



according to Regulation (EC) No 1907/2006 (REACH)

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

- **1.1 Product identifier**
- Trade name: **Hydrox S**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Emulsion matrix for production of bulk emulsion explosives.
Note the manufacturer's product information.
Use the product only within the framework of existing laws and regulatory approvals.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
AUSTIN POWDER GmbH
Weissenbach 16
A-8813 St. Lambrecht
Telefon +43(0)3585/2251
E-Mail: sdb@austinpowder.at
- **Information department:**
Werkschutz AUSTIN POWDER GmbH, (Mo – Fr 6 – 13 Uhr): +43(0)3585/2251
E-Mail - Address: sdb@austinpowder.at
- **1.4 Emergency telephone number:** Poison Control Center: +43 (01) 406 43 43

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Ox. Liq. 2 H272 May intensify fire; oxidiser.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation. In terms of labelling the derogation according to Art. 23e in conjunction with Appendix I, section 1.3.5 und 2.1 is claimed.
- **Hazard pictograms**



GHS03 GHS07

- **Signal word** Danger
- **Hazard statements**
H272 May intensify fire; oxidiser.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
- **Precautionary statements**
P221 Take any precaution to avoid mixing with combustibles.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P250 Do not subject to grinding/shock/friction.
P280 Wear protective gloves/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.
P373 DO NOT fight fire when fire reaches explosives.
P370+P380 In case of fire: Evacuate area.
P312 Call a POISON CENTER/doctor if you feel unwell.
P372 Explosion risk in case of fire.

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P302+P352 IF ON SKIN: Wash with plenty of water.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 6484-52-2 EINECS: 229-347-8 Reg.nr.: 01-2119490981-27	ammonium nitrate ⚠ Ox. Sol. 2, H272; ⚠ Eye Irrit. 2, H319	62-75%
CAS: 7631-99-4 EINECS: 231-554-3 Reg.nr.: 01-2119488221-41	sodium nitrate, containing in the dry state more than 16,3 per cent by weight of nitrogen ⚠ Ox. Sol. 2, H272; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10-16%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information**
Do not leave affected persons unattended.
Personal protection for the First Aider.
Take affected persons out into the fresh air.
Take affected persons out of danger area and lay down.
Repeated contact with the substance can cause skin and eye irritation
- **After inhalation**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
Symptoms may not occur immediately but only later. Therefore, following the inhalation of combustion gases or vapors affected people for 48 hours under medical supervision to keep .
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
Seek immediate medical advice.
- **4.2 Most important symptoms and effects, both acute and delayed**
Symptoms of poisoning may even occur after several hours, therefore medical observation for at least 48 hours after the accident.
Symptoms include methemoglobin formation through NO contact, pulmonary edema with a latency up to 48 hours.
- **Information for doctors**

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Particularly for the prevention of pulmonary edema cortisone must be administered by inhalation (depending on the type of drug 5-10 inhalations).

Medical supervision of the patient at least for 72-96 hours.

· **Danger**

If swallowed, large quantities:

Can cause disturbances of the gastro-intestinal tract. The inclusion of the product in the body may cause formation of methaemoglobin which in sufficient concentration causes cyanosis .

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

* **SECTION 5: Firefighting measures**

· **5.1 Extinguishing media**

· **Suitable extinguishing agents** Explosive material, no fire-fighting!

· **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

Danger of explosion if heated under confinement.

In case of fire, toxic gases (NOx) generate.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

Mount respiratory protective device.

· **Additional information**

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

* **SECTION 6: Accidental release measures**

· **6.1 Personal precautions, protective equipment and emergency procedures**

Keep away from ignition sources

Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

· **6.3 Methods and material for containment and cleaning up:**

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Ensure adequate ventilation.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

* **SECTION 7: Handling and storage**

· **7.1 Precautions for safe handling**

Keep receptacles tightly sealed.

Open and handle receptacle with care.

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

· **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Keep respiratory protective device available.

Use explosion-proof apparatus / fittings and spark-proof tools.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:**
 - Store away from reducing agents.
 - Do not store together with organic and combustible substances.
- **Further information about storage conditions:**
 - Store receptacle in a well ventilated area.
 - Keep receptacle tightly sealed.
 - Protect from heat and direct sunlight.
 - Do not store below 5 °C or above 30 °C.
 - A storage up to 60 °C is safe. Product data sheet note.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
 - The usual precautionary measures should be adhered to when handling chemicals.
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
 - Do not eat, drink, smoke while working.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **Protection of hands:**
 - Protective gloves.
 - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
 - None required during handling of packaged products, use in direct contact with the explosive mass; nitrile or neoprene gloves, leather in brief periods.
- **Material of gloves**
 - Nitrile rubber, NBR
 - Neoprene gloves
- **Penetration time of glove material**
 - The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - Form:** Solid.
 - Colour:** White
 - Odour:** Mineral-oil-like
- **pH-value:** Not applicable.

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· Change in condition Boiling point/Boiling range:	undetermined
· Flash point:	Not applicable
· Flammability (solid, gaseous)	Not applicable.
· Ignition temperature:	
Decomposition temperature:	> 200 °C
· Self igniting:	Product is not selfigniting.
· Danger of explosion:	Explosive when mixed with combustible material. Heating may cause an explosion.
· Density at 20 °C:	1.40 g/cm ³ (ca. 1,35-1,45 g/cm ³)
· Solubility in / Miscibility with Water at 20 °C:	800 g/l
· Viscosity: dynamic:	>100000 mPas
· Solvent content:	
Solids content:	80 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Risk of explosion by shock, friction, fire or other sources of ignition.
- **10.2 Chemical stability** The product is chemically stable under the recommended conditions of use.
- **Conditions to avoid:**
Avoid: heat, flames, sparks.
Shock, friction (explosive hazard)
- **10.3 Possibility of hazardous reactions**
Reacts with reducing agents
Reacts with flammable substances
Reacts with strong acids and alkali
Thermal decomposition begins at about 200 °C; explosion in the inclusion
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Acids
alkali (lyes)
Do not store together with organic and combustible substances.
Avoid contaminations with other chemical/substances, especially chlorid-containing compounds, copper, brass i.a. copper-alloy, chromate and zinc.
- **10.6 Hazardous decomposition products:**
Poisonous gases/vapours
Carbon monoxide
Nitrogen oxides (NO_x)
NH₃ (ammonia)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**

· **LD/LC50 values that are relevant for classification:**

6484-52-2 ammonium nitrate

Oral	LD50	2400 mg/kg (rat)
Dermal	LD50	> 5000 mg/kg (rat)

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7631-99-4 sodium nitrate, containing in the dry state more than 16,3 per cent by weight of nitrogen

Oral	LD50	1267 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**
Easy Irritating effect.
Causes skin irritation.
- **Serious eye damage/irritation**
Slight irritation
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Experience with humans:** Repeated contact with the explosive material can cause skin and eye irritation.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** Easily biodegradable
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Type of test** **Effective concentration** **Method** **Assessment**
CAS: 6484-52-2 Ammonium nitrate
for aquatic organisms: LD50/96 h 10 - 100 ppm
for fish: 800 mg / L lethal in 3.9 hours
CAS: 7631-99-4 Sodium nitrate
for fish: LC50> 1000 mg / L 96 h
Daphnia Daphnia LC50> 1000 mg / L 24 h
CAS: 64-19-7 acetic acid
for fish: LC50 Lepomis macrochirus 75 mg / L 96 h
Daphnia Daphnia EC50 95 mg / L 24 h
CAS: 5949-29-1 Citric Acid
for fish: LC0 Carassius auratus 625 mg / L
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
After prior treatment product has to be landfilled or incinerated adhering to the regulations pertaining to the disposal of especially hazardous waste.
- **European waste catalogue**
The disposal codes of the European list of wastes depend on the country of origin of the waste. This product has got identified uses in a various industries. This is, why a definite disposal code cannot be stated. The disposal code should be selected in agreement with disposer and/or the competent Authority.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

<ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG 	UN3375
<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG 	3375 AMMONIUM NITRATE EMULSION AMMONIUM NITRATE EMULSION
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG  <ul style="list-style-type: none"> · Class · Label 	5.1 Oxidising substances. 5.1
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG 	II
<ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · 14.6 Special precautions for user · EMS Number: 	Warning: Oxidising substances. F-H,S-Q
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Excepted quantities (EQ) 	0 Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<ul style="list-style-type: none"> · Transport category · Tunnel restriction code 	2 E
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	0 Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<ul style="list-style-type: none"> · IATA · Remarks: 	Air transport ICAO-IATA/DGR Prohibited.
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN3375, AMMONIUM NITRATE EMULSION, 5.1, II

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SECTION 15: Regulatory information

• **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

• **National regulations**

• **Technical instructions (air):**

Class	Share in %
Water	2,5-10
I	< 2,5
II	< 2,5

• **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

• **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Liability about information is not warranted although information is given to our best knowledge.

• **Relevant phrases**

- H226 Flammable liquid and vapour.
- H272 May intensify fire; oxidiser.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H361d Suspected of damaging the unborn child.
- H411 Toxic to aquatic life with long lasting effects.

• **Department issuing MSDS:** Austin Powder Lab

• **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic vPvB:
very Persistent and very Bioaccumulative Flam. Liq.
3: Flammable liquids, Hazard Category 3
Ox. Liq. 2: Oxidising Liquids, Hazard Category 2
Ox. Sol. 2: Oxidising Solids, Hazard Category 2
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Carc. 2: Carcinogenicity, Hazard Category 2
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

• *** Data compared to the previous version altered.**