

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Tris(isopropylamino)silane**

FORMULA: $C_9H_{25}N_3Si$

CAS NO: 532427-76-2

SYNONYMS: TIPAS

Intended Use: For R&D use only.

MANUFACTURER:

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SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION:

Water-reactive substances (category 2)

Skin corrosion or irritant (category 2)

Serious eye damage or irritant (category 2A)

Pictogram



Signal Word

Danger

Hazard Statements

H261	In contact with water releases flammable gas
H315	Causes skin irritation
H319	Causes serious eye irritation

SECTION 2 HAZARDS IDENTIFICATION (Cont.)

Precautionary Phrases

P264	Wash hands thoroughly after handling
P280	Wear protective gloves/protective clothing/eye protection/face protection
P231 + P232	Handle and store contents under inert gas. Protect from moisture.
P321	Specific treatment (see supplemental first aid instruction on this label)
P362	Take off contaminated clothing
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P332 + P313	If skin irritation occurs: Get medical attention.
P337 + P313	If eye irritation persists: Get medical attention.
P370 + P378	In case of fire: Use dry chemical or carbon dioxide to extinguish
P402 + P404	Store in a dry place. Store in a closed container.
P501	Dispose of contents/container in accordance with local/regional/national regulation.

OTHER HAZARDS

Reacts with ambient moisture to form Dimethylamine

NFPA 704 RATINGS (SCALE 0-4):

Health: 2

Flammability: 3

Reactivity: 2

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: $C_9H_{25}N_3Si$

Molecular weight: 203.41 g/mol

Synonyms: TIPAS

CHEMICAL NAME	CAS#	PURITY
Tris(isopropylamino)silane	532427-76-2	98+%

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush eyes with plenty of water for at least 15 minutes. A victim may need help keeping their eyelids open. Seek immediate medical attention. Continue rinsing during transport to hospital.

SKIN EXPOSURE: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water for at least 15 minutes. Seek medical attention.

INHALATION: Move victim into fresh air. If not breathing, give artificial respiration. Seek medical attention.

INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If natural vomiting occurs, prevent airway obstruction in order to avoid the possibility of pulmonary aspiration. Rinse mouth with water. Seek immediate medical attention.

NOTES TO PHYSICIAN: In case of inhalation, consider administering oxygen.

SECTION 5 FIREFIGHTING MEASURES

EXTINGUISHING MEDIA:

For fighting fires, use dry chemical, or carbon dioxide.

UNSUITABLE EXTINGUISHING MEDIA:

Water

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:

Carbon oxides, nitrogen oxides (NOx), and silicon oxides

SPECIFIC HAZARDS:

Severe fire hazard. Vapors can spread initially across the floor (heavier than air). The mixture of vapors and air may explode above the flash point. Vapors or gases may be ignited at a distance from original spill after spreading.

ADVICE FOR FIRE FIGHTERS

Wear self-contained breathing apparatus for firefighting if necessary. Keep unnecessary people away, deny entry to isolated hazard area.

If it can be done without risk move containers from fire area. Please stop the flow of material first and try to evolve. Please use extinguishing media appropriate for surrounding fire. Avoid inhalation of material or combustion by-products.

Avoid low areas and make up the wind.

If you cannot fight fire please evacuate if the containers are directly exposed to fire.

If material is leaking keep downwind evacuation.

SECTION 6 ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Do not touch or contact spilled material by hand

For personal protection see section 8.

ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage if safe to do so. Please move the storage container to a safe place in the spill area. Do not allow material to enter drains.

METHODS AND MATERIALS

Contain spillage. Prevent the spread of the chemical contact with water using plastic sheet and waterproof fabric. Keep the exposed area quarantined and control non-official persons access.

Please allow the wind in the opposite direction to avoid the lowlands.

Absorb with non-combustible material and place in container for disposal according to local regulations (see section 13).

SECTION 7 HANDLING AND STORAGE**PRECAUTIONS FOR SAFE HANDLING**

Avoid inhalation of vapor or mist. Avoid contact with skin and eyes. Wash hands and clothing after handling.

Use explosion-proof equipment. Keep away from sources of ignition – No smoking. Take measures to prevent the buildup of electrostatic charge.

The remaining material in the empty container is dangerous, use caution in handling and disposal of the container.

CONDITIONS FOR SAFE STORAGE

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from sources of ignition. Store under inert gas.

INCOMPATIBILITIES:

Exposure to air, moisture.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**COMPONENTS WITH WORKPLACE CONTROL PARAMETERS**

Contains no substances with occupational exposure limit values.

APPROPRIATE ENGINEERING CONTROLS

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday. Install local exhaust ventilation devices and management to ensure proper control. There is danger of explosion in higher concentration. Please install the ventilation system equipped with explosion-proof equipment.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Wear chemical safety goggles, faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH or EN.

SKIN PROTECTION: Compatible chemical-resistant gloves. Inspect gloves before each use. Use proper glove removal technique to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

BODY PROTECTION: Wear protective clothing to prevent skin exposure. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Ensure adequate washing facilities.

RESPIRATORY PROTECTION: Use a full-face air-purifying respirator with multi-purpose combination or type ABEK respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

CONTROL OF ENVIRONMENTAL EXPOSURE

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Colorless liquid

FORMULA MASS: 203.41 g/mol

ODOR: No data available

ODOR THRESHOLD: No data available

pH: Not available

MELTING POINT/ FREEZING POINT: not available

BOILING POINT: 165 °C

FLASH POINT: No data available

EVAPORATION RATE: No data available

UPPER/LOWER FLAMMABILITY/EXPLOSION LIMITS: No data available

VAPOR PRESSURE: 1.2mmHg @15.3 °C

VAPOR DENSITY: No data available

SPECIFIC GRAVITY: No data available

SOLUBILITY IN WATER: Reacts with water

PARTITION COEFFICIENT: N-OCTANOL/WATER: no data available

AUTO-IGNITION TEMPERATURE: no data available

DECOMPOSITION: No data available

VISCOSITY: No data available

SECTION 10 STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable in sealed containers and stored under a dry inert atmosphere. Reacts with water.

POSSIBILITY OF HAZARDOUS REACTION: Will not polymerize.

CONDITIONS TO AVOID: Avoid contact with air. Store in a dry place. Store in a location away from water supplies and sewers. Avoid heat, sparks, flame and other ignition sources. Containers exposed to heat may rupture or explode.

INCOMPATIBLE MATERIALS: Oxidizing agents, oxidizing liquids.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, nitrogen oxides, silicon oxide

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: No data available.

SKIN CORROSIVE/IRRITANT: May cause irritation or dermatitis.

SEROUS EYE DAMAGE/IRRITATION: May cause severe eye irritation.

RESPIRATORY OR SKIN SENSITIZATION: No data available

GERM CELL MUTAGENICITY: No data available

CARCINOGENICITY: No component of this product present at levels greater or equal to 0.1% is identified as probable, possible, or confirmed carcinogen by IARC, ACGIH, NTP, OSHA.

REPRODUCTIVE TOXICITY: No data available

STOT-Single Exposure: No data available

STOT-Repeated Exposure: No data available

ASPIRATION HAZARD: No data available

SECTION 12 ECOLOGICAL DATA

TOXICITY: No data available

PERSISTENCE AND DEGRADABILITY: No data available

BIOACCUMULATIVE POTENTIAL: No data available

MOBILITY IN SOIL: No data available

OTHER ADVERSE EFFECTS: No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable federal, state, and local regulations.

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is flammable. Contact a licensed professional waste disposal service to dispose of this material.

SECTION 14 TRANSPORTATION DATA

DOT, IATA, IMDG Regulated:

Water-reactive liquid, n.o.s. (Tris(isopropylamino)silane)

UN3148

Class 4.3

PG: II

Marine pollutant: No

SECTION 15 REGULATORY INFORMATION

SARA 302/313 Components:

No chemicals in this material are subject to reporting requirements of SAR Title III, Section 302 or 313.

SARA 311/312 Hazards

No contained chemicals apply.

Massachusetts/New Jersey/Pennsylvania Right to Know Components

No components are subject to the Massachusetts Right to Know Act.

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 OTHER INFORMATION

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However WONIK MATERIALS NORTH AMERICA LLC makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

DATE PREPARED: 06/2018

SDS DEPT