0.1-0.3	*

<sup>\*</sup>The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. FIRST AID MEASURES

### **Description of first aid measures**

**General advice** Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur. IF exposed or

concerned: Get medical advice/attention.

Eye contact Get immediate medical advice/attention. Rinse immediately with plenty of water, also under

the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

**Skin contact** Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an

allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

**Ingestion** Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water.

Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

**Symptoms** Burning sensation. Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

dioxide (CO2), regular dry chemical (sodium bicarbonate), regular foam (Aqueous Film

Forming Foam-AFFF), or water spray to cool containers.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the** No information available.

chemical

EN / AGHS Page 3/11

**Explosion data** 

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Special protective equipment for

fire-fighters

Cool containers with flooding quantities of water until well after fire is out. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Move containers from fire area if you can do it without risk. Use personal protection equipment. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Keep out of drains, sewers, ditches and waterways. Inhalation is a health risk.

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from

and upwind of spill/leak.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

**Environmental precautions** See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment

Use a non-combustible material like vermiculite, sand or earth to soak up the product and

place into a container for later disposal. Following product recovery, flush area with water.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other

chemicals. Store in a cool, well ventilated area. Store in accordance with local regulations. Keep container tightly closed. Store between 15 °C and 27 °C. Shipment temperature (up to 5 weeks) is -20 °C to 50 °C. Store in a combustible storage area away from heat and open

flame.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

**Exposure Limits**The following ingredients are the only ingredients of the product above the cut-off level (or

level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other

recommended limit. At this time, the other relevant constituents have no known exposure

limits from the sources listed here.

EN / AGHS Page 4/11

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Titanium dioxide	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m³ total dust	IDLH: 5000 mg/m <sup>3</sup>
13463-67-7		(vacated) TWA: 10 mg/m³ total	-
		dust	
2-Propenoic acid	TWA: 2 ppm	(vacated) TWA: 10 ppm	TWA: 2 ppm
79-10-7	S*	(vacated) TWA: 30 mg/m <sup>3</sup>	TWA: 6 mg/m <sup>3</sup>
		(vacated) S*	

## **Appropriate engineering controls**

**Engineering controls** Showers

> **Evewash stations** Ventilation systems.

#### Individual protection measures, such as personal protective equipment

Tight sealing safety goggles. Eye/face protection

**Hand Protection** Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do

not eat, drink or smoke when using this product. Wash hands before breaks and

immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state liquid **Appearance** Ink cartridge Odor Characteristic

Color beige

**Odor threshold** No information available

Remarks • Method **Property** Values

Hq N/A

No data available None known Melting point / freezing point Boiling point / boiling range No data available None known

Flash point >= 100 - < 250 °C / >= 212 - <

482 °F

None known No data available **Evaporation rate** Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability limit: No data available No data available

Lower flammability limit: Vapor pressure No data available None known No data available None known Vapor density Relative density No data available None known

Insoluble in water Water solubility Solubility in other solvents No data available None known Partition coefficient No data available None known **Autoignition temperature** No data available None known No data available **Decomposition temperature** None known Kinematic viscosity No data available None known No data available **Dynamic viscosity** None known

**EN / AGHS** Page 5/11

Explosive properties No information available Oxidizing properties No information available

Other Information

Softening point
Molecular weight
VOC Content (%)
Liquid Density
No information available

## 10. STABILITY AND REACTIVITY

**Reactivity** Heating may cause a fire.

**Chemical stability** Decomposes on exposure to light. Unstable if heated.

Conditions to avoid None known based on information supplied.

**Incompatible materials**None known based on information supplied.

Hazardous decomposition products Thermal Decomposition Products. Combustion: oxides of carbon.

## 11. TOXICOLOGICAL INFORMATION

## Information on likely routes of exposure

#### **Product Information**

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin contact** Specific test data for the substance or mixture is not available.

**Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause

gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on

components).

## Information on toxicological effects

Symptoms Redness. Burning. May cause blindness. Itching. Rashes. Hives.

Numerical measures of toxicity

**Acute toxicity** 

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1,722.00 mg/kg
ATEmix (dermal) 4,225.00 mg/kg
ATEmix (inhalation-dust/mist) 66.50 mg/l

Unknown acute toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity

**Component Information** 

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Exo-1,7,7-trimethylbicyclo[2.2.1]	= 4890 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
hept-2-yl acrylate			
5888-33-5			
4-(1-Oxo-2-propenyl)-morpholin	= 588 mg/kg (rat)	> 2000 mg/kg (rat)	= 5.28 mg/l (rat)

EN / AGHS Page 6/11

e 5117-12-4			
Proprietary	= 2.000 mg/kg (Rat) (Method: OECD Test Guideline 423)	= 2.000 mg/kg (Rat)(Method: OECD Test Guideline 402)	-
Proprietary	(Rat) LD50 = 1,590 - 3,910 mg/kg	(Rabbit) LD50 = > 2,000 mg/kg	(Rat) 1 h LC0 = 6.7 mg/l
Proprietary	>2000 mg/kg (Rat)	>2000 mg/kg	-
Proprietary	rat (oral): > 2,500 mg/kg (OECD Guideline 423)	> 5,000 mg/kg (OECD Guideline 402)	> 1 mg/l 4 h (OECD Guideline 403)
Proprietary	> 5,000 mg/kg (Rat) (OECD Guideline 401)	> 2,000 mg/kg (Rat) (OECD Guideline 402)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg > 10000 mg/kg ( Rat )	-	-
2-Propenoic acid 79-10-7	= 193 mg/kg (Rat) = 33500 µg/kg (Rat)	= 295 mg/kg ( Rabbit ) = 280 µL/kg ( Rabbit )	= 3.6 mg/L (Rat)4 h = 11.1 mg/L (Rat)1 h

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation
No information available.

Serious eye damage/eye irritation
Respiratory or skin sensitization
No information available.

Germ cell mutagenicity
No information available.

**Carcinogenicity** No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium dioxide 13463-67-7	-	Group 2B	-	Х
2-Propenoic acid 79-10-7	-	Group 3	-	-

Reproductive toxicity

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

**Aspiration hazard** No information available.

# 12. ECOLOGICAL INFORMATION

## **Ecotoxicity**

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Exo-1,7,7-trimethylbicycl o[2.2.1]hept-2-yl acrylate 5888-33-5	1.98 mg/l Fresh water	0.704 mg/l Fresh water	-	0.524 mg/l Fresh water
4-(1-Oxo-2-propenyl)-mor pholine 5117-12-4	120 mg/l (algae)	-	-	120 mg/kg (daphnia)
Proprietary	(Pseudokirchneriella subcapitata) : 1,6 mg/l (Method: OECD Test Guideline 201)	(Fish) : 4,95 mg/l	-	(Daphnia magna Straus) : 2,36 mg/l (Method: OECD Test Guideline 202)

EN / AGHS Page 7/11

Proprietary	Pseudokirchneriella subcapitata (green algae) 96 h EC50 = 0.17 mg/l	Oncorhynchus mykiss (rainbow trout) 96 h LC50 = 27 mg/l	-	Daphnia magna (Water flea) 48 h EC50 = 95 mg/l
Proprietary	14.4 mg/l (growth rate), Desmodesmus subspicatus (OECD Guideline 201, static)	24 mg/l, Brachydanio rerio (Directive 92/69/EEC, C.1, static)	-	53.9 mg/l, Daphnia magna (OECD Guideline 202, part 1, semistatic)
Proprietary	> 2.01 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)	6.53 mg/l, Oryzias latipes (JIS K 0102-71, semistatic)	-	3.53 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
2-Propenoic acid 79-10-7	0.04: 72 h Desmodesmus subspicatus mg/L EC50 0.17: 96 h Pseudokirchneriella subcapitata mg/L EC50	222: 96 h Brachydanio rerio mg/L LC50 semi-static	-	95: 48 h Daphnia magna mg/L EC50 270: 24 h Daphnia magna mg/L LC50 Static

Persistence and degradability No information available.

**Bioaccumulation** There is no data for this product.

**Component Information** 

Chemical name	Partition coefficient
2-Propenoic acid	0.46
79-10-7	

Other adverse effects No information available.

# 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging

Do not reuse empty containers.

US EPA Waste Number U239

	Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Г	2-Propenoic acid	-	-	-	U008
	79-10-7				

## 14. TRANSPORT INFORMATION

Additional information The environmentally hazardous substance mark is not required when transported in sizes

of ≤5L or ≤5kg The marine pollutant mark is not required when transported in sizes of ≤5L

or ≤5kg

DOT

UN/ID no. UN3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Hazard Class
Packing group

**Special Provisions** 8, 146, 173, 335, IB3, T4, TP1, TP29

**Description** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(2-Propenoic acid), 9, III, Marine pollutant

**Emergency Response Guide** 

Number

UN/ID no. UN3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Hazard Class 9
Packing group III

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(2-Propenoic acid), 9, III

MEX

**TDG** 

**UN/ID no.** UN3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Hazard Class 9

Special Provisions 274, 331, 335

Packing group III

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(2-Propenoic acid), 9, III

ICAO (air)

UN/ID no. UN3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Hazard Class 9
Packing group III

Special Provisions A97, A158, A197

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(2-Propenoic acid), 9, III

IATA

UN Number UN3082
Transport hazard class(es) 9
Packing group III
ERG Code 9L
Special Provisions A197

**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (2-Propenoic acid), 9, III

**IMDG** 

UN Number UN3082
Transport hazard class(es) 9
Packing group III
EmS-No. F-A, S-F
Special Provisions 274, 335, 969

**Description** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(2-Propenoic acid, STABILIZER), 9, III, Marine pollutant

RID

UN Number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9
Packing group III
Classification code M6

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(2-Propenoic acid), 9, III (STABILIZER, PROPRIETARY STABILIZER)

Labels

<u>ADR</u>

UN Number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9
Packing group III
Classification code M6

Tunnel restriction code (E)

**Special Provisions** 274, 335, 601, 375

**Description** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(2-Propenoic acid), 9, III (STABILIZER, PROPRIETARY STABILIZER)

Labels

**ADN** 

UN/ID no UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9
Packing group III
Classification code M6

**Special Provisions** 274, 335, 375, 601

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(2-Propenoic acid), 9, III (STABILIZER, PROPRIETARY STABILIZER)

Hazard label(s) 9 Limited quantity (LQ) 5 L



## 15. REGULATORY INFORMATION

**International Inventories** 

TSCA Complies DSL/NDSL Complies

**EINECS/ELINCS**No information available
No information available

**IECSC** Complies

**KECL PICCS**No information available
No information available

**AICS** Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

## **US Federal Regulations**

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

## SARA 311/312 Hazard Categories

Acute health hazardYesChronic Health HazardYesFire hazardNoSudden release of pressure hazardNoReactive HazardNo

EN / AGHS Page 10 / 11

#### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

#### **CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
2-Propenoic acid	5000 lb	-	RQ 5000 lb final RQ
79-10-7			RQ 2270 kg final RQ

### **US State Regulations**

## **California Proposition 65**

This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Titanium dioxide - 13463-67-7	Carcinogen
ethylbenzene - 100-41-4	Carcinogen

#### U.S. State Right-to-Know Regulations

#### **US State Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
2-Propenoic acid	X	X	X
79-10-7			

#### U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA Health hazards 3 Flammability 1 Instability 0 Physical and chemical

properties -

HMIS Health hazards 3 \* Flammability 1 Physical hazards 0 Personal protection X Chronic Hazard Star Legend \*= Chronic Health Hazard

Revision Date 08-Nov-2017

**Revision Note**No information available.

**Disclaimer** 

The information provided in this Safety Data Sheet derives from a third party source. Whilst we believe that the information is correct as at the date of its publication, we do not make any representations or warranties regarding the accuracy or completeness of the information nor the quality or specification of any materials, substances or mixtures referred to herein (collectively, "Materials"). The information is being provided solely as a guideline for the safe handling, use, consumption, processing, storage, transportation, disposal and release of the Materials. The information may not be sufficient for such purposes and the user should not place any reliance on the information provided. The information may not be applicable to Materials that are combined with any materials or in any process other than as expressly stated herein. We shall not be liable for any kind of liability including, without limitation, damages, losses or expenses, arising out of or as a result of any reliance on the information contained in this Safety Data Sheet. This Safety Data Sheet remains our exclusive property and should not be reproduced, modified or distributed without our prior written consent.

**End of Safety Data Sheet** 

EN / AGHS Page 11 / 11