

000000024074

Version 1.0

Revision Date 05/24/2019

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SECTION 1. IDENTIFICATION

Product name : TG4000

Number : 000000024074

Product Use Description : Electronic Materials

Manufacturer or supplier's details : Honeywell International Inc.
115 Tabor Road
Morris Plains, NJ 07950-2546

For more information call : 1-480-293-9800(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : paste

Color : grey

Odor : none

Classification of the substance or mixture

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS).

GHS Label elements, including precautionary statements

Hazards not otherwise classified : Repeated or prolonged exposure may irritate eyes, skin and respiratory system.

Carcinogenicity

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No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Chemical name	CAS-No.	Concentration
Zinc oxide	1314-13-2	30.00 - 60.00 %
Aluminium	7429-90-5	30.00 - 60.00 %
Polydimethylsiloxane	63148-62-9	5.00 - 10.00 %

SECTION 4. FIRST AID MEASURES

- General advice : Get medical attention. Show this safety data sheet to the doctor in attendance. First aider needs to protect himself.
- Inhalation : Remove victim from exposure and then have him lie down in the recovery position. If not breathing, give artificial respiration. Use oxygen as required, provided a qualified operator is present. Keep respiratory tract clear. Keep patient warm and at rest. If symptoms persist, call a physician.
- Skin contact : Take off immediately all contaminated clothing. Wash off with soap and plenty of water. Call a physician if irritation develops or persists.
- Eye contact : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation develops or persists.
- Ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to an unconscious person. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If vomiting occurs naturally, have the victim lean forward to reduce risk of aspiration. Call a physician.

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Notes to physician

Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry powder
Water spray
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during firefighting : The product is not flammable.
Fire or intense heat may cause violent rupture of packages.
Hazardous decomposition products formed under fire conditions.
- Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
- Further information : Evacuate personnel to safe areas.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Wear personal protective equipment. Unprotected persons must be kept away.
Ensure adequate ventilation.
Avoid breathing vapours, mist or gas.

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- Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
Do not flush into surface water or sanitary sewer system.
Do not allow run-off from fire fighting to enter drains or water courses.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Ventilate the area.
Sweep up and shovel into suitable containers for disposal.
Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE**Handling**

- Precautions for safe handling : Wear personal protective equipment.
Use only with adequate ventilation.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

- Conditions for safe storage, including any incompatibilities : Keep tightly closed in a dry, cool and well-ventilated place.
Store in original container.
Store in upright position only.
Protect from physical damage.
Store away from incompatible substances.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.
- Engineering measures : Use with local exhaust ventilation.

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Eye protection : Safety glasses with side-shields

Hand protection : Protective gloves
Gloves must be inspected prior to use.
Replace when worn.

Skin and body protection : Protective suit

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Aluminium	7429-90-5	TWA : Time weighted average	1 mg/m3	2008	ACGIH:US. ACGIH Threshold Limit Values
Further information	:	Form of exposure : Respirable fraction.			

Aluminium	7429-90-5	REL : Recomm ended exposure limit (REL):	5 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Further information	:	Form of exposure : Respirable.			

Aluminium	7429-90-5	REL : Recomm ended exposure limit (REL):	5 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Further information	:	Form of exposure : Welding fume or pyrophoric powder. Expressed as : as Al			

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Aluminium	7429-90-5	REL : Recomm ended exposure limit (REL):	10 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Further information	:	Form of exposure : Total			

Aluminium	7429-90-5	PEL : Permissi ble exposure limit	15 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Further information	:	Form of exposure : Total dust. Expressed as : as Al			

Aluminium	7429-90-5	PEL : Permissi ble exposure limit	5 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Further information	:	Form of exposure : Respirable dust. Expressed as : as Al			

Aluminium	7429-90-5	TWA : Time weighted average	5 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Further information	:	Form of exposure : Fume. Expressed as : as Al			

Aluminium	7429-90-5	TWA : Time weighted average	15 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Further information	:	Form of exposure : Total dust. Expressed as : as Al			

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Aluminium	7429-90-5	TWA : Time weighted average	5 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Further information	:	Form of exposure : Respirable dust. Expressed as : as Al			

Aluminium	7429-90-5	TWA : Time weighted average	5 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Further information	:	Form of exposure : Pyrophoric powder. Expressed as : as Al			

Zinc oxide	1314-13-2	STEL : Short term exposure limit	10 mg/m3	2008	ACGIH:US. ACGIH Threshold Limit Values
Further information	:	Form of exposure : Respirable fraction.			

Zinc oxide	1314-13-2	TWA : Time weighted average	2 mg/m3	2008	ACGIH:US. ACGIH Threshold Limit Values
Further information	:	Form of exposure : Respirable fraction.			

Zinc oxide	1314-13-2	REL : Recomm ended exposure limit (REL):	5 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Further information	:	Form of exposure : Fume.			

Zinc oxide	1314-13-2	REL : Recomm ended exposure limit (REL):	5 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
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Further information	:	Form of exposure : Dust.
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Zinc oxide	1314-13-2	Ceil_Tim e : Ceiling Limit Value and Time Period (if specified) :	15 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
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Further information	:	Form of exposure : Dust.
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Zinc oxide	1314-13-2	STEL : Short term exposure limit	10 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
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Further information	:	Form of exposure : Fume.
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Zinc oxide	1314-13-2	PEL : Permissi ble exposure limit	5 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
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Further information	:	Form of exposure : Fume.
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Zinc oxide	1314-13-2	PEL : Permissi ble exposure limit	5 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
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Further information	:	Form of exposure : Respirable fraction.
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Zinc oxide	1314-13-2	PEL : Permissi ble exposure limit	15 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
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Further information	:	Form of exposure : Total dust.
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Zinc oxide	1314-13-2	STEL : Short term exposure limit	10 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
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Further information	:	Form of exposure : Fume.
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Zinc oxide	1314-13-2	TWA : Time weighted average	5 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
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Further information	:	Form of exposure : Fume.
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Zinc oxide	1314-13-2	TWA : Time weighted average	5 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
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Further information	:	Form of exposure : Respirable fraction.
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Zinc oxide	1314-13-2	TWA : Time weighted average	10 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
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Further information	:	Form of exposure : Total dust.
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	paste
Color	:	grey
Odor	:	none
Odor threshold	:	Note: no data available
pH	:	Note: no data available

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Melting point/range : Note: no data available

Boiling point/boiling range : Note: no data available

Flash point : Note: Not applicable

Evaporation rate : Note: no data available

Lower explosion limit : Note: no data available

Upper explosion limit : Note: no data available

Vapor pressure : Note: no data available

Vapor density : Note: no data available

Density : 2.7 g/cm³ at 25 °C

Water solubility : Note: no data available

Partition coefficient: n-octanol/water : Note: no data available

Ignition temperature : Note: no data available

Decomposition temperature : Note: no data available

Viscosity, dynamic : Note: no data available

Viscosity, kinematic : Note: no data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

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SECTION 10. STABILITY AND REACTIVITY

Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: no data available
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Hazardous decomposition products formed under fire conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: Note: no data available
Acute inhalation toxicity	: Note: no data available
Acute dermal toxicity	: Note: no data available
Skin irritation	: Note: no data available
Eye irritation	: Note: no data available
Sensitisation	: Note: no data available
Further information	: Note: No toxicology information is available.

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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : Note: no data available

Toxicity to daphnia and other aquatic invertebrates : Note: no data available

Toxicity to algae : Note: no data available

Elimination information (persistence and degradability)

Bioaccumulation : Note: no data available

Biodegradability : Note: no data available

Further information on ecology

Additional ecological information : We have no quantitative data concerning the ecological effects of this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION**DOT** Not dangerous goods**TDG** Not dangerous goods**IATA** Not dangerous goods**IMDG** Not dangerous goods

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SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act	: On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	: On the inventory, or in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	: All components of this product are on the Canadian DSL
Japan. Kashin-Hou Law List	: On the inventory, or in compliance with the inventory
Korea. Existing Chemicals Inventory (KECI)	: On the inventory, or in compliance with the inventory
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	: On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances	: On the inventory, or in compliance with the inventory
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	: On the inventory, or in compliance with the inventory

National regulatory information

SARA 302 Components	: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	: The following components are subject to reporting levels established by SARA Title III, Section 313: : Zinc oxide 1314-13-2

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	: Aluminium	7429-90-5
SARA 311/312 Hazards	: Acute Health Hazard	
California Prop. 65	: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	
Massachusetts RTK	: Zinc oxide	1314-13-2
	: Aluminium	7429-90-5
New Jersey RTK	: Zinc oxide	1314-13-2
	: Aluminium	7429-90-5
Pennsylvania RTK	: Zinc oxide	1314-13-2
	: Aluminium	7429-90-5

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 1	1
Flammability	: 1	1
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group