SAFETY DATA SHEET

SDS- EUEN-2024

Date Updated: 24th.April.2024

Version: 1.0/EN.

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878, Article 31

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product form : Mixture
Product Name : SF 1000 Silica Aerogel Blanket (3mm-5mm-6mm-8mm-10mm-12mm-15-20mm)
Brand : I CORSYS SF 1000 AEROGEL BLANKET
Synonyms : Silica Aerogel Blanket; Silica Aerogel Materials

1.2. Relevant identified uses of the substance or mixture and uses advised against

Application of the substances/mixture: High performance insulation material
Uses advised against: None specified.

1.3. Details of the supplier of the safety data sheet

Manufactured by:

I Core Systems GmbH
Wissenschaftspark Gelsenkirchen
Munscheidstr. 14
45886 Gelsenkirchen / Germany
Tel: +49 209 9843 9999
Web: icorsys.com
Further information obtainable from: contact@icorsys.com
E-mail of competent person responsible for SDS: pyigitoglu@mgmail.com

1.4. Emergency telephone number

European Emergency No: 112
Emergency telephone at the company: +49 (0) 209 9843 9999 (Monday to Friday 7 am to 5 pm)

SECTION 2: HAZARDS IDENTIFICATION

1.1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008 Of the European Parliament and Of the Council Of 16 December 2008 on Classification, Labelling and Packaging of Substances and Mixtures, Amending and Repealing Directives 67/548/EEC And 1999/45/EC, and Amending Regulation (EC) No 1907/2006.

1.2. Label elements

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008 Of the European Parliament and Of the Council Of 16 December 2008 on Classification, Labelling and Packaging of Substances and Mixtures, Amending and Repealing Directives 67/548/EEC And 1999/45/EC, And Amending Regulation (EC) No 1907/2006.

1.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Ingredient	Product identifier	Percentage (%)
Synthetic Amorphous Silica	CAS Number: 7631-86-9 EC Number: 231-545-4	87-95
Titanium Dioxide	CAS Number: 1317-80-2 EC Number: 215-282-2	0.01

This product is composed of synthetic amorphous silica dioxide, commonly called white carbon black. Amorphous silica should not be confused with crystalline silica.
Hazardous components: No hazardous components in this proprietary formulation.
Full text of H-statements: see section 16

SECTION 4: FIRST-AID MEASURES

4.1. Description of first aid measures
After inhalation: Remove person to fresh air.
After skin contact: Wash with soap and water. Observe good occupational hygiene for work. If skin irritation or rash occurs, seek medical attention.
After eye contact: Do not rub eyes. Dust particles may cause abrasive injury. Flush eyes with water for several minutes.
After swallowing: Need for First Aid is not anticipated.

4.2. Most important symptoms and effects, both acute and delayed
Dust may cause mechanical eye and skin irritation. Inhalation of dust may cause irritation of the respiratory system. Silica aerogels are hydrophobic (repel water) and may cause temporary drying and irritation of the skin, eyes, and mucous membranes.

4.3. Indication of any immediate medical attention and special treatment needed
Immediate medical attention is generally not required.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media Suitable extinguishing agents
Use fire extinguishing methods suitable to surrounding conditions.

5.2. Special hazards arising from the substance or mixture
Product is a super-insulator. Rolls of material will retain heat within internal layers that may be a source of ignition after the fire is extinguished. Keep hot material away from combustible materials and cool hot insulation with water.

5.3. Advice for firefighters
Protective equipment: Normal firefighting procedures should be followed to avoid inhalation of smoke and gases produced by a fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Use personal protective equipment as required.
Ensure adequate ventilation.
Avoid formation of dust.

6.2. Environmental precautions
Report spills as required under national and local regulations.

6.3. Methods and material for containment and cleaning up
Collect using methods that avoid the generation of dust (pick up or vacuum dust) and place in appropriate container for disposal.

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
Prevent formation of dust.
Aerogel blankets may generate dust when handled. Workplace exposures to all dusts should be controlled with standard industrial hygiene practices. Local exhaust should be the primary dust control method. Dry vacuuming is the preferred method for cleaning up dust. Because aerogel dust is hydrophobic, water is not an effective dust control agent. Unpack material in the work area. This will help to minimize the area where dust exposure may occur. Trimmed material should be promptly packed in disposal bags. Trims and offcuts may be reused in secondary applications. Scrap material should be packed for disposal. Avoid dust contact with eyes, skin and clothing and avoid breathing dust. Wash hands with soap and water after handling.

7.2. Information about protection against explosions and fires
No special measures required.

7.3. Conditions for safe storage, including any incompatibilities
Information about storage in one common storage facility: Keep tightly closed in the packaging until ready for use. Store in a dry place.

7.4. Further information about storage conditions
Dispose of contents/container in accordance with local/regional/national/international regulations.

7.5. Specific end use(s)
No relevant information available.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION
Additional information about design of technical systems
Technical measures and the application of adequate working methods take priority over the use of personal protection equipment. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

8.1. Control parameters
There are no exposure limits identified for the main product component, which is classified as synthetic amorphous silica.
Exposure limits for synthetic amorphous silica are based on silica.
Components with limit values that require monitoring at the workplace:

CAS: 7631-86-9 silica, amorphous	
Australia	:2 mg/m^3, TWA, respirable
Austria MAK	:4 mg/m^3, TWA, inhalable fraction
Germany TRGS 900	:4 mg/m^3, TWA, inhalable fraction
India	:10 mg/m^3, TWA
Ireland	:2.4 mg/m^3, TWA, respirable dust
Norway	:1.5mg/m^3, TWA, respirable dust
UK WEL	:6 mg/m^3, TWA, total inhalable fraction 2.4 mg/m^3, TWA, respirable fraction
US OSHA PEL(TWA)	:15 mg/m^3, total dust 5 mg/m^3, respirable fraction
CAS: 1317-80-2, titanium, dioxide	
Germany TRGS 900	:1.5 mg/m^3, respirable dust
UK WEL	:10 mg/m^3, total inhalable fraction 4mg/m^3, respirable fraction

US OSHA PEL(TWA)	:10 mg/m^3, total dust 5 mg/m^3, respirable fraction
US OSHA REL	:2.4 mg/m^3 for fine Titanium Dioxide, and 0.3 mg/m3 for ultrafine Titanium Dioxide

8.2. Exposure controls
Personal protective equipment
General protective and hygienic measures: Observe good hygiene practices.

Breathing equipment: Select fit and use in accordance with local and national regulations.

Protection of hands
Material of gloves: Impervious gloves recommended for handling product.
Penetration time of glove material: Not Applicable.

Eye protection: Appropriate safety eye wear is recommended.

Body protection: Appropriate work clothing is recommended.

Environmental exposure controls: Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Soft non-woven fabric blanket
Color:	White
Odor:	Odorless. Under certain conditions, may have faint ammonia-like odor.
Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/Melting range:	No data available.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not Flammable.
Ignition temperature:	No data available.
Decomposition temperature:	Not determined.
Auto igniting:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Oxidizing properties:	Not applicable.
Vapor pressure:	Not applicable.
Density:	Not determined.
Relative density:	Not determined.
Vapor density:	Not applicable.
Evaporation rate:	Not applicable.
Solubility in / Miscibility with	
Water:	Insoluble.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not applicable.

Kinematic: Not applicable

9.2. Other information
No relevant information available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
Not reactive under normal conditions.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known.

10.4. Conditions to avoid
Avoid prolonged exposure above the recommended use temperature.

10.5. Incompatible materials
Strong acids and bases.

10.6. Hazardous decomposition products
No hazardous decomposition products during normal storage and handling.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Acute toxicity:
Based on available data, components are not acutely toxic.
Dust may cause mechanical irritation and dryness to eyes and skin.

Synthetic Amorphous Silica
Oral LD50: >5,000mg/kg
Inhalation LC50: >2,000mg/m3
Dermal LD50: >3,000mg/kg
Eye Irritation: Synthetic amorphous silica and silicates are not irritating to skin and eyes under experimental conditions but may produce dryness following prolonged and repeated exposure.
Skin Irritation: Synthetic amorphous silica and silicates are not irritating to skin and eyes under experimental conditions but may produce dryness following prolonged and repeated exposure.

Titanium Dioxide
Oral LD50: >5,000mg/kg
Inhalation LC50: >6,820mg/m3(ALC/4 hours rat)
Dermal LD50: >10,000mg/kg(rabbit)

Eye Irritation: Slight Irritation
Skin Irritation: Slight Irritation

Skin Corrosion/Irritation: Handling may cause dryness and may cause temporary irritation to skin.
Serious eye damage/irritation: Handling may cause dryness and may cause temporary irritation to skin.
Sensitization: The chemical structure does not suggest a sensitizing effect.
Chronic Toxicity:
Some studies of long-term amorphous silica dust exposures indicate a potential for decreased lung function. In surveyed studies, this effect is characterized as compounded by smoking. Additionally, surveyed studies characterize the decreased lung function effect as reversible on discontinuation of exposure.

Additional toxicological information:
Carcinogenic categories
IARC (International Agency for Research on Cancer)
IARC is a research organization that evaluates the evidence on the causes of cancer but does not make regulation, legislation, or public health intervention recommendations. The IARC Monographs Program identifies cancer hazards but does not evaluate the risks associated with specific levels or circumstances of exposure.
The International Agency for Research on Cancer (IARC) considers synthetic amorphous silica to be not classifiable as to its carcinogenicity to humans (Group 3).
In 2006, the International Agency for Research on Cancer (IARC) reclassified titanium dioxide as ''possibly carcinogenic to humans'' (Group 2B) based on animal experiments. In the draft Titanium Dioxide Monograph (Vol. 93), IARC concluded that the human carcinogenic studies ''do not suggest an association between occupational exposure as it occurred in recent decades in western Europe and North America and risk of cancer.'' See Section 11 for a full discussion. The Group 2B for Ti02 classification was based on three animal studies and four human studies.

NTP (National Toxicology Program)
None of the ingredients is listed.
OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.
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 11 NOTES: Toxicological information is based on literature review for synthetic amorphous silica (CAS No.7631 -86-9) and titanium dioxide (CAS No.1317-80-2). This product is composed of synthetic amorphous silica dioxide, commonly called white carbon black. Amorphous silica should not be confused with crystalline silica.
Epidemiological studies indicate low potential for adverse health effects from exposure to amorphous silica.

11.2. Information on other hazards
No additional information available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Aquatic toxicity
Studies on fish, daphnia and algae using synthetic amorphous silica (SAS) showed no toxicity; physical effects on daphnid mobility were observed in tests using unfiltered suspensions at 1000 mg/L and higher. Test results of SAS, based on loading rates, are as follows:
96h-LL0 (Danio rerio): 10,000 mg/L (suspension)
96h-NOEC (Pimephales promelas, colloidal silica): 500 mg/L
24h-EL0 (Daphnia magna): 1000 mg/L (suspension), 24-h EL50 (Daphnia magna): >10,000 mg/L (filtered suspension).
The 21day-NOECs for daphnid reproduction were at 100 mg/L or higher for the dissolved fractions of SAS.
For algae, the 72h-EC50 was above water solubility, the 72h-NOEC was 173 mg/L (dissolved fractionl).

TiO2 is not acutely and chronically toxic to aquatic organisms. Thus, TiO2 are not a classified or non-classified acute and chronic hazard to aquatic organisms.

12.2. Persistence and degradability
No relevant information available.

12.3. Bioaccumulative potential
No relevant information available.

12.4. Mobility in soil
No relevant information available.

12.5. Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

12.6. Endocrine disrupting properties
Product
Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

12.7. Other adverse effects
No relevant information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

13.2. Uncleaned packaging
Recommendation: Cover promptly to avoid dust generation.
Disposal must be made according to official regulations.

SECTION 14 : TRANSPORT INFORMATION

UN-Number
DOT, IMDG, IATA — Not applicable

UN proper shipping name
DOT, IMDG, IATA — Not applicable

Transport hazard class(es)
DOT, IMDG, IATA
Class — Not applicable

Packing group
DOT, IMDG, IATA — Not applicable

Environmental hazards — Not applicable

Special precautions for user — Not applicable

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code — Not determined

UN "Model Regulation" — Not applicable

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations
OSHA Hazard Communication Standard (29 CFR 1910.1200)
This product is not a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard.

Toxic Substances Control Act (TSCA)
All components are on the inventory or in compliance with the inventory.

CERCLA (Comprehensive Response Compensation and Liability Act)
Product is not classified as hazardous or reportable under this requirement.

SARA TITLE III (Superfund Amendments and Reauthorization Act)
Product is not classified as hazardous or reportable under this requirement.

311/312 HAZARD CATEGORIES
Materials in this product are classified as hazardous or reportable under this requirement.

313 REPORTABLE INGREDIENTS
Materials in this product are not classified as hazardous or reportable under this requirement.

STATE REGULATIONS
Materials in this product appear on the following state hazardous substance lists: CA, IN, KY, MA, MN, NC, NJ, OR, PA. Check individual state requirements.

European Union
This Product is not classified as a dangerous material or preparation as defined in EC Directives 67/548/EEC or 1999/45/EC. Aerogel insulation blankets are considered an article, not a substance or preparation, under the REACH directive. (Regulation (EC) No. 1907/2006 (REACH)
This safety data sheets complying with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
This safety data sheets complying with Regulation (EC) No 1272/2008 Of the European Parliament and Of the Council Of 16 December 2008 on Classification, Labelling and Packaging of Substances and Mixtures, Amending and Repealing Directives 67/548/EEC And 1999/45/EC, And Amending Regulation (EC) No 1907/2006.

California Proposition 65
None of the ingredients is listed.

Australia Inventory of Chemical Substances (AICS)
No information available.

Canada Domestic Substance List (DSL)
All chemical substances in this product are included on or exempted from the Canadian Domestic Substance List (DSL). Amorphous silica (CAS No. 7631-86-9) is listed on the WHMIS Ingredient Disclosure List at a concentration threshold of 1 %.

China Existing Chemical Inventory (IECSC)
No information available.

European Inventory of Existing Commercial Chemical Substances (EINECS)
No information available.

Japanese Existing and New Chemical Substances Inventory (ENCS)
No information available.

Korea Toxic Chemical Control Law (KECI) or Existing Chemicals List (ECL)
No information available.

Malaysia Environmentally Hazardous Substances Notification and Registration (EHSNR)
No information available.

Philippine Inventory of Chemicals and Chemical Substances (PICCS)
No information available.

New Zealand Inventory of Chemicals (NZIoC)
No information available.

Taiwan Inventory of Chemicals (CSNN)
No information available.

Mexico El Inventario Nacional de Sustancias Quimicas (INSQ)
No information available.

International Regulations
Amorphous silica (CAS No. 7631-86-9) is listed on the WHMIS Ingredient Disclosure List at a concentration threshold of 1%.
Titanium dioxide (CAS No. 1317-80-2) is listed at a concentration threshold of 0.1%.

15.2. Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: OTHER INFORMATION

Product safety data sheet for prepared in accordance with Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the 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 , 2000/21/EC and Commission Regulation (EU) 2020/878.

16.1. Indication of changes (Additions, Deletions, Revisions)
Date of last issue: 24.04.2024
Date of first issue: 24.04.2024
Revision Date: -

16.2. Abbreviations and acronyms
CLP = Classification Labelling Packaging
CAS No. = Chemical Abstracts Service number.
EC Number = EINECS and ELINCS Number (see also EINECS and ELINCS).
EU = European Union.
IARC = International Agency for Research on Cancer.
OSHA = European Agency for Safety and Health at work.
PBT = Persistent, Bioaccumulative and Toxic substance.
REACH = Registration, Evaluation, Authorization and Restriction of Chemicals Regulation (EU) No 2015/830.
SVHC = Substances of Very High Concern.
vPvB = very Persistent and very Bioaccumulative.
UN = United Nations.
MARPOL = International Convention for the Prevention of Pollution from Ships (IMO).
IBC = Intermediate Bulk Container.
EINECS = European Inventory of Existing Commercial chemical Substances.
ELINCS = European List of Notified Chemical Substances.
ADN/ADNR= Regulations concerning the transport of dangerous substances in barges on inland waterways.
ADR/RID = European Agreement concerns the International Carriage of Dangerous Goods by Road/ Regulations concerning the international carriage of dangerous goods by rail.

16.3. Key literature reference and sources for data:
Synthetic Amorphous Silica Toxicity Information Reference: United Nations Environmental Programme (UNEP), Organization for Economic Co-operation and Development (OECD) Screening Information Data Set (SIDS) Initial Assessment Report, Synthetic Amorphous Silica, July 23, 2004.

16.4. Classification and procedure used to derive the classification for mixtures according to Regulation (EC)1272/2008(CLP)
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008 Of the European Parliament and Of the Council Of 16 December 2008 on Classification, Labelling and Packaging of Substances and Mixtures, Amending and Repealing Directives 67/548/EEC And 1999/45/EC, And Amending Regulation (EC) No 1907/2006.

16.5. Relevant R-phrases and/or H-statements (number and full text)

National Fire Protection Association (NFPA) Rating
Health: [1] - Irritation or minor reversible injury possible.
Flammability: [0] - Will not burn.
Reactivity: [0] - Normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosives
Other: Not Applicable

The Hazardous Materials Information System (HMIS) Rating
Health: [1] - Irritation or minor reversible injury possible.
Flammability: [0] - Will not burn.
Reactivity: [0] - Normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosives
Personal Protection: See SECTION 8

16.6. Training advice:
Do not handle until all safety precautions have been read and understood.

16.7. Further information
Edited by: PINAR YİĞİTOĞLU ARTUK
Chemical Evaluation Specialist Preparer Certificate Number and Date: NBC / 04.22.02&08.08.2023
This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation, as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not valid for the new made-up material. This version of the SDS supersedes all previous versions.