Material Safety Data Sheet

roVa™ Shield NF

Date: 07 / 05 / 2023

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product Name: roVa™ Shield NF

Synonyms: Silica aerogel material

Use of the Substance/Preparation: Thermal insulation & Flame-retardant (self-extinguishing)

Manufacturer: roVa Corporation
Address: 382, Gangnam-daero, Gangnam-gu, Seoul, Korea - 06232

Telephone: +82 2 796 8440
E-mail: info@rovashield.com

2. HAZARDS IDENTIFCATION

Emergency Overview

Caution:
May cause skin and respiratory tract irritation. Ingestion may cause gastric disturbances.

Appearance: White liquid
Odor: Faint Odor

Primary Routes of Exposure:
Primary routes of exposure for liquids include skin and eye contact, inhalation, and ingestion.

Potential Health Effects

Skin contact:
May cause skin irritation. May be harmful if absorbed through the skin.

Eye contact:
May cause eye irritation.

Inhalation:
Material may be irritating to upper respiratory tract and mucous membranes.

Ingestion:
May be harmful if swallowed.

Chronic Effects of Exposure:
None known for product

Carcinogenicity:
No data available. Also see Section 15.

Target Organ Effects:
Skin, Lungs

Medical Condition Aggravated By Exposure:
Excessive exposure and inhalation may aggravate pre-existing skin disorders and chronic respiratory disorders including, but not limited to, bronchitis, emphysema, and asthma.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percent	EINECS Number
Acrylate Copolymer	25085-02-3	15~30	
Water	7732-18-5	20~40	231-791-2
Titanium dioxide	13463-67-7	1~10	
Trimethylsilylated Silica (amorphous silica)	7631-86-9	3~10	262-373-8
Soda Lime Borosilicate Glass	65997-17-3	5~10	
Proprietary Additive	NA	<=5	Not assigned

4. FIRST AID MEASURES

Eye Contact:
Immediately wash with large amounts of water for 15 minutes, occasionally lifting lids. Remove contact lenses if worn and continue to wash with water. If irritation occurs and persists, get medical treatment.

Skin Contact:
Remove contaminated clothing and footwear. Immediately wash with large amounts of water for at least 20 minutes. If irritation occurs and persists, get medical treatment.

Ingestion:
Seek immediate medical attention. Do not induce vomiting.

Inhalation:
Remove to fresh air. If irritation occurs and persists, get medical treatment.

5. FIRE-FIGHTING MEASURES

Flash Point:
> 100 °C

Autoignition Temperature:
Not Determined

Hazardous combustion products:
Carbon dioxide, carbon monoxide, hydrocarbons

Extinguishing Media:
Use media suitable for surrounding fire and that are appropriate to the surrounding environment;

Water & foam, water mist, carbon dioxide, and dry chemical fire extinguishers are all suitable.
Note that water & foam and water mist fire extinguishers are primarily for Class A fires.

Protective Equipment for Fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turnout gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Wear personal protective equipment during cleanup and provide adequate ventilation.

Environmental Precautions:
Local authorities should be advised if significant spillages cannot be contained.

Methods and Materials for Containment and Cleaning Up:
Contain spills using inert absorbent material such as sand, earth, and saw dust. Use rags to clean up spilled material. Dispose in suitable waste containers in accordance with local, state, and federal regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling:
Wear personal protective gear (rubber gloves, protection uniform, activated carbon mask, etc.) and avoid direct skin contact. Provide adequate ventilation and avoid inhalation of vapor or mist. Practice good industrial hygiene and safety guidelines.

Conditions for Safe Storage:
Keep in cool and well-ventilated area. Avoid direct sunlight and protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits
None applicable

Engineering Controls
Ensure adequate ventilation to maintain exposures below occupational limits.

Personal Protective Equipment
Respiratory Protection:
Wear properly fitted NIOSH/MSHA approved respirator whenever workplace conditions warrant use of a respirator. Wear respiratory protection if ventilation is inadequate.

Hand Protection:
Nitrile, latex or other impermeable protective gloves to prevent dermal exposure

Eye Protection:
Safety goggles (Chemical goggles). Wear face shields if splashing hazard exists.

Hygiene Measures:
Wash hands and/or face thoroughly between breaks and at the end of the working period.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White Liquid
Odor:	Faint Odor
pH:	7.0 ~ 9.0 (25 °C)
Freezing/Melting Point:	Not Determined
Boiling Point:	approximately 100 °C
Flashing Point:	> 100 °C
Evaporation Rate:	Not Determined
Flammability:	Not a flammable liquid according to GHS
Vapor Pressure:	approximately 17.5 mmHg (20 °C)
Solubility in Water:	Partly Soluble
Autoignition Temperature:	Not Determined
Viscosity:	12,000 ~ 20,000 mPa·s

10. STABILITY AND REACTIVITY

Chemical Stability:
Chemically stable under normal handling conditions.

Hazardous Reactions:
None under normal use

Conditions To Avoid:
Prolonged exposure to temperatures above the recommended use temperature.

Substances to Avoid:
Oxidizing agent, acid agent, alkali agent, alkali metal hydroxide, nitrate (Fire and explosion)
Sulfuric acid (exothermic reaction)

Hazardous Decomposition Products:
carbon monoxide (CO), carbon dioxide (CO_2), hydrocarbons

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Oral
Type of value: LD50
Species: rat
Value: > 2,000 - 10,000 mg/kg

Irritation/Corrosion
Skin:
Species: rabbit
Result: non-irritant
Method: OECD Guideline 404

Eye:
Species: rabbit
Result: non-irritant
Method: OECD Guideline 405

Other information:
The information was derived from products of similar composition.

12. ECOLOGICAL INFORMATION

Fish
Acute:
OECD Guideline 203 static
Brachydanio rerio/LC50 (96 h): > 100 mg/l

Aquatic invertebrates
Acute:
OECD Guideline 202, part 1 static
Daphnia magna/EC50 (48 h): > 100 mg/l

Aquatic plants
Toxicity to aquatic plants:
OECD Guideline 201 green algae/EC50 (72 h): > 100 mg/l
Nominal concentration.

Microorganisms
Toxicity to microorganisms:
DIN EN ISO 8192-OECD 209-88/302/EEC,P. C activated sludge, domestic/EC20 (0.5 h): > 100 mg/l

Degradability / Persistence
Biological / Abiological Degradation

Test method:	OECD 302B; ISO 9888; 88/302/EEC,part C
Method of analysis:	DOC reduction
Degree of elimination:	> 70 %
Evaluation:	Easily eliminated from water. The product can be virtually eliminated from water by abiotic processes e.g. adsorption onto activated sludge.

Bioaccumulation
Based on its structural properties, the polymer is not biologically available. Accumulation in organisms is not to be expected.

13. DISPOSAL CONSIDERATIONS

Waste Disposal:
Dispose in an approved facility or through a licensed waste disposal contractor. Disposal of this product, solutions, and any byproducts should at all times comply with the requirements of environmental protection and waste disposal legislation. Do not discharge into waterways, drains, and sewers.

Container Disposal:
Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Follow Waste Disposal guidelines.

14. TRANSPORT INFORMATION

UN Number:
Not classified as a dangerous good under transport regulations.

UN Proper Shipping Name:
Not classified as a dangerous good under transport regulations.

Transport Hazard Class:
Not classified as a dangerous good under transport regulations.

Packaging Group:
Not classified as a dangerous good under transport regulations.

Land Transport:
USDOT Not classified as a dangerous good under transport regulations.

Sea Transport:
IMDG Not classified as a dangerous good under transport regulations.

Air Transport:
IATA/ICAO Not classified as a dangerous good under transport regulations.

Rail Transport:
RID Not classified as a dangerous good under transport regulations.

15. REGULATORY INFORMATION

This product contains Styrene Acrylic Latex Polymer NJTS-50078-NCD.

Styrene Acrylic Latex Polymer NJTS-50078-NCD:

U.S. Federal Regulations

Registration Status	TSCA, US released/listed
OSHA Hazard Category	Not Hazardous
SARA Hazard Category (EPCRA 311/312)	Not Hazardous

U.S. State Regulations

Right-to-Know Substances List	NJ, PA, MA

California Proposition 65:
THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

16. OTHER INFORMATION

HMIS Rating
Health: 1 Flammability: 1 Physical Hazard: 0

MSDS Creation Date: 07/05/2023

Revision number and date
Number of Revision : 0
Revision Date : / /

Date format : mm/dd/yyyy

DISCLAIMER

The Data set forth in these sheets are based on the information provided by the suppliers of the raw materials and chemicals used in the manufacturing of the aforementioned product. roVa corporation makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereon.

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