SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Acetone
MSDS Number	:	000000015713
Product Use Description	:	Chemical intermediate
Manufacturer or supplier's details	:	Honeywell International Inc. 101 Columbia Road Morristown, NJ 07962-1057
For more information call	:	1-855-410-4578 +1-215-533-3000 (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
Color	:	colourless
Odor	:	sweet pungent

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, Respiratory system, Central nervous system

GHS Label elements, including precautionary statements

Symbol(s) :



Signal word : Danger

Hazard statements : Highly flammable liquid and vapour.
Causes eye irritation.
May cause respiratory 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 protective gloves/ eye protection/ 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.
Keep cool.
Store locked up.

Disposal:

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

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

Formula : C3H6O

Chemical nature : Substance

Chemical Name	CAS-No.	Concentration
Acetone	67-64-1	0.00 - <=100.00 %

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.

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. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Call a physician.

Notes to physician

Treatment : Treat symptomatically. Risk of product entering the lungs on

vomiting after ingestion.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Cool closed containers exposed to fire with water spray. Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)
Specific hazards during firefighting	:	Extremely flammable. Forms or accumulates static electricity, may cause fire or explosion. Vapours may form explosive mixtures with air. 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. In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO2)
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus and protective suit.
Further information	:	Acetone/water solutions that contain more than 2.5% acetone have flash points. When the acetone concentration is greater than 8% (by weight) in a closed container, it would be within the flammable range and cause fire or explosion if a source of ignition were introduced.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Wear personal protective equipment. Unprotected persons must be kept away. Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Do not swallow. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.

Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.
Methods for cleaning up	:	Ventilate the area. No sparking tools should be used. Use explosion-proof equipment. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Handling

Handling	:	Wear personal protective equipment. Use only in well-ventilated areas. Keep container tightly closed. Do not use air pressure to unload containers. Do not smoke. Do not swallow. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.
Advice on protection against fire and explosion	:	Keep away from fire, sparks and heated surfaces. This liquid may form an ignitable vapor-air mixture in closed tanks or containers. This liquid may accumulate static electricity even when transferred into properly grounded containers. Bonding and grounding may be insufficient to remove static electricity. Static electricity accumulation may be significantly increased by the presence of small quantities of water. Always bond the receiving container to the fill pipe before and during loading, following NFPA-77 and/or API RP 2003 requirements. Automatic gauging devices and other floats in vessels or tanks which contain static accumulating liquids should be electrically bonded to the shell. Bonding and grounding alone may be inadequate to eliminate fire and explosion hazards associated with electrostatic charges.

In addition to bonding and grounding, efforts to mitigate the hazards of an electrostatic discharge may include, but are not limited to, ventilation, inerting and/or reduction of transfer velocities.
Always keep the nozzle in contact with the container throughout the loading process. Do not fill any portable containers in or on a vehicle.
Special precautions, such as reduced loading rates and increased monitoring, must be observed during "switch loading" operations (i.e. loading this material in tanks or shipping compartments that previously contained middle distillates or similar products).
Non-equilibrium conditions may increase the risks associated with static electricity such as tank and container filling, tank cleaning, sampling, gauging, loading, filtering, mixing, agitation, etc.
Dissipation of electrostatic charges may be improved with the use of conductivity additives when used with other mitigating efforts, including bonding and grounding.
Use explosion-proof equipment.
Keep product and empty container away from heat and sources of ignition.
Use only non-sparking tools.
No smoking.

Storage

Requirements for storage areas and containers	:	Store in area designed for storage of flammable liquids. Protect from physical damage. 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 away from heat and sources of ignition. Keep away from direct sunlight. Store away from incompatible substances. Container hazardous when empty. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures	:	Ensure that eyewash stations and safety showers are close to the workstation location.
Engineering measures	:	Use only in an area equipped with explosion proof exhaust ventilation. Prevent vapour buildup by providing adequate ventilation during and after use. Electrical equipment should be protected to the appropriate standard.
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 Gloves must be inspected prior to use. Replace when worn.
Skin and body protection	:	Wear as appropriate: Solvent-resistant apron and boots Flame retardant antistatic protective clothing If splashes are likely to occur, wear: Protective suit
Respiratory protection	:	In the case of vapour formation use a respirator with an approved filter. For rescue and maintenance work in storage tanks use self-contained breathing apparatus. Use NIOSH approved respiratory protection.
Hygiene measures	:	When using, do not eat, drink or smoke. Wash hands and face before breaks and immediately after handling the product. Keep working clothes separately. Remove and wash contaminated clothing before re-use. Do not swallow. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis

Acetone	67-64-1	TWA : time weighted average	(500 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
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	(200 ppm)	12 2010	ACGIHLIS_P:US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values
Acetone	67-64-1	STEL : Short term exposure limit	(500 ppm)	12 2010	ACGIHLIS_P:US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values
Acetone	67-64-1	REL : Recommended exposure limit (REL):	590 mg/m3 (250 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Acetone	67-64-1	PEL : Permissible 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
Color	:	colourless
Odor	:	sweet pungent
pH	:	7
Melting point/freezing point	:	-94 °C
Boiling point/boiling range	:	56.1 °C
Flash point	:	1 °F (-17 °C)
Lower explosion limit	:	2 %(V)
Upper explosion limit	:	12.8 %(V)
Vapor pressure	:	241 hPa at 20 °C(68 °F)
Density	:	0.79 g/cm3
Water solubility	:	Note: completely soluble

Ignition temperature	:	465 °C
Molecular weight	:	58.08 g/mol

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Conditions to avoid	:	Heat, flames and sparks. Keep away from direct sunlight.
Incompatible materials to avoid	:	Acids Aldehydes Alkalis Amines Ammonia Oxidizing agents Reducing agents Chlorine compounds May form explosive mixtures with chromic anhydride, chromyl alcohol, hexachloromelamine, hydrogen peroxide, permonosulfuric acid, potassium tertbutoxide, and thioglycol.
Hazardous decomposition products	:	In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO2)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50: 5,800 mg/kg Species: rat
Acute inhalation toxicity	:	LC50: 32000 ppm

Exposure time: 4 h
Species: rat

Acute dermal toxicity : LD50: > 7,426 mg/kg
Species: guinea pig

Skin irritation : Species: rabbit
Result: Mild skin irritation
Exposure time: 24 h

Eye irritation : Species: rabbit
Result: irritating
Method: Draize Test

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

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

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

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

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

Toxicity to daphnia and other aquatic invertebrates : LC50: 12,600 - 12,700 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to algae : EC50: 3,020 mg/l
Exposure time: 14 d
Species: Chlorella pyrenoidosa

Toxicity to bacteria : EC50: 14,500 mg/l
Exposure time: 15 min
Species: Photobacterium phosphoreum

Elimination information (persistence and degradability)

Biodegradability : 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 1090
Proper shipping name : ACETONE

	Class		3
	Packing group		II
	Hazard Labels		3
IATA	UN/ID No.	:	UN 1090
	Description of the goods	:	ACETONE
	Class	:	3
	Packaging group	:	II
	Hazard Labels	:	3
	Packing instruction (cargo aircraft)	:	364
	Packing instruction (passenger aircraft)	:	353
	Packing instruction (passenger aircraft)	:	Y341
IMDG	UN/ID No.	:	UN 1090
	Description of the goods	:	ACETONE
	Class	:	3
	Packaging group	:	II
	Hazard Labels	:	3
	EmS Number	:	F-E, S-D
	Marine pollutant	:	no

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. Toxic Chemical Control Law (TCCL) List	:	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	:	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	:	SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards	:	Fire Hazard Acute Health Hazard Chronic Health Hazard
CERCLA Reportable Quantity	:	5000 lbs
California Prop. 65	:	WARNING! This product contains a chemical known to the State of California to cause cancer. Benzene 71-43-2 Acetaldehyde 75-07-0 Cumene 98-82-8

: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Toluene	108-88-3
Benzene	71-43-2

Massachusetts RTK	:	Acetone	67-64-1
	:	Benzene	71-43-2
	:	Acetaldehyde	75-07-0
New Jersey RTK	:	Acetone	67-64-1
Pennsylvania RTK	:	Acetone	67-64-1
	:	Benzene	71-43-2

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*	1
Flammability	:	3	3
Physical Hazard	:	0	
Instability	:		0

* - 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.
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