

## SAFETY DATA SHEET

### 1.- IDENTIFICATION OF THE PRODUCT AND COMPANY

Product name: **DS 2**  
Product type and usage: Powdered descaler for ware washers and washing machines.  
Responsible for introduction on the market: FIRMA SRL  
Address: VIA PER MODENA, 28, 42015 CORREGGIO (RE), ITALY  
Emergency telephone number: +39 (0)522/691880

### 2.- COMPOSITION/INFORMATION ON INGREDIENTS

Substances contained in accordance with regulations regarding dangerous substances and compounds and related classification:

CAS #:	SUBSTANCE NAME:	CONCENTRATION:	CE CLASSIFICATION:
5329-14-6	AMIDOSULFURIC ACID	>30%	X <sub>1</sub> R 36/38-52/53

### 3.- HAZARDS IDENTIFICATION

Main risks for health (also in case of incorrect use):

- The product performs a corrosive action.
- Contact with skin causes chapping caused by the dehydrating action on skin tissues.
- Contact with eyes causes ulcerative lesions.

Main risks for the environment (also in case of incorrect use):

- Prevent product from reaching drains and surface water.

### 4.- FIRST-AID MEASURES

4.1 General indications: In case of doubt or when symptoms persist seek medical advice and show the preparation's safety data sheet. Do not administer any substances orally to unconscious persons.

4.2 First-aid in case of:

- 4.2.1 Ingestion: Do not induce vomiting. In all cases seek medical advice.
- 4.2.2 Inhalation: Remove victim from contaminated area and move to ventilated environment. If symptoms to respiratory system are present seek medical advice.
- 4.2.3 Skin contact: Wash affected area with plenty of water followed by a diluted solution of sodium bicarbonate. If burning sensation persists seek medical advice.
- 4.2.4 Eye contact: Immediately rinse eyes with eyelids wide open for at least 10 minutes with plenty of water. Seek specialist medical advice.

### 5.- FIRE FIGHTING MEASURES

"The product is not combustible"

Means of extinction in case of fire/explosion:

Suitable: Water or chemical powder.

Unsuitable: None.

Personnel charged with fire extinguishing role must be equipped with complete fire fighting equipment. Always cool containers to prevent decomposition of product and the development of substances considered dangerous for health and safety. (nitrogen oxides, ammonia and sulphur oxides)

### 6.- ACCIDENTAL RELEASE MEASURES

Individual measures: (See section 8 of present data sheet).

Environmental precautions: Prevent discharge in the drainage system or in surface water.  
Neutralize with alkaline substances and dispose of residue of the preparation according to current local, national and community legislation.

Cleaning/collection methods: Collect as much solid product as possible with manual or mechanical means. If possible reuse, alternatively confer to authorised dump to be treat as special waste.

## 7.- HANDLING AND STORAGE

Handling: Operate according to standard hygiene practices, adopting suitable individual protective means where they are required (see section 8 of this data sheet).  
Incompatible materials: Avoid contact with other chemical products, especially nitrates, oxidising agents and alkalis.  
Storage: Product hydrolyses in presence of water.  
Store in dry and well ventilated area.  
Keep containers well closed also after use. (Watery solutions are acid).

## 8.- EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls: TLV/TWA (ACGIH, USA) 13 mg/m<sup>3</sup>  
Respiratory protection: In presence of dust use dust proof face mask.  
Hand protection: Anti-acid gloves.  
Eye protection: Safety glasses. Do not wear contact lenses.  
Skin protection: Protective work clothes.

## 9.- PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid crystalline	Auto-ignition:	Not available
Colour:	White	Explosive properties:	Not available
Odour:	Odourless	Oxidising properties:	Not available
pH (1% solution):	1-1.5	Vapour pressure:	Not available
Boiling point/boiling range:	Not available	Relative density:	2.12 g/cm <sup>3</sup>
Melting point:	190°C	Solubility in oil:	Not available
Flash point:	Not available	Water solubility:	22 g/100 g. of water

## 10.- STABILITY AND REACTIVITY

Conditions to avoid: Overheating and very damp environments.  
Materials to avoid: Nitrates, oxidising agents and alkaline substances.  
Decomposition dangers: At high temperatures toxic vapours of nitrogen and sulphur oxides and ammonia are released.

## 11.- TOXICOLOGICAL INFORMATION

### 11.1 Routes of exposure:

11.1.1 Ingestion: Yes.  
11.1.2 Inhalation: Yes.  
11.1.3 Contact: Yes.

11.2 Toxicological effects on health: LD 50 (Oral): 3160 mg/kg/Rat

Irritation rabbit: skin-500 mg/24 hours, severe  
eyes-250 µg/24 hours, severe

11.2.1 Acute toxicity: Inhalation of vapours causes irritation of lower and upper respiratory tract, with coughing and respiratory difficulties, at higher temperatures also pulmonary oedema.

11.2.2 Chronic toxicity: Research conducted on rats treated with 100 mg/Kg/ per day orally for 105 days. Weight loss and fall in food consumption were observed.  
At dosage levels of 500 mg/Kg/ per day the substance resulted well tolerated.

### 11.3 Corrosiveness/irritant power:

11.3.1 Skin: Irritation with erythema, oedema, dryness and chapping.  
11.3.2 Eyes: Irritation with reddening, oedema and lachrymation with pain.

## 12.- ECOLOGICAL INFORMATION

The substance does not cause biological consumption of oxygen.  
Limited damaging power of amidosulfuric acid is witnessed after neutralisation on fish and bacteria.  
Toxic effect caused by pH levels below 6.

## 13.- DISPOSAL CONSIDERATIONS

Always proceed with neutralisation before performing any kind of treatment, including biological treatment when possible.  
Disposal must be performed in authorised dump or processing plant under controlled conditions.  
Wash the containers before their reuse or disposal in authorised dump.

## 14.- TRANSPORT INFORMATION

Road haulage, rail freight: RID-ADR  
Class: 8 Packing group: III UN number: 3260 "Corrosive solid, acidic, inorganic, n.o.s."

## 15.- REGULATORY INFORMATION

Classification according to dangerous substances and preparations regulation:

15.1 Labelling in accordance with CE Directive:

15.2 Symbol: X<sub>i</sub> (Irritant)

15.3 Risk phrases: R 36/38 Irritating to eyes and skin.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

15.4 Safety phrases: S 2 Keep out of the reach of children.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28 After contact with skin, wash immediately with plenty of soap and water.

## 16.- OTHER INFORMATION

The information contained in this safety data sheet is based on current knowledge and on community directives DIR 2001/58/CE and 1999/45/CE.

List of risk phrases mentioned in section 2 of present document:

R 36/38 Irritating to eyes and skin.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

TLV (threshold limit value) concentration of a substance (in the air) to which it is estimated all workers can be exposed to repeatedly day after day, without suffering effects.

It is expressed in mg/m<sup>3</sup> or in ppm as a daily average in the course of 8 working hours (TLV-TWA).

The product must not be used for uses other than those specified in section 1, unless written instructions have been provided for its manipulation.

It is the responsibility of the user to take all necessary measures to conform to local, national and community legislation.

Last updated: October 2005

FIRMA SRL