

MATERIAL SAFETY DATA SHEET

On the basis of the REACH Regulation (EC) No 1907/2006 of the European Parliament and the Council of 18 December 2006 on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (The European Union Journal of Laws, L 396 of 30 December 2006)
Date of issue: 01.06.2007, Update date: 25 November 2010, Number of pages: 1 / 4

NANO SILVER Preparation for cleaning air-conditioning systems

1. Identification of the preparation/Identification of the company

1.1 Product Name: NANO SILVER Preparation for cleaning air-conditioning systems

Product Code: 19-535

1.2 Use of the product: cleaning of air-conditioning systems

1.3 DISTRIBUTOR:

company name and address: **AMTRA Sp. zo.o., ul. Schonów 3, 41-200 Sosnowiec**

Phone number: (032) 294 41 00

Fax number. (032) 317 34 32

amtra@amtra.pl

1.4 Emergency telephone: +48 32 317 34 32 (hours 8am - 3pm)

1.5 The person responsible for preparation of material safety data sheet: Anna Nowak-mail:

anna@nanochem.com.pl

2. Hazard(s) identification

Mixture is classified as dangerous in accordance with the law regulations.

Hazardous Properties: Extremely Flammable product

Danger to the environment: Not classified as a hazard to the environment

3. Composition information on ingredients

Chemical nature: A mixture of alcohol and Nano Silver particles

Ingredients:	%	CAS	EC	Hazard classification
ethyl alcohol	<70%	64-17-5	200-578-6	F; R11
Isobutane	<25%	75-28-5	200-857-2	F+; R12

4. First-aid measures

Ingestion: Rinse mouth with water. Give to drink approximately 1-2l of water. Do not induce vomiting.

Consult a doctor, show the product label. Do not give anything to an unconscious person.

Inhalation poisoning: Remove to fresh air.

Contact with the skin: Wash with plenty of water.

contact with the eyes: Flush with plenty of water for about 15 minutes with eyelids open, consult a doctor.

5. Fire-fighting measures

Fire hazard: Flammable, products of incomplete combustion may contain carbon monoxide, steam and aerosols form a combustible and explosive mixer with air, the vapors are heavier than air and accumulate on the surface and in the lower parts of the premises

Extinguishing Media: Alcohol resistant foam or film-forming foams or water – fire sprays in the case of large fires, extinguish small fires with extinguishing powder or carbon dioxide, do not use water in a full stream. If there is a possibility remove adjacent tanks away from danger, if not cool them by spraying water.

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6. Accidental release measures

Do not allow uncontrolled release of product into the environment. You must inform relevant authorities to notify them of any release of product into the environment.

In case of release of a large amount of product into the environment, the contaminated area should be fenced off, and no one should be allowed to enter the fenced area. The first should be to cut off the source of contamination and protect the environment. Remove potential sources of ignition. The released product should be collected and sent for disposal. If necessary, call rescue services.

7. Handling and Storage

Handling the product:

Proceed in accordance with generally accepted principles of safety. When handling the product do not eat, drink or not take medication, avoid contact with the liquid. Avoid breathing vapors, do not swallow. Practice good personal hygiene and follow OSH, use protective clothing, work in ventilated areas. Change contaminated protective clothing.

Storage:

Store the product in labeled, original, sealed containers in a well ventilated spaces. Keep away from direct sunlight and sources of ignition in shady places. Recommended storage temperature 5-35°C. Do not store near food, animal feed and drinking water.

8. Exposure controls/personal protection

Used personal protective equipment should meet the requirements of the Regulation of the Minister of Economy, Labor and Social Policy of 21 December 2005 on essential requirements for personal protective equipment (Journal of Laws No 259, item 2173)

Ventilation Requirements: General room ventilation

Maximum permissible concentration: for ethanol: TWA = 1900 mg/m³ (according to the Regulation of the Minister of Labor and Social Policy of 29 November 2002 (Journal of Laws No 217, item 1833)

Respiratory Protection: Ventilation

Eye/Face Protection: Rubber protective gloves

Skin protection: not necessary

9. Physical and Chemical Properties

Physical state at 20°C liquid in the aerosol container		Color colorless	Smell characteristic	
Boiling point Temp. no data	Melting point temp. no data	Flash-point temp. Below 0°C		Ignition temp. no data
Upper explosive limit [%V/V] not applicable		Lower explosive limit [% V/V] not applicable		Vapor pressure [hPa] at 180°C no data
Density [kg/m ³] at 20°C ~ 850 kg/m³		pH not applicable		Viscosity [mPa] at 20°C not applicable
Refractive index no data		Solubility in water very good		Solubility in organic solvent no data
Combustibility no data		Oxidizing properties not applicable		Explosive properties not applicable
Partition coefficient n-octanol/water no data		Other properties product is not explosive, but a mixture of its vapor with air may be explosive		

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10. Stability and reactivity

Hazardous Conditions – heating the preparation especially above 50⁰ C, direct sunlight, contact with hot surfaces or any incandescent material, ignition source, static discharges

Hazardous materials - mineral oxidizing acids, free metals (alkalis, alkali mixtures) nitrides, peroxides and organic hydroperoxides, oxidizers and reducers

Hazardous decomposition products - no data

11. Toxicological Information

Toxicological data according to ESIS for ethanol:

Acute Oral Toxicity: LD50 6200 mg/kg (rat)

Acute skin toxicity: LD50 > 20000 mg/kg (rabbit)

Acute inhalation toxicity: LC50 > 8000 mg/kg/ 0.5h (rat)

Acute toxicity: Not applicable

Inhalation exposure: May cause headache, dizziness, nausea and vomiting

Skin Contact: Possible cause skin irritations and drying of the skin to the point of inflammation

Eye contact: The possibility of conjunctival inflammation.

Ingestion: stomach pains, nausea and vomiting. May cause irritation of the mouth, esophagus and gastrointestinal tract. May cause pneumonia in case of aspiration into the lungs.

health effect from prolonged exposure: Strong irritation of the mucous membranes of eyes and respiratory tracts, watery eyes, fatigue, drowsiness, dizziness, headaches and stomach aches.

Sensitization of product: No sensitizing effect

Chronic Action: Does not show any chronic effect

Mutagenicity: Not mutagenic

Carcinogenicity: Does not appear carcinogenic

Effects on Fertility: No effect on reproduction

12. Ecological Information

Permissible pollution of inland surface water: No data

Toxic concentrations for aquatic organisms, animal and plants:

Classification data for ethanol:

Acute toxicity to fish: LC50 - 8140 mg/l/48h

Acute toxicity to invertebrates: EC50 - 9266-14221 mg/l/48h

Toxicity to algae: EC50 - 5000 mg/l/7h

It dissolves in water. Subject to the process of evaporation from the surface of the water. Liquid harmful to aquatic organisms, largely undergoes bio-degradation process. Oxidizes rapidly in air and water as a result of the photochemical reaction.

13. Disposal considerations

Observe the provisions of the Act of 27 April 2001 on Waste disposal (Journal of Laws No 62, item 628), as amended. Observe the provisions of the Act of 27 May 2001 on packaging and packaging waste (Journal of Laws No 63, item 638) as amended.

Waste code:

16 05 05 gases in pressure containers other than those mentioned in 16 05 04

15 01 05 steel box. Multi packaging materials

20 01 01 Carton. Paper and paperboard

20 01 39 Cap. Plastics

14. Transport information

Shipping Name: **NANO SILVER preparation for cleaning Air-Conditioning Systems**

Aerosols

Material identification number: UN 1950

ADR Code: 2

Classification Code: 2/5F

Packaging group: II

Hazard identification number: 20

Warning label: 2

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15. Regulatory Information

The Act of 11 January 2001 on chemical substances and preparations (Journal of Laws No 11, item 84 of 14 February 2001) as amended.

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All work products must be performed in accordance with the provisions of Chapter IV, Section D, the Regulation of the Minister of Labor and Social Policy of 26 September 1997 on the general regulations and safety at work (Journal of Laws No 129 item 824), as amended (Journal of Laws No 91/2002 item 811)

The Regulation of the Minister of Health of 5 March 2009 on the labeling of hazardous substances and dangerous preparations and certain chemical preparations.

The Regulation of the Minister of Health of 17 January 2003 on the categories and groups of biocidal products according to their intended use.

The Journal of Laws No 39 item 252 of 1 February 2007 on the publication of consolidated text of the Act on biocidal products.

R12 - Extremely flammable product

S2 - Keep out of reach of children

S16 - Keep away from sources of ignition -no smoking

S23 - Do not breathe vapors

S25 - Avoid contact with eyes.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S38 - In case of insufficient ventilation, wear suitable individual respiratory equipment.

S45 - In case of accident or if you feel unwell, seek medical advice immediately - if possible show the label on the product



Extremely Flammable

Pressurized container: protect from sunlight and temperatures exceeding 50⁰ C. Do not pierce or burn, even after use. Do not spray on naked flame or any incandescent material. Keep away from sources of ignition - do not smoke while spraying. Keep away from children.

16. Other Information

Information contained in the material safety data sheet come from current knowledge and experience in handling the product. Data on the product have been presented in order to fulfill safety requirements and do not guarantee its performances

The employer is obliged to inform all employees who have contact with the product of hazards and personal protective measures listed in this material safety data sheet.

This material safety data sheet has been prepared on the basis of material safety data sheets of constituents supplied by their manufacturers, studies conducted and the existing regulations on dangerous substances and chemical preparations.

R-phrases:

R 11 - Highly flammable product

R12 - Extremely flammable product