

Material safety data sheet**AG Silver**

Data sporządzenia: 29.05.2011

Data aktualizacji 18.11.2015

Section 1: Identification of the substance / mixture and the company**1.1 Product identification** **AG Silver****1.2 identified uses of the substance or mixture and uses that are not advised:**

Advised use: Thermal paste containing silver compounds with high thermal conductivity

Users advice against: Not defined

1.3 Details of the supplier of the safety data sheet:MANUFACTURER AG Termopasty Grzegorz Gąsowski
18-218 Sokoly, ul. Kolejowa 33 E, tel/fax (0 86) 274 13 42E-mail address of the person responsible for the sheet: biuro@termopasty.pl**1.4. Emergency number** 86274 13 42 available between 8.00 – 16.00
Toxicological Information 22 618 77 10, National Centre for Toxicological Information 42 631 47**SECTION 2: Threat identification****2.1 Classification of the substance or mixture****Classification according to 1272/2008:**

Aquatic Acute 1; H400

Aquatic Chronic 1; H410

Human health risks

Does not pose a threat if used correctly.

Environmental hazards

Very toxic to aquatic life with long lasting effects.

Physical / Chemical risks

Does not pose a threat if used correctly.

The product has to be labelled **2.2 Elementy oznakowania:****Pictograms****Hasło ostrzegawcze:** Uwaga**Phrases signalling the kind of threat:****H410** –Very toxic to aquatic life with long lasting effects.**Phrases stating the safe use conditions****P273** – Avoid release to the environment.**P501** – Remove/ empty contents / container in accordance with national regulations.

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2.3 Other risks/hazards:

No other hazards.

No information about meeting the criteria of PBT or vPvB, in accordance with attachment XIII REACH regulations.

Appropriate studies have not been conducted.

SECTION 3: Composition / information on ingredients
3.1 Compounds:

Does not apply.

3.2 Mixtures:

Hazardous ingredients

Identyfikator produktu	Content %	CLP classification	
		hazard class and category codes	codes indicating threat kind
Chinese white – zinc oxide No CAS: 1314-13-2 No WE: 215-222-5 No index: 030-013-00-7 No REACH: 01-2119463881-32-0064	10 - < 30	Aquatic Acute 1 Aquatic Chronic 1	H400 H410

Pełna treść zwrotów H w sekcji 16

SEKCJA 4: Środki pierwszej pomocy
4.1 First aid description
If contact with skin:

Wipe the contaminated area with cloth of paper and wash in warm water with soap.

If contact with eyes:

Immediately wash with plenty of pure water for few minutes. Get medical attention if any discomfort continues.

If inhaled:

Product is not volatile– the risk of contamination through breathing is unlikely. Move the exposed person to fresh air at once. Get prompt medical attention.

Ingestion:

Rinse mouth thoroughly. Get medical attention. Show the container to the doctor.

4.2 Late and strong symptoms and the effects of exposure:

Skin contact: possible irritation.

Contact with eyes: possible irritation, lacrimation

Respiratory system: dust exposure can be the cause of irritation of mucous membranes of upper airways. .

Digestive system: Swallowing can cause digestive track disorders.

4.3 Recommendations for immediate medical aid:

The decision regarding the treatment is made by the doctor treating the affected person.

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SECTION 5: Fire-fighting measures**5.1 Extinguishing media****Proper extinguishing media**

AG Silver is not easily flammable. Use fire-extinguishing media appropriate for surrounding materials
Water, foam resistant to alcohol, carbon dioxide, extinguishing powders.

Improper extinguishing media:

Do not use water streams.

5.2 Hazards connected with the mixture or the compounds:

Tanks exposed to fire or high temperature should be cooled down with water from a safe distance; if possible, remove them from the danger area. It is possible that the compounds will produce carbon monoxide, carbon dioxide, silicon dioxide (SiO₂). At temperatures above 15 ° C, in presence of oxygen it may emit small amounts of formaldehyde.

5.3 Information for fire brigade

Harmful substances may be formed during a fire. Wear gastight protective clothing and self-contained breathing apparatus (breathing apparatus with mask). Do not allow the substances into sewage system or streams, lakes etc. Inform the local area about the fire. Evacuate anyone not involved in fire-fighting procedure. Inform National Fire Department and, if necessary, the police, local authorities and the nearest Chemical Rescue Unit.

SECTION 6: Accidental release measures**6.1 Individual safety measures, safety gear and procedures for emergency situations:**

For the non-emergency personnel: inform emergency services. Evacuate anyone who is not involved in removing the threat. For the emergency services: provide proper safety gear (clothing, safety goggles and gloves).

6.2 Health safety measures

In the event of failure do not allow discharges into the environment. Prevent the product from entering the sewers, surface water, ground water and soil. Try to collect as much as possible, to suitable containers for later disposal.

6.3 Methods and materials to prevent the spread of infection and aiding cleaning up:

Pick up mechanically and place in a labelled, sealed container for product recovery or safe disposal. Contaminated surfaces cleaned with detergents and rinse with plenty of water. Contaminated water should be disposed of as hazardous waste.

6.4 References to other sections:

Product waste management- see section 13.

Measures for personal safety - see section 8.

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SECTION 7: Dealing with substances and compounds and their storage.

7.1 Safety measures regarding safe use:

Use in well-ventilated areas. Avoid contact with eyes and prolonged contact with the skin. Work in accordance with safety and hygiene measures: Do not eat, drink and smoke at work, wash hands after use, remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including information about any incompatibilities:

Store in a well-ventilated, cool, dry place. Containers when not in use, should be tightly closed. Protect from sunlight.

7.3 Specific use:

Thermal paste containing silver compounds with high thermal conductivity.

SEKCJA 8: Kontrola narażenia/środki ochrony indywidualnej

8.1 Details about control:

Regulation of Ministry of Family, Labour and Social Policy from 6th June 2014 regarding the highest allowed concentration and intensity of compounds harmful for health in the work environment (Journal of Laws, item 817)

Compounds that are subject of the exposure norms:

	Substance name	Nr CAS	NDS	NDSch	NDSP
1.	Zinc oxide - based on Zn - Inhalable fraction	1314-13-2	5 mg/m ³	10 mg/m ³	Not defined

8.2 Exposure control:

Appropriate engineering controls:

Local exhaust ventilation with an enclosed dust emission and overall workplace ventilation. .

Individual protection measures, such as personal protective equipment:

Face and eye protection:

Avoid contact with eyes. If there is a possibility of exposure, wear safety glasses with side shields or protective goggles (when combined with a half-mask).

Skin protection

Avoid contact with skin. Wear protective gloves made of natural rubber, nitrile, butyl or polyvinyl alcohol (in accordance with EN375).

Types of gloves based on the material::

The selection of suitable gloves not only depends on the material, but also on the brand and quality of the product. Resistance of the material, the glove can be determined after testing. The exact time of the wear and tear of the gloves must be determined by the manufacturer.

Other:

Avoid contact with skin.

Respiratory track protection

Avoid breathing in the dust. When the concentration of the substance is determined and known, personal protection should taken into account with regards to the concentrations of substances occurring at the workplace, exposure time, the activities performed by the employee and the instructions given by the manufacturer of personal protective equipment. In an emergency, mask with dust filter should be worn.

Thermal hazards:

does not apply.

Material safety data sheet**AG Silver****biological monitoring**

not stated.

environmental monitoring

The acceptable level of substances in the air - Regulation Minister of Environment of 24 August 2012. On the levels of certain substances in the air (Dz. U. 2012 No. 0 pos. 1031) has not been established.

The permissible values of pollutants in industrial wastewater sent into sewer systems - Regulation of the Minister of 14 July 2006 on the manner of executing the obligations by providers of industrial effluents as well as terms of forwarding effluents to the sewerage systems (Journal of Laws. 2006 No 136, pos. 964): Zinc 2 mg Zn / l.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 basic chemical and physical properties**

Appearance:	paste, grey
Odour:	odour-free
Odour detection threshold:	not stated
pH:	does not apply
Melting temperature:	not stated
Boiling temperature:	not stated
Ignition temperature	305 °C
Evaporation rate:	not stated
Flammability (solid, gas):	does not apply
Lower explosive limit:	not stated
Higher explosive limit:	not stated
Vapour pressure:	not stated
Relative vapour density:	not stated
Density:	2,5 g/cm ³
Solubility:	does not dissolve in water Other solvents: chlorinated hydrocarbons, solvents aromatic, gasoline
Auto ignition temperature:	not stated
Decomposition temperature:	not stated
Viscosity:	1500
Explosive properties:	not present
Oxidising properties:	not present

9.2 Other information:

Heat transfer in the range . 0-150°C	> 6 W/m K
range of working temperature	-30 - 300°C

SEKCJA 10: Stability and reactivity**10.1 Reactivity**

Unknown.

10.2 Chemical stability

Stable under appropriate conditions of storage and use. No dangerous polymerisation should be expected..

10.3 Możliwość występowania niebezpiecznych reakcji:

Nie przewiduje się wystąpienia niebezpiecznej polimeryzacji.

Material safety data sheet**AG Silver****10.4 Conditions to avoid**

Avoid high temperature, direct sunlight exposure, hot surfaces and open flames

10.5 incompatible materials:

Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products:

Oxides of carbon, silicon dioxide.

SEKCTION 11: Toxicological information**11.1 Information on toxicological effects**

a) Acute Toxicity: does not apply

Zinc oxide:

LD50 (rat, orally): >2000 mg/kg

LC50 (rat, inhalation) >5,7 mg/l

LOAEL (The Lowest Dose Disclosing Poisoning) >5 mg/m³ human

b) corrosive /skin irritation: does not apply

c) serious eye damage/may cause eye irritation: does not apply

d) sensitizing effects on the respiratory system or skin: does not apply

e) mutagenic effect on reproductive cells: does not apply

f) carcinogenicity: does not apply

g) reproductive toxicity: does not apply

h) toxic effects on target organs – single exposure: does not apply

i) toxic effects on target organs - repeated exposure: does not apply

j) aspiration hazard: does not apply

Information on likely exposure:**inhalation**

Inhalation of dust may irritate the respiratory system.

Skin contact

Avoid contact with skin. It can be irritating to the skin.

Eye Contact

Avoid contact with eyes. It can be irritating to the eyes.

Ingestion

Oral zinc oxide may cause nausea, vomiting, abdominal pain. Ingestion may be disturbances in the gastrointestinal tract. Immediately contact your doctor

Delayed, immediate and prolonged effects from short- and long-term exposure:

Zinc fever (fever casting) occurs only in the production of ZnO, when there is smoke (aerosol) ZnO. Not relates to a packaged, commercial zinc white (ZnO).

Interactive effects:

No data.

SEKCTION 12: ecological information

Very toxic to aquatic organisms; may cause long-term effects. Do not allow to enter into surface water, drains and watercourses.

12.1 Toxicity:

Zinc oxide:

Fish: LC50 *Oncorhynchus mykiss* (rainbow trout) dose of 1.1 mg / l for 96 hours

Daphnia and other aquatic invertebrates: EC50 *Daphnia magna* dose > 1.0 mg / l for 48 h

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For algae: IC50 Pseudokirchneriella subcapitata (green algae): dose of 0.17 mg / l for 72h

12.2 Durability and degradability:

No data.

12.3 Bioaccumulative:

No data.

12.4 Mobility in soil:

AG Silver is not a volatile substance, does not pose a threat to the atmospheric air, may pose a risk to surface water and soil. Avoid releasing into sewers, water reservoirs, groundwater and soil.

12.5 Results of PBT and vPvB:

No data.

12.6 Other hazardous effects:

No data.

SECTION 13: Disposal**13.1 Waste treatment methods****Produkt zużyty**

Do not empty into drains. Do not allow contamination of surface water and groundwater. Do not dispose with regular trash. Incinerate hazardous waste in incineration plants in the presence of flammable materials. Eliminate the gathered waste materials according to the Environmental Protection Department of the Regional Office or the district office.

Dispose of as hazardous waste code: 13 03 10 oils and other liquids used as insulating and heat.

Contaminated packaging

Empty disposable packages to an authorized waste contractor. The packaging code: 15 01 10 Packages containing remains of hazardous substances or contaminated Minister for the Environment of 9th September 2014 on waste catalogue (Journal item. 1923).

Community legislation on waste:

Council Directive No. 75/442 / EEC on waste, Council Directive No. 91/689 / EEC on hazardous waste, Commission Decision No 2000/532 / EC of 3 May 2000 stating the list of wastes, OJ No. L 226/3 of 6th September 2000, together with the amending decisions.

SECTION 14: Transport

14.1 UN number (ONZ number): Not applicable, the product is not classified as dangerous during transport.

14.2 Correct shipping name UN: Not applicable, the product is not classified as dangerous during transport.

14.3 Hazard class for transportation: Not applicable, the product is not classified as dangerous during transport.

14.4 Packing group: Not applicable, the product is not classified as dangerous during transport.

14.5 Environmental hazards: Not applicable, the product is not classified as dangerous during transport.

14.6 Special precautions for user: Not applicable, the product is not classified as dangerous during transport.

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14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable, the product is not classified as dangerous during transport.

15. Laws concerning the safety, health and environmental regulations specific for the substance or mixture:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation, Restriction of Chemicals (REACH), with further amendments.

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015. Amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation of the European Parliament and of the Council of 16 December 2008 No. 1272/2008 (CLP), with further amendments.

The Act of 25 February 2011. on chemical substances and their mixtures (Journal of Laws No. 63, item. 322. with further amendments

Regulation of the Minister of Health of 10 October 2013. Amending the regulation on the category of hazardous substances and mixtures, where the packaging is provided with a closing child-resistant fastenings and tactile warning of danger (Journal of laws.. 2013 No. 0 pos. 1225)

The Act of 14 December 2012. Waste (Journal of laws. 2013 No. 0 pos. 21).

The Act of 13 June 2013 on packaging and packaging waste (Journal of laws 2013 pos. 888).

Minister for the Environment of 9 September 2014 on waste catalogue (Journal of Laws. item 1923).

Council Directive No. 75/442 / EEC on waste, Council Directive No. 91/689 / EEC on hazardous waste, Commission Decision No 2000/532 / EC of 3 May 2000 stating the list of wastes, OJ No. L 226/3 of September 6 2000, together with the amending decisions.

The Act of 19 August 2011. On the transport of dangerous goods (Journal of Laws No. 227, item. 1367)

Government Statement of 23 March 2011. On the entry into force of amendments to Annexes A and B to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), done at Geneva on 30 September 1957. (Journal of Laws No. 110, item . 641).

Minister of Labour and Social Policy of 6 June 2014 on maximum permissible concentration and intensity of harmful factors in the work environment (Journal item. 817).

Regulation of the Minister of Health of 30 December 2004 on health and safety relating the presence of chemical agents (Dz. U. of 2005. No. 11, pos. 86, as amended. D.)

Minister for the Environment of 9 December 2003 on substances posing a particular threat to the environment (Journal of Laws No. 217, poz.2141).

15.2 Chemical Safety Assessment:

No chemical safety assessment for the substance in the mixture, and the mixture itself.

SECTION 16: Other information

All data is based on our current knowledge. The card was developed based on the SDS and the data obtained from the manufacturer. Recipients of our product must take into account the existing legal provisions and other regulations.

Other sources of data for the sheet update:

- The laws are cited in section 15 of the sheet.
- Annex to Commission Regulation (EU) 2015/830 of 28th May 2015.
- Information from Bureau for Chemical Substances, the Chief Sanitary Inspector, the Institute of Occupational Medicine of prof. J. Nofer, the Institute of Occupational Medicine and Environmental Health.

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H definitions:

H400 – Very toxic to aquatic organisms

H410 – Very toxic to aquatic life with long lasting effects.

Description of used abbreviations, acronyms and symbols:

Aquatic Acute 1 – Hazardous to the aquatic environment: category 1

Aquatic Chronic 1 – Hazardous to the aquatic environment category 1

classification system:

1. The presence of zinc oxide in the product (10-30%), classifies the mixture as dangerous in terms of the risks of acute and chronic (long-term) to the aquatic environment category 1

Changes have been made in the safety data sheet in accordance with Commission Regulation (EU) No 2015/830 of 28 May 2015.

Changes in the sections 2, 3, 8, 9, 11, 15

Informing the Inspector for Chemical Substances about the mixture entering the Polish market is required in accordance with the requirements of Art. 15 of the Act of 25 February 2011. on chemical substances and their mixtures (Journal of Laws No. 63, item. 322). because the mixture is classified as hazardous.