

Safety Data Sheet
Titan-Primer MCU, Part B

I. Product and Company Identification

Product Name: Titan-Primer MCU, Part B
Supplier: NRI 3875 Fiscal Court, Ste #100 Riviera Beach, FL 33404 __ (561)683-6992
Emergency Phone Number: 800-535-5053
Product Description: Hardener solution
Product Use: Concrete primer
Chemical Name or Synonym: None

II. Hazards Identification

Classification of the substance or mixture

Flammable liquids – Category 4
Skin corrosion/irritation – Category 1B
Skin sensitization - Category 1
Serious eye damage/eye irritation – Category 1
Specific Target Organ Toxicity (Repeated Exposure) – Category 2
Acute Toxicity (Dermal) – Category 4
Toxic to Reproduction (Unborn Child) – Category 1B
Toxic to Reproduction (Fertility) – Category 2
Hazardous to the aquatic environment, acute hazard – Category 2
Hazardous to the aquatic environment, long-term hazard – Category 1



Hazard Statements:

H227 Combustible liquid
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H317 May cause an allergic skin reaction
H312 Harmful in contact with skin.
H360 May damage the unborn child.
H361 Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H401 Toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Signal Word: Danger

Precautionary Statement:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from flames and hot surfaces. No smoking
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash face, hands and any exposed skin thoroughly after handling.

Safety Data Sheet
Titan-Primer MCU, Part B

P272 Contaminated work clothing must not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352+P312 IF ON SKIN: Wash with plenty of water. Call a Poison Center/doctor if you feel unwell.

National Fire Protection Association Hazard Ratings – NFPA(R):

Health Hazard: 3
 Flammability: 2
 Reactivity: 0

III. Chemical Composition

Component	CAS#	%Composition
Proprietary	Proprietary	48 – 85
Benzyl alcohol	100-51-6	6 - 18
1,2-Ethanediamine, N1,N2-bis(2-aminoethyl)-	90640-67-8	4 - 12
Isophorone diamine	2855-13-2	3 – 8
m-xylenediamine	1477-55-0	1 - 4
Bisphenol A	80-05-7	1 - 4
Dimethylaminopropylamine	109-55-7	0 - 2
2,4,6-tris((dimethylaminomethyl)phenol	90-72-2	0 - 2
Salicylic acid	69-72-7	0 - 2

IV. First Aid Measures

First Aid Measures for Accidental:

Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Eye Contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin Exposure: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Most important symptoms/effects, acute and delayed:

Chronic effects: Not determined

Notes to Physician: Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

V. Fire Fighting Measures

Suitable Extinguishing Media: Dry chemical, carbon dioxide (CO₂), foam or water spray.

Not Suitable Extinguishing Media: Do not use water jet.

Safety Data Sheet
Titan-Primer MCU, Part B

Special Fire Fighting Procedures: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire . No action shall be taken involving any personal risk or without suitable training . Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special Protective Equipment for Fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Unusual Fire and Explosion Hazards: No Determined

Hazardous Decomposition Materials (Under Fire Conditions): Nitrogen oxides, carbon dioxide, carbon monoxide.

VI. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8). Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Cleanup and Disposal of Spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

VII. Handling and Storage

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage including any incompatibilities: Store between the following temperatures: 2 to 40°C (35.6 to 104°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

VIII. Exposure Controls / Personal Protection

Exposure Guidelines:

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
m-xylenediamine	0.1 mg/m ³ (Absorbed through skin)	-	-

Safety Data Sheet
Titan-Primer MCU, Part B

Appropriate Engineering Controls: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Personal Protective Equipment:

Respiratory Protection: In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Eye / Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): butyl rubber, Ethyl Vinyl Alcohol Laminate (EVAL). Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

IX. Physical and Chemical Properties

Physical Appearance:	Brown color. Liquid
Odor:	Amine-like
Odor Threshold:	Not available
pH:	11
Flash Point:	82.0 °C (179.6 °F)
Method Used:	DIN 51758 EN 22719 (Pensky-Martens Closed Cup)]
Flammability Limits (vol/vol%):	Lower: N/A Upper: N/A
Melting Point Range:	Not available
Boiling point:	135°C (275°F)
Evaporation Rate:	Not available
Specific Gravity:	1.03
Viscosity:	Dynamic: 450 to 1400 mPa·s (450 to 1400 cP)
Water Solubility:	Partially soluble
Vapor Pressure:	Not available
Vapor Density:	1.03 g/cm ³ at 20°C (68°F)
Relative Density:	Not available
Partition coefficient (n-octanol/water):	Not available
Auto-ignition Temperature:	Not available
Decomposition Temperature:	Not available
Volatile Organic Content:	Not available

X. Stability and Reactivity

Reactivity: No data available

Hazardous Polymerization: Will not occur

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to Avoid: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Safety Data Sheet
Titan-Primer MCU, Part B

Incompatible Materials/Chemicals: Strong acids, strong bases, strong oxidizing agents.

Hazardous Decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

XI. Toxicological Information

Numerical measures of toxicity:

Component	Endpoint	Species	Result
Benzyl Alcohol	LC50 Inhalation Dusts and mists LD50 Oral	Rat-Male, Female Rat-Male	>4178 mg/m ³ 1620 mg/kg
Isophorone diamine	LD50 Oral	Rat-Male	1030 mg/kg
Bisphenol A	LC50 Inhalation Dusts and mists LD50 Dermal LD50 Oral	Rat-Male, female Rabbit-Male Rat-Male, Female	>170 mg/m ³ 6400 mg/kg 2000 to 5000 mg/kg
m-xylenediamine	LC50 Inhalation Dusts and mists LD50 Dermal LD50 Oral	Rat- Female Rat-Male, female Rat-Male, female	0.8 mg/L >3100 mg/kg 930 mg/kg
dimethylaminopropylamine	LC50 Inhalation Vapor LD50 Dermal	Rat-Male, female Rabbit	24.8 mg/L 1000 to 2000 mg/kg
Salicylic acid	LD50 Oral LCO Inhalation Dusts and mists LD50 Dermal	Rat Rat Rat-Male, female	1600 mg/kg 0.9 mg/L >2000 mg/kg
2,4,6-tris (dimethylaminomethyl)phenol	LD50 Dermal	Rat-Male	>971 mg/kg

Potential Acute Health Effects:

Acute Eye Irritation: Corrosive to eyes.

Acute Skin Irritation: Corrosive to the skin. Toxic in contact with skin. May cause sensitization by skin contact.

Acute Ingestion Toxicity: Harmful if swallowed. Ingestion of corrosive substances can cause burns of the upper digestive and respiratory tract.

Acute Inhalation Toxicity: Toxic by inhalation.

Symptoms:

Eye Contact: Causes burns.

Inhalation: Severely irritating to the respiratory system.

Skin Contact: Causes burns.

Ingestion: No information available.

Chronic Health Effects: Contains material that can cause target organ damage. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Target organs: Contains material which causes damage to the following organs: respiratory tract irritation and brain.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Reproductive: Contains material which may cause developmental effects, based on animal data.

Medical conditions aggravated by over-exposure: Pre-existing skin disorders and disorders involving any other target organs mentioned in this SDS as being at risk may be aggravated by over-exposure to this product.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Safety Data Sheet
Titan-Primer MCU, Part B

Short term exposure: No specific data.

Long term exposure: No specific data.

XII. Ecological Information

Environmental Effects: No known significant effects or critical hazards.

Ecotoxicity: Toxic to aquatic life with long lasting effects.

Chemical Name	Endpoint	Exposure	Species	Result
Benzyl alcohol	Acute EC50	48 hours	Daphnia	230 mg/L
	Acute EgC50	72 hours static	Algae	770 mg/L
	Acute LC50	96 hours static	Fish	460 mg/L
	Chronic NOEC	72 hours static	Algae	310 mg/L
	Chronic NOEC	21 days Semi-static	Daphnia	51 mg/L
1,2-Ethanediamine, N1,N2-bis(2-aminoethyl)-	Acute LC50	48 hours	Fish	330 mg/L
	Acute EC50	48 hours	Daphnia	31.1 mg/L
	Acute EC50	72 hours	Algae	20 mg/L
	Acute EC10	21 dyas semi-static	Daphnia	1.9 mg/L
Isophorone diamine	Acute EC10	18 hours	Bacteria	1120 mg/L
	Acute EC50	72 hours static	Algae	37 mg/L
	Acute EC50	48 hours static	Daphnia	23 mg/L
	Acute LC50	96 hours semi-static	Fish	110 mg/L
m-xylenediamine	Acute EC10	30 minutes static	Bacteria	>1000 mg/L
	Acute EC50	48 hours	Daphnia	15.2 mg/L
	Acute EC50	72 hours static	Algae	20.3 mg/L
	Acute LC50	96 hours semi	Fish	87.6 mg/L
Bisphenol A	Acute EC50	96 hours	Algae	2.5 to 3.1 mg/L
	Acute EC50	48 hours	Daphnia	3.9 to 10.2 mg/L
	Acute LC50	96 hours	Fish	7.5 mg/L
	Chronic NOEC	444 days Flow-through	Fish	0.016 mg/L
Dimethylaminopropylamine	Acute EC50	17 hours static	Bacteria	95 mg/L
	Acute EC50	48 hours static	Daphnia	59.5 mg/L
	Acute EbC50	72 hours static	Algae	53.5 mg/L
	Acute LC50	96 hours static	Fish	122 mg/L
	Chronic EbC10	72 hours static	Algae	43 mg/L
	Chronic NOEC	17 hours static	Bacteria	94.5 mg/L
2,4,6-tris(dimethylaminomethyl)phenol	Acute ErC50	72 hours static	Algae	84 mg/L
	Acute LC50	96 hours static	Daphnia	718 mg/L
	Acute LC50	96 hours static	Fish	175 mg/L
	Chronic NOEC	72 hours	Algae	6.25 mg/L
Salicylic acid	Acute EC50	72 hours	Algae	>100 mg/L
	Acute EC50	16 hours statuc	Bacteria	380 mg/L
	Acute EC50	48 hours statuc	Daphnia	870 mg/L
	Acute LC50	96 hours flow-through	Fish	1370 mg/L
	Chronic NOEC	21 days	Daphnia	10 mg/L

Persistence and degradability:

Safety Data Sheet
Titan-Primer MCU, Part B

For Isophorone diamine, m-xylendiamine, 1,2-Ethanediamine, N1,N2-bis(2-aminoethyl)-, and bisphenol A: Not readily
 For dimethylaminepropylamine: Readily. Photolysis: 50% (14 days)
 For Salicylic acid: Inherent

Bioaccumulative potential: No data available

Chemical Name	LogPow	BCF	Potential
Benzyl Alcohol	1.1	1	Low
1,2-Ethanediamine,N1,N2-bis(2-aminoethyl)-	-2.65	-	Low
Isophorone diamine	0.99	-	Low
m-xylendiamine	0.18	<0.3	Low
dimethylaminopropylamine	-0.352	-	Low
2,4,6-tris(dimethylaminomethyl)phenol	0.219	-	Low
Salicylic acid	2.25	-	Low

Mobility in soil: No information available

Other adverse effects: No known significant effects or critical hazard

XIII. Disposal Considerations

Waste treatment methods: Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Uncleaned packaging: Do not re-use empty containers for food, clothing, or products for human or animal consumption, or where skin contact can occur. Empty containers could retain product residues. Dispose of container and unused contents in accordance with federal, state, and local regulations.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

XIV. Transport Information

DOT

UN-Number: UN2735

Proper shipping name: Amines, liquid, corrosive, marine pollutant

Hazard Class: 8

Packing Group: II

IMDG

UN-Number: UN2735

Proper shipping name: Amines, liquid, corrosive, marine pollutant

Hazard Class: 8

Packing Group: II

IATA

UN-Number: UN2735

Proper shipping name: Amines, liquid, corrosive, marine pollutant

Hazard Class: 8

Packing Group: II

Safety Data Sheet
Titan-Primer MCU, Part B

XV. Regulatory Information

International Inventories:

TSCA: All components are listed or exempted.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

U.S. Federal Regulations: Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

- Fire Hazard
- Immediate (acute) health hazard
- Delayed (chronic) health hazard

Clean Water Act: This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

SARA 313 Form R – Reporting Requirements:

<u>Product Name</u>	<u>Concentration</u>
Bisphenol A	3%

U.S. State Regulations:

California Proposition 65: This product contains less than 0.1% of chemicals known to the State of California to cause birth defects or other reproductive harm.

Ingredient Name

- Toluene
- Methanol

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Component	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Benzyl Alcohol			X		
Bisphenol A			X		
m-Xylenediamine			X		
Dimethylaminopropylamine			X		
Methanol	X	X	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

XVI. Other Information

Key Legend Information:

N/A – Not Applicable

Safety Data Sheet
Titan-Primer MCU, Part B

ND – Not Determined
N.D.A – No data available
NE – Not established
ACGIH – American Conference of Governmental Industrial Hygienists
OSHA – Occupational Safety and Health Administration
TLV – Threshold Limit Value
TWA – Time Weighted Average
NTP – National Toxicology Program
IARC – International Agency for Research on Cancer
NIOSH - National Institute for Occupational Safety and Health
DOT – Department of Transportation
IATA – International Air Transportation Association
IMO – International Maritime Organization

The information contained herein is based on the data available to us and is believed to be accurate. The data is offered in good faith as typical values and not as product specification. The information in this data sheet was compiled from information supplied by the vendors of the components of this compound. NRI makes no warranty either expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. The recommended industrial hygiene and safe handling procedures are believed to be genuinely applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. NRI assumes no responsibility for injury from the use of the product described herein. The information is intended only to assist in the safe handling of this material.

(R4) Revision date: 11.05.15