

000000025080

Version 1.0

Revision Date 11/18/2019

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SECTION 1. IDENTIFICATION

Product name : HT7000

Number : 000000025080

Product Use Description : Electronic Materials

Note : This sample is for research and development purposes only. The handling and use of this material must be supervised by qualified individuals. The chemical, physical and toxicological properties of this material have not been fully investigated. Use due precaution in handling, storage and disposal.

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

For more information call : 1-509-252-2200
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 : red

Odor : slight

Classification of the substance or mixture

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

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

000000025080

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

Carcinogenicity

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
Aluminium oxide	1344-28-1	60.00 - 90.00 %
Zinc oxide	1314-13-2	10.00 - 40.00 %
Proprietary Ingredient	-	<10.00 %

SECTION 4. FIRST AID MEASURES

- Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.
- Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If victim is fully conscious, give a cupful of water. Call a physician.

Notes to physician

Indication of immediate : Treat symptomatically.

000000025080

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

medical attention and
special treatment needed, if
necessary

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Foam
Carbon dioxide (CO₂)
- Specific hazards during firefighting : In case of fire hazardous decomposition products may be produced such as:
Aluminum oxides
carbon oxides (CO, CO₂).
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear personal protective equipment.
Ensure adequate ventilation.
Do not swallow.
Do not breathe vapours, mist or gas.
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Should not be released into the environment.
Prevent further leakage or spillage if safe to do so.
- 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 in well-ventilated areas.
Do not swallow.

000000025080

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

Do not breathe 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 containers tightly closed in a dry, cool and well-ventilated place.
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.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.

Engineering measures : Use with local exhaust ventilation.

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.
When using do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Remove and wash contaminated clothing before re-use.
Keep working clothes separately.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
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SAFETY DATA SHEET

Honeywell**000000025080**

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

Aluminium oxide	1344-28-1	TWA : Time weighted average	1 mg/m3	2009	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further information	:	Form of exposure : Respirable fraction.			

Aluminium oxide	1344-28-1	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), as amended
Further information	:	Form of exposure : Respirable fraction.			

Aluminium oxide	1344-28-1	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), as amended
Further information	:	Form of exposure : Total dust.			

Aluminium oxide	1344-28-1	TWA : Time weighted average	5 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Further information	:	Form of exposure : Respirable fraction.			

Aluminium oxide	1344-28-1	TWA : Time weighted average	10 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Further information	:	Form of exposure : Total dust.			

SAFETY DATA SHEET

Honeywell**000000025080**

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

Aluminium oxide	1344-28-1	TWA : Time weighted average	50 millions of particles per cubic foot of air	03 2016	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Further information	:	Form of exposure : Total dust.			

Aluminium oxide	1344-28-1	TWA : Time weighted average	5 mg/m3	03 2016	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Further information	:	Form of exposure : Respirable fraction.			

Aluminium oxide	1344-28-1	TWA : Time weighted average	15 mg/m3	03 2016	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Further information	:	Form of exposure : Total dust.			

Aluminium oxide	1344-28-1	TWA : Time weighted average	15 millions of particles per cubic foot of air	03 2016	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Further information	:	Form of exposure : Respirable fraction.			

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

SAFETY DATA SHEET

Honeywell**000000025080**

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

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

Honeywell**000000025080**

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

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), as amended
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Further information	:	Form of exposure : Fume.
------------------------	---	--------------------------

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), as amended
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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), as amended
------------	-----------	---	----------	------------	---

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), as amended
------------	-----------	--	----------	------	--

Further information	:	Form of exposure : Fume.
------------------------	---	--------------------------

Zinc oxide	1314-13-2	TWA : Time weighted average	5 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
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Further information	:	Form of exposure : Fume.
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SAFETY DATA SHEET

Honeywell**000000025080**

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

Zinc oxide	1314-13-2	TWA : Time weighted average	5 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Further information	:	Form of exposure : Respirable fraction.			
Zinc oxide	1314-13-2	TWA : Time weighted average	10 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Further information	:	Form of exposure : Total dust.			

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: paste
Color	: red
Odor	: slight
Odor threshold	: Note: no data available
pH	: Note: Not applicable
Freezing point	: 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: Not applicable
Upper explosion limit	: Note: no data available

000000025080

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

Vapor pressure : Note: no data available

Vapor density : Note: no data available

Density : Note: no data available

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

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Conditions to avoid : No information available.

Incompatible materials : Strong oxidizing agents
Strong acidsHazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:
Aluminum oxides

000000025080

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

carbon oxides (CO, CO₂).**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.

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

Further information on ecology

SAFETY DATA SHEET

Honeywell

000000025080

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

Additional ecological information : Toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

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

SECTION 14. TRANSPORT INFORMATION

DOT

UN/ID No.	: UN 3077
Proper shipping name	: Environmentally hazardous substances, solid, n.o.s. (Zinc oxide)
Class	: 9
Packing group	: III
Hazard Labels	: 9

IATA

UN/ID No.	: UN 3077
Description of the goods	: Environmentally hazardous substances, solid, n.o.s. (Zinc oxide)
Class	: 9
Packaging group	: III
Hazard Labels	: 9
Packing instruction (cargo aircraft)	: 956
Packing instruction (passenger aircraft)	: 956
Packing instruction (passenger aircraft)	: Y956

IMDG

UN/ID No.	: UN 3077
Description of the goods	: Environmentally hazardous substances, solid, n.o.s. (ZINC OXIDE)
Class	: 9
Packaging group	: III
Hazard Labels	: 9
EmS Number	: F-A, S-F
Marine pollutant	: yes

000000025080

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act	: Not On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	: Not in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	: Not in compliance with the inventory
Japan. Kashin-Hou Law List	: Not in compliance with the inventory
Korea. Existing Chemicals Inventory (KECI)	: Not in compliance with the inventory
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	: Not in compliance with the inventory
China. Inventory of Existing Chemical Substances (IECSC)	: Not in compliance with the inventory
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	: Not 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:

000000025080

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

	: Aluminium oxide	1344-28-1
	: Zinc oxide	1314-13-2
	: Zinc Carbonate	3486-35-9

SARA 311/312 Hazards : Acute Health Hazard

California Prop. 65 :



WARNING: This product can expose you to chemicals, listed below, known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Lead oxide	1317-36-8
	1306-19-0
	1306-19-0

Massachusetts RTK	: Aluminium oxide	1344-28-1
	: Zinc oxide	1314-13-2
	:	1306-19-0

New Jersey RTK	: Aluminium oxide	1344-28-1
	: Zinc oxide	1314-13-2

Pennsylvania RTK	: Aluminium oxide	1344-28-1
	: Zinc oxide	1314-13-2

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

000000025080

Version 1.0

Revision Date 11/18/2019

Print Date 12/03/2019

material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

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