

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass

Number : 000000011637

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
1-509-252-2200
(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 : liquid, clear

Color : colourless

Odor : alcohol-like ketone-like

Classification of the substance or mixture

Classification of the substance or mixture : Flammable liquids, Category 2
Eye irritation, Category 2A
Specific target organ toxicity - single exposure, Category 3,
Central nervous system

GHS Label elements, including precautionary statements

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass

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Version 1.4

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Symbol(s)



Signal word

: Danger

Hazard statements

: Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness and dizziness.

Precautionary statements

: **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear eye/face protection.**Response:**IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER or doctor/ physician if you feel unwell.
If eye irritation persists: Get medical advice/ attention.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.**Storage:**Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

ACGIH: Ethanol 64-17-5
A3: Confirmed animal carcinogen

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Accuglass®312B Spin-On Glass, Accuglass® 412B Spin-On Glass, Accuglass® 512B Spin-On Glass, Siloxane Spin-On Glass, Methyl Siloxane

Chemical nature : Mixture

Chemical Name	CAS-No.	Concentration
Ethanol	64-17-5	28.00 - 42.00 %
Isopropanol	67-63-0	20.00 - 35.00 %
Acetone	67-64-1	8.00 - 19.00 %
Methyl Siloxane Polymer	-	8.00 - 17.00 %
Water	7732-18-5	8.00 - 13.00 %

SECTION 4. FIRST AID MEASURES

General advice : Show this safety data sheet to the doctor in attendance.

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.

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. Call a physician.

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

Notes to physician

Treatment : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Dry chemical
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : Water may be ineffective.
Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during firefighting : Flammable.
Vapours may form explosive mixtures with air.
Vapours are heavier than air and may spread along floors.
Vapours may travel to areas away from work site before igniting/flashing back to Vapour source.
Cool closed containers exposed to fire with water spray.
Do not allow run-off from fire fighting to enter drains or water courses.
In case of fire hazardous decomposition products may be produced such as:
Carbon dioxide (CO₂)
Carbon monoxide
Silicon oxides
- Special protective equipment for firefighters : In the event of fire and/or explosion do not breathe fumes.
Wear self-contained breathing apparatus and protective suit.
No unprotected exposed skin areas.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Wear personal protective equipment. Unprotected persons must be kept away.
Ensure adequate ventilation.
Remove all sources of ignition.
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.
Do not swallow.

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

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- Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Prevent product from entering drains.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Methods for cleaning up : Ventilate the area.
No sparking tools should be used.
Use explosion-proof equipment.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Shovel into suitable container for disposal.

SECTION 7. HANDLING AND STORAGE**Handling**

- Handling : Handle with care.
Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from fire, sparks and heated surfaces.
Take precautionary measures against static discharges.
Ensure all equipment is electrically grounded before beginning transfer operations.
No sparking tools should be used.
Use explosion-proof equipment.
Do not smoke.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.
- Advice on protection against fire and explosion : Vapours may form explosive mixtures with air.
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
Vapours are heavier than air and may spread along floors.
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.
Container hazardous when empty.
Keep product and empty container away from heat and sources of ignition.
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

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Take measures to prevent the build up of electrostatic charge.
To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded.
Electrical equipment should be protected to the appropriate standard.

No sparking tools should be used.

Use explosion-proof equipment.

No smoking.

Storage

Requirements for storage areas and containers : Storage rooms must be properly ventilated.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep refrigerated.
Keep away from heat and sources of ignition.
Keep away from direct sunlight.
Store in area designed for storage of flammable liquids.
Protect from physical damage.
Store away from incompatible substances.

Storage temperature : -1 - 4 °C (30 - 39 °F)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.

Engineering measures : Use product only in closed system.
Provide adequate ventilation.
Prevent vapour buildup by providing adequate ventilation during and after use.

Eye protection : Do not wear contact lenses.
Wear as appropriate:
Safety glasses with side-shields
If splashes are likely to occur, wear:
Goggles or face shield, giving complete protection to eyes

Hand protection : Solvent-resistant gloves (butyl-rubber)
Gloves must be inspected prior to use.
Replace when worn.

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

- Skin and body protection : impervious clothing
Flame retardant antistatic protective clothing.
If splashes are likely to occur, wear:
Protective suit
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
Use NIOSH approved respiratory protection.
- 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.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Ethanol	64-17-5	STEL : Short term exposure limit	(1,000 ppm)	2009	ACGIH:US. ACGIH Threshold Limit Values
Ethanol	64-17-5	REL : Recommended exposure limit (REL):	1,900 mg/m3 (1,000 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Ethanol	64-17-5	PEL : Permissible exposure limit	1,900 mg/m3 (1,000 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Ethanol	64-17-5	TWA : Time weighted average	1,900 mg/m3 (1,000 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

SAFETY DATA SHEET

Honeywell**ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass****000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

Isopropanol	67-63-0	TWA : Time weighted average	(200 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Isopropanol	67-63-0	STEL : Short term exposure limit	(400 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Isopropanol	67-63-0	REL : Recomm ended exposure limit (REL):	980 mg/m3 (400 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Isopropanol	67-63-0	STEL : Short term exposure limit	1,225 mg/m3 (500 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Isopropanol	67-63-0	PEL : Permissi ble exposure limit	980 mg/m3 (400 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Isopropanol	67-63-0	TWA : Time weighted average	980 mg/m3 (400 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Isopropanol	67-63-0	STEL : Short term exposure limit	1,225 mg/m3 (500 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Acetone	67-64-1	TWA : Time weighted average	(500 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values

SAFETY DATA SHEET

Honeywell**ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass****000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

Acetone	67-64-1	STEL : Short term exposure limit	(750 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Acetone	67-64-1	TWA : Time weighted average	(250 ppm)	02 2014	ACGIH:US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values
Acetone	67-64-1	STEL : Short term exposure limit	(500 ppm)	12 2010	ACGIH:US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values
Acetone	67-64-1	REL : Recomm ended exposure limit (REL):	590 mg/m3 (250 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Acetone	67-64-1	PEL : Permissi ble exposure limit	2,400 mg/m3 (1,000 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Acetone	67-64-1	TWA : Time weighted average	1,800 mg/m3 (750 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Acetone	67-64-1	STEL : Short term exposure limit	2,400 mg/m3 (1,000 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid, clear

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

Color	: colourless
Odor	: alcohol-like ketone-like
pH	: Note: no data available
Melting point/range	: Note: no data available
Boiling point/boiling range	: 74 - 78 °C
Flash point	: 28.0 °F (-2.2 °C) Method: closed cup Note: Acetone
Evaporation rate	: < 1
Flammability	: Not applicable
Lower explosion limit	: 2.6 %(V)
Upper explosion limit	: 12.8 %(V)
Vapor pressure	: 243 hPa
Density	: 0.8 - 0.9 g/cm3
Partition coefficient: n-octanol/water	: Note: no data available
Ignition temperature	: 537 °C
Decomposition temperature	: Note: No decomposition if used as directed.
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Bulk density	: Note: Not applicable

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	: With oxidizing agents possible. Hazardous polymerisation does not occur.
Conditions to avoid	: Heat, flames and sparks. Keep away from direct sunlight.
Incompatible materials to avoid	: Oxidizing agents Halogens alkaline materials Strong acids Metals
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO ₂) Silicon oxides

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
Repeated dose toxicity Acetone	: Species: Rat NOEL: 19000 ppm 8-Week Inhalation Toxicity Study 5 days/week for 8 weeks Slightly reduced weight gain compared to controls

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

Species: Rat
NOEL: 100 mg/kg
90-Day Oral Toxicity Study
increased liver and kidney weights

Species: Rat
Lowest observed effect level: 500 mg/kg
90-Day Oral Toxicity Study
increased liver and kidney weights

Further information :

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish
Ethanol

: LC0: 8,140 mg/l
Exposure time: 48 h
Species: Leuciscus idus (Golden orfe)

flow-through test
LC50: 12,900 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)

LC50: 14,200 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

Isopropanol

: LC50: > 5,000 mg/l
Exposure time: 24 h
Species: Carassius auratus (goldfish)

LC50: 8,970 mg/l
Exposure time: 48 h
Species: Leuciscus idus (Golden orfe)

LC50: 10,400 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

Acetone

: static test
LC50: 5,540 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

static test
LC50: 8,300 mg/l
Exposure time: 96 h
Species: Lepomis macrochirus (Bluegill sunfish)

Toxicity to daphnia and other aquatic invertebrates

Ethanol : EC50: 9,268 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

EC50: 10,800 mg/l
Exposure time: 24 h
Species: Daphnia magna (Water flea)

Isopropanol : EC50: > 100 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Acetone : LC50: 12,600 - 12,700 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to algae

Ethanol : LC0: 5,000 mg/l
Species: Scenedesmus quadricauda (Green algae)

Isopropanol : LC50: > 2,000 mg/l
Exposure time: 72 h
Species: Desmodesmus subspicatus (green algae)

Acetone : EC50: 3,020 mg/l
Exposure time: 14 d
Species: Chlorella pyrenoidosa (aglae)

Toxicity to bacteria

Ethanol : LC0: 6,500 mg/l
Species: Pseudomonas putida

EC50: 35,470 mg/l
Exposure time: 5 min
Species: Photobacterium phosphoreum

EC50: 34,634 mg/l
Exposure time: 30 min
Species: Photobacterium phosphoreum

Isopropanol : EC50: 35,390 mg/l

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

	Exposure time: 5 min Species: Photobacterium phosphoreum
Acetone	: EC50: 14,500 mg/l Exposure time: 15 min Species: Photobacterium phosphoreum
Biodegradability Isopropanol	: Biochemical Oxygen Demand (BOD) Biochemical oxygen demand within 5 days Value: 58 %
Acetone	: anaerobic Result: Readily biodegradable Value: 78 % Method: OECD 301 D

Further information on ecology**SECTION 13. DISPOSAL CONSIDERATIONS**

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

SECTION 14. TRANSPORT INFORMATION

DOT	UN/ID No.	: UN 1993
	Proper shipping name	: Flammable liquids, n.o.s. (Ethanol, Isopropanol, Acetone)
	Class	3
	Packing group	II
	Hazard Labels	3

IATA	UN/ID No.	: UN 1993
	Description of the goods	: Flammable liquids, n.o.s. (Ethanol, Isopropanol, Acetone)
	Class	: 3
	Packaging group	: II
	Hazard Labels	: 3
	Packing instruction (cargo aircraft)	: 364
	Packing instruction (passenger aircraft)	: 353
	Packing instruction (passenger aircraft)	: Y341

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

IMDG	UN/ID No.	: UN 1993
	Description of the goods	: Flammable liquids, n.o.s. (ETHANOL, ISOPROPANOL, ACETONE)
	Class	: 3
	Packaging group	: II
	Hazard Labels	: 3
	EmS Number	: F-E, S-E
	Marine pollutant	: no

SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act	: On the inventory, or in compliance with the inventory
Australia. Industrial Chemical (Notification and Assessment) Act	: Not in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	: This product contains the following components that are not on the Canadian DSL nor NDSL.
Japan. Kashin-Hou Law List	: Not in compliance with the inventory
Korea. Toxic Chemical Control Law (TCCL) List	: Not 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	: Not in compliance with the inventory

National regulatory information

SARA 302 Components	: No chemicals in this material are subject to the reporting
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ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

Print Date 06/09/2016

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:
: Isopropanol 67-63-0

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

CERCLA Reportable Quantity : 26315 lbs

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 : Ethanol 64-17-5
: Isopropanol 67-63-0
: Acetone 67-64-1

New Jersey RTK : Ethanol 64-17-5
: Isopropanol 67-63-0
: Acetone 67-64-1

Pennsylvania RTK : Ethanol 64-17-5
: Isopropanol 67-63-0
: Acetone 67-64-1

WHMIS Classification : B2: Flammable liquid
D2B: Toxic Material Causing Other Toxic Effects
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2*	2
Flammability	: 3	3
Physical Hazard	: 0	
Instability	:	0

ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass**000000011637**

Version 1.4

Revision Date 08/25/2015

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* - Chronic health hazard

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.

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

Previous Issue Date: 11/19/2014

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group