

MATERIAL SAFETY DATA SHEET

Chemical Product

Product Name:
VITRIDE (SODIUM BIS) (2-
METHOXYETHOXY)
ALUMINIUM HYDRIDE 70%
IN TOLUENE

CAS#: - 22722-98-1

Synonym: Not applicable

Chemical Name: Not applicable

Chemical Formula: Not applicable

Composition and Information on Ingredients

Name	S.K.U	% by Weight
Vitride	GCS-3275	70
Toluene	108-88-3	30

Hazards Identification

Potential Acute Health Effects:

Extremely hazardous in case of ingestion. Very hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator). Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available.
The substance is toxic to lungs, the nervous system, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly

Careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention.
Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: The lowest known value is 480°C (896°F) (Toluene).

Flash Points: The lowest known value is CLOSED CUP: 4.4°C (39.9°F). (Setaflash). OPEN CUP: 12.78°C (55°F). (Toluene)

Flammable Limits: The greatest known range is LOWER: 1.2% UPPER: 7.1% (Toluene)

Products of Combustion: These products are carbon oxides (CO, CO₂). Some metallic oxides.

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of open flames and sparks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Accidental Release Measures

Small Spill:

Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as moisture.

Storage:

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Toluene TWA: 50 (ppm) from ACGIH (TLV) [1995] TWA: 188 (mg/m³) from ACGIH [1995] Consult local authorities for acceptable exposure limits.

Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: Not applicable.

Color: Not available.

pH (1% soln/water): Not available.

Boiling Point: The lowest known value is 110.6°C (231.1°F) (Toluene).

Melting Point: May start to solidify at -95°C (-139°F) based on data for: Toluene.

Critical Temperature: Not available.

Specific Gravity: The only known value is 0.8661 (Water = 1) (Toluene).

Vapor Pressure: The highest known value is 21.9 mm of Hg (@ 20°C) (Toluene).

Vapor Density: The highest known value is 3.18 (Air = 1) (Toluene).

Volatility: Not available.

Odor Threshold: The highest known value is 1.6 ppm (Toluene)

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available. Dispersion Properties: Not available.

Solubility: Very slightly soluble in cold water.

Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of
Instability:

Not available.

Incompatibility with various substances: Extremely reactive or incompatible with moisture.

Corrosivity: Non-corrosive in
presence of glass.

Special Remarks on
Reactivity: Not available.

Special Remarks on
Corrosivity: Not available.

Polymerization: No.

Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR

EXPOSURE. Acute oral toxicity (LD50): 636 mg/kg [Rat]. (Toluene). Acute dermal toxicity (LD50): 14100 mg/kg [Rabbit]. (Toluene). Acute toxicity of the vapor (LC50): 49000 ppm 4 hour(s) [Rat]. (Toluene).

Chronic Effects on Humans: The substance is toxic to lungs, the nervous system, mucous membranes.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals:

Detected in maternal milk in human. Passes through the placental barrier in human. Embryotoxic and/or foetotoxic in animal. (Toluene)

Special Remarks on Chronic Effects on Humans: Not available.

Toxicological Data on Ingredients: Vitride LD50: Not available. LC50: Not available.
Toluene: ORAL (LD50): Acute: 636 mg/ kg [Rat]. 2600 mg/kg [Rat]. DERMAL (LD50): Acute: 14100 mg/kg [Rabbit].
VAPOR (LC50): Acute: 49000 ppm 4 hour(s) [Rat].

Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Disposal Considerations

Waste Disposal:

Transformation Information

Land transport (ADR-RID)

Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE

UN N°: 3399

H.I. nr: X323

ADR - Class: 4.3

Sea transport (IMDG) [English only]

Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE

UN N°: 3399

IMO-IMDG - Class or division: 4.3: Contact with water liberates highly flammable gases. (3: Flammable liquid.)

IMO-IMDG - Packing group: I

Air transport (ICAO-IATA) [English only]

Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE

UN N°: 3399

IATA - Class or division: 4.3: Contact with water liberates highly flammable gases. (3: Flammable liquid.)

IATA - Packing group: I

Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Toluene California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Toluene Pennsylvania RTK: Toluene Massachusetts RTK: Toluene TSCA 8(b) inventory: Vitride; Toluene SARA 313 toxic chemical notification and release reporting: Toluene CERCLA: Hazardous substances.: Toluene

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R11- Highly flammable. R14- Reacts violently with water. R38- Irritating to skin. R41- Risk of serious damage to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection

Association (U.S.A.): Health:
2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.



Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer:

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