

SAFETY DATA SHEET

ACRYSHIELD®

Revision Date: 9/18/15

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : ACRYSHIELD®
 PRODUCT GRADE/TYPE : A600,A610, A640
 SDS NUMBER : J253-AS-G-002
 PRODUCT USE : ACRYLIC ROOF COATING
 MANUFACTURER : National Coatings Corporation
 1201 Calle Suerte
 Camarillo, CA 93012
www.nationalcoatings.com
 PRODUCT INFORMATION : 1-800-423-9557
 CHEMTREC NORTH AMERICA : 1-800-424-9300
 CHEMTREC INTERNATIONAL : 703-527-3887

SECTION II – HAZARDS IDENTIFICATION

GHS CLASSIFICATION: NON-HAZARDOUS
GHS LABEL: None

SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	Weight %
*Titanium dioxide (unbound only)	13463-67-7	3-7
Limestone	1317-65-3	10-40
Zinc Oxide	1314-13-2	2-4
Ammonia-Aqueous Solution	1336-21-6	<1.0

**The hazards of the listed titanium dioxide, crystalline silica (Quartz) from limestone and ZnO are for their powder unbound form. In the bound form and when used for application as a roof coating for which the products are designed, these ingredients are not hazardous.*

SECTION IV – FIRST AID MEASURES

Eye Contact: Eye irritation. Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from eyeball to ensure thorough rinsing. Get immediate medical attention.

Skin Contact: Itching or burning of the skin. Immediately flush the skin with plenty of water while removing contaminated clothing and shoes. Get immediate medical attention.

Inhalation: Nasal irritation, headache, dizziness, nausea, vomiting. Heart palpitations, breathing difficulty, cyanosis, tremors, weakness, red flushing of face, irritability. Remove exposed person from source of exposure to fresh air. If not breathing, clear airway and start cardiopulmonary resuscitation (CPR). Avoid mouth to mouth resuscitation. Get medical attention immediately.

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

SECTION V – FIRE-FIGHTING MEASURES

Suitable Extinguishing Media : Use dry chemical, foam or carbon dioxide to extinguish fire.

Specific hazards arising from the chemical: Dangerous when exposed to heat or flame. Will form flammable or explosive mixtures with air at room temperature. Irritating or toxic substances may be emitted upon thermal decomposition. Thermal decomposition products may include oxides of carbon and nitrogen. Vapor or gas may spread to distant ignition sources and flash back. Vapors or gas may accumulate in low areas. Runoff to sewer may cause fire or explosion hazard. Containers may explode in heat of fire. Containers may explode in heat of fire. Vapors may concentrate in confined areas. Liquid will float and may reignite on the surface of water.

Special protective action for fire-fighters: Water should be used to cool fire-exposed containers, structures and to protect personnel. Use water to dilute spills and flush them away from sources of ignition. Do not flush down sewers or other drainage systems. Exposed fire-fighters must wear NIOSH approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

SECTION VI – ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment.
Keep people away from and upwind of spill/leak.
Material can create slippery conditions.

Environmental Precautions: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Methods of Cleaning up: Contain spills immediately with inert materials (e.g. sand, warth).
Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

SECTION VII – HANDLING AND STORAGE

Precautions for safe handling:

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. Use personal protective equipment in handling and observe personal hygiene after use of the product.

Conditions for safe storage : **Storage Temperature:** Minimum : 40°F (4.44°C)
Maximum: 100°F (37.77°C)

Storage Period: 12 months

Keep container closed when not in use. Protect from freezing.

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters:

Component	CAS #	Regulation	Type of Listing	Occupational Exposure Limits
Titanium dioxide	13463-67-7	JSOH OELs (05 2009	TWA	1 mg/m ³ (Respirable dust)
		US ACGIH (2011)	TWA	4 mg/m ³ (Total dust)
Zinc oxide	1314-13-2	ACGIH	TWA	10 mg/m ³
		OSHA	STEL	2 mg/m ³
Calcium Carbonate (in Limestone)	1317-65-3	OSHA	PEL	10 mg/m ³
		NIOSH	TWA	5 mg/m ³ (fume, respirable fraction)
				15 mg/m ³ (Total dust)
				5 mg/m ³ (Respirable fraction)
				15 mg/m ³ (Total dust)
				10 mg/m ³ (Total dust)

				5 mg/m3 (respirable dust)
Quartz (in limestone) Quartz (in limestone)	14808-60-7	ACGIH OSHA NIOSH	TWA TWA	0.025 mg/m3 (respirable fraction) 0.1 mg/m3 (respirable dust) 0.05 mg/m3 (respirable dust)
Aqua Ammonia	1336-21-6	ACGIH OSHA_Trans NIOSH	TWA-8hr STEL PEL STEL-15 mins -10 hr TWA	25 ppm 18 mg/m3 35 ppm 27 mg/m3 50 ppm 35 mg/m3 35 ppm 27 mg/m3 25 ppm 18 mg/m3 300 ppm IDLH

- Engineering Controls:** : Mechanical local exhaust ventilation at point of containment release.
- 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.
- Eye/face Protection** : Chemical splash goggles (ANSI Z-87.1 or approved equivalent)
- Skin Protection** : Impervious (Neoprene gloves)
- Respiratory Protection** : Wear suitable respirator (MSHA/NIOSH approved or equivalent) where exposure limits are exceeded.

SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid (color varies from white , beige, gray, gree, brick-red)
Odour:	Slight amine odor
Odour threshold:	Not available
pH:	8.5-10.4
Melting point/freezing point:	0°C (32°F) similar to water
Boiling Point/boiling 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.
Evaporation Rate:	Not available
Flammability:	Not available
Upper/Lower Flammability or explosive limits:	Not available
Vapor Pressure:	22.7 mm Hg at 20°C (68.°F) similar to water
Vapor density	Not available
Relative density:	10.0-11.7#/gal
Solubility: in water	Soluble
Partition Coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	100-115 ku

Note: The above data are typical values and must not be construed as a specification.

SECTION X – STABILITY AND REACTIVITY

Reactivity:	Non-reactive
Chemical Stability:	Stable
Possibility of hazardous reactions:	None known.
Conditions/Materials to avoid:	Keep from freezing/No known materials to avoid
Incompatible Materials:	None known.
Hazardous decomposition:	By Thermal decomposition: carbon monoxide, carbon dioxide, acrylic monomers, other potentially toxic fumes

SECTION XI – TOXICOLOGICAL INFORMATION

Acute Toxicity:

Component	Acute Oral	Acute Dermal	Acute Inhalation
Titanium Dioxide	LD50 rat >5000 mg/kg	LD50:>5000 mg/kg (Rabbit)	LC50/4h/rat (dust/mist):>6.82 mg/l, 4 h (Rat)
Limestone	LD50 rat >6450 mg/kg	Not available	Not available
Zinc Oxide	Not available	Not available	LC50>2500 mg/m3, (mouse
Aqua Ammonia	LD 50 (ammonia) (Oral/Rat) 350 mg/kg LC 50 inhalation rat 2000 ppm/4h.	Corrosive!	Corrosive!

Skin/Eye Irritation:

Titanium Dioxide Rabbit, Exposure Time, 24 h, Non-Irritating
 Limestone & Zinc Oxide Not available
 Mixture Not available

Mutagenicity:

Titanium Dioxide Genetic Toxicity in Vitro: Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)
 Genetic Toxicity in Vivo: Drosophila SLRL test: negative (Drosophila melanogaster)
 Limestone & Zinc Oxide Not available
 Mixture Not available

Carcinogenicity:

Titanium dioxide (Ti-Pure, DuPont) 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.
 Based upon all study results, DuPont scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experience in the workplace.
 Reviewed human exposure data did not suggest an association between occupational exposure to titanium dioxide and 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."

Quartz (in Limestone) ACGIH: A2-suspected human carcinogen
 NIOSH: Potential occupational carcinogen
 IARC : Monograph 68 (1997) (Listed under Crystalline Silica inhaled in the form of quartz or cristobalite
 From occupational sources) (Group 1-Carcinogenic to humans)

Limestone & Zinc Oxide Not available

Ammonia Tested on microorganisms and animals-may affect genetic material
 May cause cancer (tumorigenic) based on animal data (ammonia-anhydrous)

Sensitization:

Titanium dioxide Dermal: non-sensitizer (Guinea pig, Maximization Test), non-sensitizer (Human, Patch Test)

Repeated Dose toxicity: 28 days, Inhalation: NOAEL: 35mg/m3, (Rat)
Quartz, zinc oxide, mixture Not available

Reproductive toxicity, STOT, Aspiration hazard- Not available for components and mixture in the products listed.

Other Toxicological Information:

*Reviewed human exposure data did not suggest an association between occupational exposure to titanium dioxide and 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."

SECTION XII – ECOLOGICAL INFORMATION

Ecotoxicity:

Titanium dioxide Aquatic Toxicity: 96 hr LC50: Fathead minnow>1,000mg/l; LC50: > 1000 mg/l (Golden Orfe (Leuciscus idus), 48 hours) ;
Acute Toxicity to Aquatic invertebrates: EC50> 3mg/l (Water Flea (Daphnia Magna))
Toxicity to Microorganisms : EC50> 10,000 mg/l, (Pseudomas fluorescens, 24 h)

Limestone Acute and Prolonged toxicity to Fish: LC50: 56,000 mg/l (Mosquitofish (Gambusia affinis), 48 hours)

Aqua Ammonia In water-LC50:0.1ppm (24hrs) (Rainbow trout) ; 8.2 mg/l 96 hrs (Hathead minnow; 0.1 ppm (48 hrs) (Bluegill)
Short term-not possible; long term-yes; products of degradation are less toxic than the product itself

Persistence and Degradability, Bioaccumulative Potential, Mobility in Soil:

Not available for components and mixtures in the products listed

SECTION XIII – DISPOSAL INFORMATION

Environmental Precautions:

Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Waste Disposal Method:

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

Empty Container Precautions:

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

SECTION XIV – TRANSPORT INFORMATION

UN Number : Not applicable
UN proper Shipping Name : Not applicable
Transport Hazard Class : Not applicable
Packing Group : Not applicable
Environmental Hazards : Not hazardous

Land Transport (DOT) : Non-Regulated

Sea Transport (IMDG) : Non-Regulated

Air Transport (ICAO/IATA) : Non-Regulated

Special Precautions : No data available

SECTION XV – REGULATORY INFORMATION

Unites States TSCA Inventory (US.TSCA): All components of this product are in compliance with the inventory listing

requirement of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

CERCLA Information (40CFR302.4): Release of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to the state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title Section 304.

SARA TITLE III, Sections 302, 304, 311, 312: This material does not contain any component listed in EPA's List of List. Section 313 Supplier Notification: This product contains the following toxic chemical (s) subject to the reporting requirements of SARA Title III Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

Chemical Name	CAS #	% By Weight
Ammonia-Aqueous solution	1336-21-6	<1.0%

Workplace Classification:

OSHA : This product is considered not hazardous under OSHA Hazard Communication Standard (29CFR 1910.1200).

WHMIS : This product and its components are not listed as a 'controlled product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).

Proposition 65 : This product contains a chemical known to cause cancer or reproductive toxicity:

Component	CAS #	Authoritative Body	Date entered
Titanium dioxide (airborne, unbound particles of respirable size)	(none), several substances for single listing	Labor code (LC)	September 2, 2011
Silica, crystalline (airborne particles of respirable size); 0.5% in Limestone	(none), several substances for single listing	State's Qualified Expert (SQE)	October 1, 1988

SECTION XVI - OTHER INFORMATION

HMIS Rating:	Health	Flammability	Physical Hazard
	1	0	0

Legend:

Acronym	Meaning
ACGIH	American Conference of Governmental Hygienists
OSHA	Occupational Safety Health Administration
SARA	Superfund Amendment Reauthorization Act
TRI	Toxic Release Inventory
GHS	Globally Harmonized System (of Classification and Labeling of Chemicals)
DOT	Department of Transportation
IMDG	International Maritime Dangerous Goods
ICAO	International Civil Aviation Organization
IATA	International Air Transport Association

The information in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. The information relates only to the specific material designated and may not be valid for such material used in combination with or any other material in any process, unless specified in the test.

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This SDS adheres to the standards and regulatory requirements of the United States and has been written under the guidance of the Globally harmonized System of Classification and Labeling of Chemicals
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