

VALAGRO SDS according to HCS APPENDIX D TO §1910.1200

Date: June 19, 2015 Rev. 1.0

Product: 11266

Code: RETROSAL

Print Date: 19 June 2015

## SAFETY DATA SHEET

### Retrosal

#### SECTION 1: IDENTIFICATION

- 1.1. Product Identifier used on the label  
Trade name: Retrosal
- 1.2. Other means of identification  
Trade code: 11266
- 1.3. Recommended use of the chemical and restrictions on use:  
Fertilizer
- 1.4. Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:  
Produced and packed by:  
VALAGRO Spa  
Via Cagliari, 1 Zona Industriale  
66041 Atessa (CH) ITALY  
Tel. (+39) 08728811 Fax (+39) 0872881382  
[www.valagro.com](http://www.valagro.com)

Distributed and guaranteed by:  
Valagro USA Inc.  
19500 Hwy 249, suite 245 - Houston TX 77070  
Tel (281) 664 8700 - Fax (281) 664 8701

Competent person responsible for the safety data sheet:

[regulatory@valagro.com](mailto:regulatory@valagro.com)

- 1.4. Emergency phone number  
Valagro USA Inc  
Tel (281) 664 8700 - Fax (281) 664 8701

#### SECTION 2: HAZARD(S) IDENTIFICATION

- 2.1. Classification of the chemical in accordance with paragraph (d) of §1910.1200;

 Danger, Eye Dam. 1, Causes serious eye damage.

- 2.2. Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200:



Danger

Causes serious eye damage.

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Wear safety goggles and face shield.

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

Immediately call a doctor

First Aid:

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

Inhalation : Remove to fresh air. Get medical attention for any breathing difficulty.

Eye Contact : Rinse cautiously with water for several minutes holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or physician.

Ingestion : Rinse mouth with water. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person. Immediately call a doctor

Skin Contact: Remove all contaminated clothing. Rinse with plenty of soap and water.

2.3. Hazards not otherwise classified that have been identified during the classification process:  
None

2.4. Ingredient(s) with unknown acute toxicity:

None component with unknown acute toxicity is present in the mixture

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

3.1 Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

>= 20% - < 25% Nitric acid, ammonium calcium salt

CAS: 15245-12-2, EC: 239-289-5

 Oral Acute Tox. 4 H302

 Eye Dam. 1 H318

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### SECTION 4: FIRST AID MEASURES

4.1. Description of necessary measures:

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Never give anything by mouth to an unconscious person; if person is conscious rinse mouth with water and then give plenty of water to drink. Do not induce vomiting unless instructed to do so by medical personnel. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

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Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms/effects, acute and delayed:

Potential acute health effects

Eye contact:

Causes serious eye damage.

Symptoms: pain, redness, tearing

Inhalation:

if inhaled, especially at high temperatures, the vapors may be very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Symptoms: N.A.

Skin contact: No known significant effects

Symptoms: N.A.

Ingestion: May cause burns to mouth, throat and stomach.

Symptoms: abdominal pain, confusion, convulsions, nausea, dizziness

In case of ingestion of large amounts, NO<sub>3</sub>-ions contained in the product can oxidize the iron atoms in hemoglobin making it unable to carry oxygen effectively to the tissues (methemoglobinemia)

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Treatment:

No specific treatment.

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## SECTION 5. FIRE-FIGHTING MEASURES

5.1. Suitable (and unsuitable) extinguishing media.

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

Do NOT use chemical extinguisher or foam or attempt to smother the fire with steam or sand.

5.2. Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces smoke containing nitrogen oxides, sulfur oxides

5.3. Special protective equipment and precautions for fire-fighters.

Use suitable breathing apparatus, protective clothing, eye protection and gloves resistant to chemicals according to EN469 and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

In case of entry into waterways, soil or drains, inform the responsible authorities

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothes giving a total skin protection, latex gloves and safety glasses.

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See protective measures under point 7 and 8.

Ensure adequate ventilation, move people in a safe place.

6.2. Methods and material for containment and cleaning up

Wash with plenty of water.

Pick up the product in clean plastic labeled containers and reuse as fertilizer or dispose in authorized facilities

Material suitable for collecting: inert and non-combustible absorbent material

In case of spills, cover drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities

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## **SECTION 7: HANDLING AND STORAGE**

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Exercise the greatest care when handling or opening the container.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original containers tightly closed in a cool and well-ventilated area away from heat source, direct sunlight, food, drink and feed and incompatible material.

Incompatible materials:

Reducing agents, alkalis, combustible materials, Zinc, Copper (see section 10)

Instructions as regards storage premises:

Adequately ventilated premises.

Do not mix with other fertilizers containing nitrates

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## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1. Exposure limit values:

No data available for the mixture.

8.2. Appropriate engineering controls.

It is recommended that the workers wear appropriate gloves and protective glasses

8.3. Individual protection measures, such as personal protective equipment:

Please observe the usual precautionary measures for handling of chemicals.

The personal protective equipment must be compliant to the regulation UNI –EN in force

Eye protection:

Use close fitting safety goggles according to the standard EN 166, don't use eye lens

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber according to EN 374

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Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

|   |                                |
|---|--------------------------------|
| Appearance:                                   | Brown liquid                   |
| Odour:  | coffee                         |
| Odour threshold:                              | N.A.                           |
| pH 1% water solution at 68°F:                 | 2.4                            |
| Melting point / freezing point:               | N.A.                           |
| Initial boiling point and boiling range:      | > 100°C                        |
| Flash point:                                  | N.A.                           |
| Evaporation rate:                             | not applicable, solid          |
| Flammability (Solid/gas):                     | N.A.                           |
| Upper/lower flammability or explosive limits: | N.A.                           |
| Vapour pressure:                              | not applicable, solid          |
| Vapour density:                               | not applicable, solid          |
| Apparent density:                             | 1.3 Kg/dm <sup>3</sup> at 68°F |
| Solubility in water:                          | soluble                        |
| Lipid solubility:                             | N.A.                           |
| Partition coefficient (n-octanol/water):      | N.A.                           |
| Auto-ignition temperature:                    | N.A.                           |
| Decomposition temperature:                    | N.A.                           |
| Viscosity:                                    | N.A.                           |

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## SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity
  - Stable under normal conditions of use and storage
- 10.2. Chemical stability
  - Stable under normal conditions of use and storage
- 10.3. Possibility of hazardous reactions
  - None
- 10.4. Conditions to avoid
  - Avoid heating the product at high temperatures which induce thermal decomposition; the product may release hazardous substances as nitrogen oxides, sulfur oxides.
- 10.5. Incompatible materials
  - Reducing agents, alkalis, combustible materials, Zinc, Copper
- 10.6. Hazardous decomposition products
  - In case of high temperatures: sulfur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>)

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## SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact);

Toxicological information of the mixture:

N.A.

Toxicological information of the main substances found in the mixture:

Nitric Acid, ammonium calcium salt - CAS: 15245-12-2

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Potential acute health effects

Inhalation:

May give off vapor that is very irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion:

May cause burns to mouth, throat and stomach.

In case of ingestion of large amounts, NO<sub>3</sub>-ions contained in the product can oxidize the iron atoms in hemoglobin making it unable to carry oxygen effectively to the tissues (methemoglobinemia)

Skin contact:

No known significant effects or critical hazards; may cause irritation to the skin

Eye contact:

Causes serious eye damage.

11.2 Symptoms related to the physical, chemical and toxicological characteristics:

Toxicological information of the mixture:

N.A.

Toxicological information of the main substances found in the mixture:

Nitric Acid, ammonium calcium salt - CAS: 15245-12-2

Inhalation:

Symptoms may include the following: cough, shortness of breath

Ingestion:

Symptoms may include the following: stomach pains

Skin contact:

Adverse symptoms may include the following: pain or irritation, redness, blistering may occur

Eye contact:

Adverse symptoms may include the following: pain, redness, tearing

11.3 Delayed and immediate effects and also chronic effects from short- and long-term exposure;

See section 11.2

11.4 Numerical measures of toxicity (such as acute toxicity estimates).

No data available for the mixture

Toxicological information of the main substances found in the mixture:

a) acute toxicity:

nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5

LD<sub>50</sub> Oral Rat = 500 mg/Kg (OECD 423)

LD<sub>50</sub> Dermal Rat > 2000 mg/Kg bw (OECD 402)

b) skin corrosion/irritation:

nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5

Non-irritating to the skin

c) serious eye damage/irritation:

nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5

Causes serious eye damage (rabbit, OECD 405)

d) respiratory or skin sensitisation:

nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5

Skin: No known significant effects or critical hazards.

Respiratory: Not determined.

e) germ cell mutagenicity:

nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5

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- No mutagenic effect.
- f) carcinogenicity:  
nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5  
No carcinogenic effect
- g) reproductive toxicity:  
nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5  
Oral, 28 days, rat:  $\geq 1500$  mg / kg bw / day OECD 422, with potassium nitrate  
subacute toxicity:  
Oral, 28 days  $\geq 1000$  mg / kg bw / day OECD 407, with potassium nitrate
- h) STOT-single exposure:  
nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5  
N.A.
- i) STOT-repeated exposure  
nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5  
N.A.
- j) aspiration hazard:  
nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5  
N.A.

11.5 Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA:

None

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## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

The release of large amounts may cause a decreasing of the pH value and can have negative effects on aquatic environments.

Aquatic acute toxicity:

nitric acid, ammonium calcium salt CAS: 15245-12-2, EC: 239-289-5

LC50 Fresh water Fish 48 h = 447 mg/l

EC50 Fresh water Daphnia 48 h > 100 mg/l

EC50 Fresh water Algae 72 h > 100 mg/l

Inhibition of microbial activity:

3-hour EC50: > 1000 mg/l; NOEC: 180 mg/l

PNEC: water: 0.45 mg / L; sea water 0.045 mg/l

### 12.2. Persistence and degradability:

Not relevant for inorganic substances (nitric acid, ammonium calcium salt)

### 12.3. Bioaccumulative potential

The product does not contain any bioaccumulative substances

### 12.4. Mobility in soil

The product is soluble and mobile in both terrestrial and aquatic compartments

### 12.5. Other adverse effects (such as hazardous to the ozone layer).

None

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## SECTION 13: DISPOSAL CONSIDERATIONS

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- 13.1. Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:
- Product :Recover if possible. In so doing, comply with the local and national regulations currently in force.
  - Packaging: Dispose according to regulations.

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#### **SECTION 14: TRANSPORT INFORMATION**

- 14.1. UN number  
Not classified as dangerous in the meaning of transport regulations.
- 14.2. UN proper shipping name  
N.A.
- 14.3. Transport hazard class(es)  
N.A.
- 14.4. Packing group  
N.A.
- 14.5. Environmental hazards  
ADR-Environmental Pollutant: No  
IMDG-Marine pollutant: No
- 14.6. Special precautions for user  
N.A.
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
N.A.

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#### **SECTION 15: REGULATORY INFORMATION**

- 15.1. Safety, health and environmental regulations specific for the product in question.
- Hazard Communication Standard (HCS) Haz Com 2012  
OSHA, 29 CFR 1910.1200(g) and Appendix D. United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), third revised edition, United Nations, 2009.  
Hazard Communication Standard  
United Nations Recommendations on the Transport of Dangerous Goods.  
OSHA Permissible Exposure Limit  
[29 CFR 1926.55 Appendix A](#)  
American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV)  
National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL)  
Chemical Abstracts Service (CAS) Registry Number

USA - Federal regulations

TSCA - Toxic Substances Control Act

List of substances included in the TSCA inventory: nitric acid, ammonium calcium salt

SARA - Superfund Amendments and Reauthorization Act

Section 302 – Extremely Hazardous Substances: no substances listed.

Section 304 – Hazardous substances: no substances listed.

Section 313 – Toxic chemical list: no substances listed.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Iron sulphate

CAA - Clean Air Act

CAA listed substances:



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None.

CWA - Clean Water Act

CWA listed substances:

Iron sulphate

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## **SECTION 16: OTHER INFORMATION , INCLUDING DATE OF PREPARATION OR LAST REVISION**

Date of preparation of the SDS: revision 1.0, date 2015-06-19.

This document was prepared by a competent person who has received appropriate training.

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

N.A. no data available

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

LTE: Long-term exposure.

PNEC: Predicted No Effect Concentration.

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

STE: Short-term exposure.

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

TLV: Threshold Limiting Value.

TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).

WGK: German Water Hazard Class.