

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Product name : Hydro Flower A  
Product code : 300.350.000

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Fertilizers

##### 1.2.2. Uses advised against

No additional information available

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

Van Goghs Complete fertilizers  
P.O. Box Postbus 90204  
1006 BE Amsterdam - The Netherlands  
T +31 20 8208177  
[info@tulip-amsterdam.com](mailto:info@tulip-amsterdam.com) - [www.vangoghs.com](http://www.vangoghs.com)

#### 1.4. Emergency telephone number

No additional information available

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 1 H318

Full text of H 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

CLP Signal word :

Danger

Contains :

calcium nitrate, anhydrous

Hazard statements (CLP) :

H318 - Causes serious eye damage.

Precautionary statements (CLP) :

P280 - Wear protective gloves, protective clothing, eye 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, a doctor.

#### 2.3. Other hazards

No additional information available

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### 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]
calcium nitrate, anhydrous	(CAS-No.) 10124-37-5 (EC-No.) 233-332-1 (REACH-no) 01-2119495093-35	6.75 – 11	Ox. Sol. 3, H272 Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
Ammonium Nitrate	(CAS-No.) 6484-52-2 (EC-No.) 229-347-8 (REACH-no) 01-2119490981-27	1.5 – 3	Ox. Sol. 3, H272 Eye Irrit. 2, H319
hydrogen chloride substance with a Community workplace exposure limit	(CAS-No.) 7647-01-0 (EC-No.) 231-595-7 (EC Index-No.) 017-002-01 (REACH-no) 01-2119484862-27	≤ 0.03	Skin Corr. 1B, H314 STOT SE 3, H335

#### Specific concentration limits:

Name	Product identifier	Specific concentration limits
Ammonium Nitrate	(CAS-No.) 6484-52-2 (EC-No.) 229-347-8 (REACH-no) 01-2119490981-27	( 80 <C ≤ 100) Eye Irrit. 2, H319
hydrogen chloride	(CAS-No.) 7647-01-0 (EC-No.) 231-595-7 (EC Index-No.) 017-002-01 (REACH-no) 01-2119484862-27	( 10 ≤C < 100) STOT SE 3, H335 ( 10 ≤C < 25) Eye Irrit. 2, H319 ( 10 ≤C < 25) Skin Irrit. 2, H315 ( 25 ≤C < 100) Skin Corr. 1B, H314

Full text of H-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

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.
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#### 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.
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### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 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 personnel

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

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 section 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.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

##### hydrogen chloride (7647-01-0)

##### EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	8 mg/m <sup>3</sup> (Hydrogen chloride; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
IOEL TWA [ppm]	5 ppm (Hydrogen chloride; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)

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hydrogen chloride (7647-01-0)	
IOEL STEL	15 mg/m <sup>3</sup> (Hydrogen chloride; EU; Short time value; Indicative occupational exposure limit value)
IOEL STEL [ppm]	10 ppm (Hydrogen chloride; EU; Short time value; Indicative occupational exposure limit value)
Belgium - Occupational Exposure Limits	
OEL TWA	8 mg/m <sup>3</sup> (Hydrogène (chlorure d'); Belgium; Time-weighted average exposure limit 8 h)
OEL TWA [ppm]	5 ppm (Hydrogène (chlorure d'); Belgium; Time-weighted average exposure limit 8 h)
OEL STEL	15 mg/m <sup>3</sup> (Hydrogène (chlorure d'); Belgium; Short time value)
OEL STEL [ppm]	10 ppm (Hydrogène (chlorure d'); Belgium; Short time value)
Netherlands - Occupational Exposure Limits	
MAC-TGG (OEL TWA)	8 mg/m <sup>3</sup> (Zoutzuur; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
MAC-TGG (OEL TWA) [ppm]	5.3 ppm (Zoutzuur; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
MAC-15 (OEL STEL)	15 mg/m <sup>3</sup> (Zoutzuur; Netherlands; Short time value; Public occupational exposure limit value)
MAC-15 (OEL STEL) [ppm]	9.9 ppm (Zoutzuur; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	2 mg/m <sup>3</sup> Hydrogen chloride (gas and aerosol mists); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
WEL TWA (OEL TWA) [2]	1 ppm Hydrogen chloride (gas and aerosol mists); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
WEL STEL (OEL STEL)	8 mg/m <sup>3</sup> Hydrogen chloride (gas and aerosol mists); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
WEL STEL (OEL STEL) [ppm]	5 ppm Hydrogen chloride (gas and aerosol mists); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)

### 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 symbol(s):



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### 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.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Colour	: light yellow.
Odour	: odourless.
Odour threshold	: No data available
pH	: 2.5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.125 kg/l
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

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### 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

No additional information available

#### 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 toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### calcium nitrate, anhydrous (10124-37-5)

LD50 oral rat	300 – 2000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight

#### Ammonium Nitrate (6484-52-2)

LD50 oral rat	2950 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

#### hydrogen chloride (7647-01-0)

LD50 dermal rabbit	> 5010 mg/kg
LC50 Inhalation - Rat	8.3 mg/l

Skin corrosion/irritation : Not classified  
pH: 2.5  
Serious eye damage/irritation : Causes serious eye damage.  
pH: 2.5  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

#### hydrogen chloride (7647-01-0)

IARC group	3 - Not classifiable
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Reproductive toxicity : Not classified

STOT-single exposure : Not classified

### hydrogen chloride (7647-01-0)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

## 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

Hazardous to the aquatic environment, long-term (chronic) : Not classified

### calcium nitrate, anhydrous (10124-37-5)

LC50 - Fish [1]	1378
EC50 - Crustacea [1]	490 mg/l
ErC50 algae	> 1700 mg/l
NOEC (acute)	180 mg/l

### Ammonium Nitrate (6484-52-2)

EC50 - Crustacea [1]	490 mg/l Test organisms (species): Daphnia magna
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### hydrogen chloride (7647-01-0)

EC50 72h - Algae [1]	0.73 mg/l
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### 12.2. Persistence and degradability

#### calcium nitrate, anhydrous (10124-37-5)

Persistence and degradability	Biodegradable in the soil. Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

### hydrogen chloride (7647-01-0)

Persistence and degradability	No (test)data on mobility of the components available.
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### 12.3. Bioaccumulative potential

#### calcium nitrate, anhydrous (10124-37-5)

Bioaccumulative potential	Not bioaccumulative.
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### hydrogen chloride (7647-01-0)

Bioaccumulative potential	No test data of component(s) available.
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### 12.4. Mobility in soil

### calcium nitrate, anhydrous (10124-37-5)

Ecology - soil	No (test)data on mobility of the substance available.
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### 12.5. Results of PBT and vPvB assessment

#### Component

calcium nitrate, anhydrous (10124-37-5)	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
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### 12.6. 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

In accordance with ADR / IMDG / IATA / ADN / RID

### 14.1 UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : Not applicable

#### IMDG

Transport hazard class(es) (IMDG) : Not applicable

#### IATA

Transport hazard class(es) (IATA) : Not applicable

#### ADN

Transport hazard class(es) (ADN) : Not applicable

#### RID

Transport hazard class(es) (RID) : Not applicable



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### 14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

### 14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

#### Inland waterway transport

Not applicable

#### Rail transport

Not applicable

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

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

#### 15.1.2. National regulations

##### Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)  
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

##### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

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### Switzerland

Storage class (LK)

: LK 8 - Corrosive materials

### 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
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	DMEL = Derived Minimal Effect level
DNEL	DNEL = Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	PNEC = Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	SDS = Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified

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vPvB	zPzB = Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources	: ECHA Website: Information on Registered Substances Handbook of Chemistry and Physics CRC Press Inc Information suppliers BIG-database.
Other information	: <b>DISCLAIMER OF LIABILITY</b> The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

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
Ox. Sol. 3	Oxidising Solids, Category 3
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
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
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.

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.