MATERIAL SAFETY DATA SHEET

Bayer MaterialScience

Bayer MaterialScience LLC
Product Safety & Regulatory Affairs
100 Bayer Road
Pittsburgh, PA 15205-9741
USA

TRANSPORTATION EMERGENCY
CALL CHEMTREC: (800) 424-9300
INTERNATIONAL: (703) 527-3887

NON-TRANSPORTATION
Bayer Emergency Phone: (412) 923-1800
Bayer Information Phone: (800) 662-2927

1. Product and Company Identification

Product Name: BAYSEAL IC IVORY
Material Number: 81179841
Chemical Family: Water-based Acrylic Coating

2. Hazards Identification

Emergency Overview

WARNING! Color: Ivory **Form:** liquid **Odor:** Mild, Amine.
May cause eye, skin, and respiratory tract irritation. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

Potential Health Effects

Primary Routes of Entry: Skin Contact, Eye Contact, Ingestion, Inhalation

Medical Conditions Aggravated by Exposure: Skin disorders, Respiratory disorders, Eye disorders

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation
Acute Inhalation
For Component: Vinyl acetate, n-butyl acrylate polymer
May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

For Component: Titanium dioxide (Rutile)
May cause mechanical irritation.

Skin
Acute Skin
For Component: Vinyl acetate, n-butyl acrylate polymer
May cause irritation with symptoms of reddening and itching.

For Component: Titanium dioxide (Rutile)

Not expected to be irritating.

Eye
Acute Eye
For Component: Vinyl acetate, n-butyl acrylate polymer
May cause irritation with symptoms of reddening, tearing and stinging.

For Component: Titanium dioxide (Rutile)
Not expected to be irritating.

Ingestion
Acute Ingestion
For Component: Titanium dioxide (Rutile)
Not expected to be harmful if swallowed.

Carcinogenicity:
Titanium dioxide (Rutile) **IARC** - Overall evaluation: 2B Possible carcinogen.

3. Composition/Information on Ingredients

Hazardous Components

Weight %	Components	CAS-No.
7 - 13%	Dipentaerythritol	126-58-9
5 - 10%	Vinyl acetate, n-butyl acrylate polymer	CAS# is a trade secret
5 - 10%	Polyvinyl Chloride Polymer	
1 - 5%	Titanium dioxide (Rutile)	13463-67-7

4. First Aid Measures

Eye Contact
In case of contact, flush eyes with plenty of lukewarm water. Get medical attention if irritation develops.

Skin Contact
In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention if irritation develops and persists.

Inhalation
If inhaled, remove to fresh air. Get medical attention if irritation develops.

Ingestion
If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

5. Fire-Fighting Measures

Suitable Extinguishing Media: All extinguishing media are suitable.

Special Fire Fighting Procedures
Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

Unusual Fire/Explosion Hazards
Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

6. Accidental release measures

Spill and Leak Procedures
Cleanup personnel must use appropriate personal protective equipment. Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal.

7. Handling and Storage

Storage Period
12 Months

Handling/Storage Precautions
Avoid breathing dust, vapor, or mist. Avoid contact with skin or clothing. Avoid contact with eyes. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use. Protect from freezing.

Further Info on Storage Conditions
None known.

8. Exposure Controls / Personal Protection

Titanium dioxide (Rutile) (13463-67-7)

US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 10 mg/m3
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 15 mg/m3 (Total dust.)
US. ACGIH Threshold Limit Values
Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Industrial Hygiene/Ventilation Measures
General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines.

Respiratory Protection
In case of insufficient ventilation wear suitable respiratory equipment.

Hand Protection
Permeation resistant gloves.

Eye Protection
splash proof goggles.

Skin and body protection
Wear cloth work clothing including long pants and long-sleeved shirts.

Additional Protective Measures
Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

9. Physical and chemical properties

Form:	liquid
Color:	Ivory
Odor:	Mild, Amine
Freezing Point:	0 °C (32 °F) similar to water
Boiling Point/Range:	100 °C (212 °F) similar to water
Flash Point:	Not applicable (water based product), however, solid material will support combustion if water has been evaporated.
Lower Explosion Limit:	not applicable
Upper Explosion Limit:	not applicable
Vapor Pressure:	17 mmHg @ 20 °C (68 °F) similar to water
Specific Gravity:	1.31

10. Stability and Reactivity

Hazardous Reactions
Hazardous polymerization does not occur.

Stability
Stable

Materials to avoid
None known.

Hazardous decomposition products
By Thermal Decomposition: Acrylic monomers, other potentially toxic fumes

11. Toxicological Information

Toxicity Data for Polyphosphoric acids, ammonium salts
Acute Oral Toxicity
LD50: > 2,000 mg/kg (Rat)

Skin Irritation
rabbit, Non-irritating

Eye Irritation
rabbit, Non-irritating

Toxicity Data for Melamine
Acute Oral Toxicity
LD50: 3,160 mg/kg (Rat)

Acute Inhalation Toxicity
LC50: 3,280 mg/m3, (Rat)

Acute dermal toxicity
LD50: > 1,000 mg/kg (rabbit)

Skin Irritation
rabbit, Exposure Time: 18 hrs, Non-irritating

Eye Irritation
rabbit, Draize, Slightly irritating
rabbit, Non-irritating

Sensitization
dermal: non-sensitizer (Human, Patch Test)
non-sensitizer (Guinea pig)

Repeated Dose Toxicity
28 Days, oral: NOAEL: 2000 ppm, (Rat)

Mutagenicity
Genetic Toxicity in Vitro:
Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)
Genetic Toxicity in Vivo:

Positive and negative results were seen in various in vitro studies; however in vivo studies were negative.

Carcinogenicity
mouse, Male/Female, oral, 2 Years,
negative
Rat, Male, oral, 2 Years,
positive

Toxicity to Reproduction/Fertility
Fertility Screening, inhalation, (Rat, Male) NOAEL (F2): 500 ug/m3
Reproductive effects have been observed in animal studies.

Developmental Toxicity/Teratogenicity
Rat, Female, oral, ad libitum, NOAEL (teratogenicity): 1,060 mg/kg,
No Teratogenic effects observed at doses tested.

Toxicity Data for C18-28 Long Chain Chlorinated Paraffin
Acute Oral Toxicity
LD50: > 26,100 mg/kg (Rat)

Toxicity Data for Titanium dioxide (Rutile)
Acute Oral Toxicity
LD50: > 5,000 mg/kg (Rat)

Acute Inhalation Toxicity
LC0: > 6.82 mg/l, dust/particulate, 4 hrs (Rat)

Acute dermal toxicity
LD50: > 5,000 mg/kg (rabbit)

Skin Irritation
rabbit, Exposure Time: 24 hrs, Non-irritating

Eye Irritation
rabbit, Draize, Non-irritating

Sensitization
dermal: non-sensitizer (Guinea pig, Maximization Test)
dermal: non-sensitizer (Human, Patch Test)

Repeated Dose Toxicity
28 Days, inhalation: NOAEL: 35 mg/m3, (Rat)

Mutagenicity
Genetic Toxicity in Vitro:
Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)
Genetic Toxicity in Vivo:
Drosophila SLRL test: negative (Drosophila melanogaster)

Carcinogenicity
Rat, Male/Female, inhalation,
According to IARC, several rat inhalation and intratracheal installation studies using titanium dioxide have shown increases in benign and malignant lung tumors. Reviewed human exposure data did not suggest an association between occupational exposure to titanium dioxide and risk for cancer. Additionally, the IARC working group determined that, #No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other material, such as in paints."

12. Ecological Information

Ecological Data for Polyphosphoric acids, ammonium salts
Acute and Prolonged Toxicity to Fish
LC50: > 500 mg/l (Goldfish (Carassius auratus), 96 h)

Ecological Data for Melamine
Biodegradation
Aerobic, 0 %, Exposure time: 14 Days
Under test conditions no biodegradation observed.
Aerobic, < 20 %, Exposure time: 20 Days

Acute and Prolonged Toxicity to Fish
LC50: > 500 mg/l (Golden orfe (Leuciscus idus), 48 hrs)

Acute Toxicity to Aquatic Invertebrates
EC50: > 2,000 mg/l (Water flea (Daphnia magna), 48 hrs)

Toxicity to Aquatic Plants
EC50: 940 mg/l, (other: algae, 4 Days)

Toxicity to Microorganisms
EC50: > 10,000 mg/l, (Pseudomonas putida, 2 hrs)

Ecological Data for C18-28 Long Chain Chlorinated Paraffin
Acute and Prolonged Toxicity to Fish
LC50: 520 mg/l (Other fish, 96 h)

Ecological Data for Titanium dioxide (Rutile)
Acute and Prolonged Toxicity to Fish
LC0: > 1,000 mg/l (Golden orfe (Leuciscus idus), 48 hrs)

Acute Toxicity to Aquatic Invertebrates
EC0: > 3 mg/l (Water flea (Daphnia magna))

Toxicity to Microorganisms
EC0: > 10,000 mg/l, (Pseudomonas fluorescens, 24 hrs)
EC0: > 5,000 mg/l, (Escherichia coli)

13. Disposal considerations

Waste Disposal Method
Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions
Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning.

14. Transportation information

Land transport (DOT)
Non-Regulated

Sea transport (IMDG)
Non-Regulated

Air transport (ICAO/IATA)
Non-Regulated

15. Regulatory Information

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

US. Toxic Substances Control Act: Listed on the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302):
Components
None

SARA Section 311/312 Hazard Categories:
Acute Health Hazard, Chronic Health Hazard

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):
Components
None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:
Components
None

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):
Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product, should be classified as a hazardous waste. (40 CFR 261.20-24)

State Right-To-Know Information
The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

Weight %	Components	CAS-No.
>=1%	Water	7732-18-5
>=1%	Polyphosphoric acids, ammonium salts	68333-79-9
7 - 13%	Dipentaerythritol	126-58-9
>=1%	Melamine	108-78-1
5 - 10%	Vinyl acetate, n-butyl acrylate polymer	CAS# is a trade secret
5 - 10%	Polyvinyl Chloride Polymer	
1 - 5%	Titanium dioxide (Rutile)	13463-67-7

MA Right to Know Extraordinarily Hazardous Substance List:

Weight %	Components	CAS-No.
<0.05%	Acetaldehyde	75-07-0
<0.05%	Vinyl Acetate	108-05-4
<0.05%	Crystalline Quartz Silica	14808-60-7

California Prop. 65:
Warning! This product contains chemical(s) known to the State of California to be Carcinogenic. - Female reproductive toxin.

Weight %	Components	CAS-No.
<0.05%	Acetaldehyde	75-07-0
<0.05%	Crystalline Quartz Silica	14808-60-7
<20 ppb	Ethylene Oxide	75-21-8
<65 ppb	Arsenic	7440-38-2
<1 ppm	Nickel (Ni)	7440-02-0
<40 ppb	1,4-Dioxane	123-91-1
<10 ppb	Formaldehyde	50-00-0

16. Other Information

NFPA 704M Rating

Health	1
Flammability	1
Reactivity	0
Other	

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS Rating

Health	1*
Flammability	1
Physical Hazard	0

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe
* = Chronic Health Hazard

The method of hazard communication for Bayer MaterialScience LLC is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Bayer MaterialScience LLC as a customer service.

Contact Person: Product Safety Department
Telephone: (412) 777-2835
MSDS Number: 000000008422
Version Date: 05/01/2008
Report Version: 2.1

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