

n-Propyl Alcohol (322)**000000011405**

Version 1.7

Revision Date 04/23/2014

Print Date 09/10/2014

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : n-Propyl Alcohol (322)

MSDS Number : 000000011405

Product Use Description : Solvent

Manufacturer or supplier's details : Honeywell International Inc.
101 Columbia Road
Morristown, NJ 07962-1057

For more information call : 1-800-368-0050
+1-231-726-3171
(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

Classification of the substance or mixture

Classification of the substance or mixture : Flammable liquids, Category 3
Serious eye damage, Category 1
Specific target organ toxicity - single exposure, Category 3,
Central nervous system

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GHS Label elements, including precautionary statements

Symbol(s)



Signal word

: Danger

Hazard statements

: Flammable liquid and vapour.
Causes serious eye damage.
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.
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.
Immediately call a POISON CENTER or doctor/ physician.
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

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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 : C3H8O

Chemical Name	CAS-No.	Concentration
Propan-1-ol	71-23-8	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 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 if irritation develops or persists.
- Ingestion : Do not induce vomiting without medical advice. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Call a physician.

Notes to physician

- Treatment : Treat symptomatically.

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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
Cool closed containers exposed to fire with water spray.
- Unsuitable extinguishing media : 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.
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.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Wear personal protective equipment.
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.
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.
Prevent product from entering drains.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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Methods for cleaning up : Ventilate the area.
No sparking tools should be used.
Use explosion-proof equipment.
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a 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 smoke.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion : Keep away from fire, sparks and heated surfaces.
Take precautionary measures against static discharges.
Ensure all equipment is electrically grounded before beginning transfer operations.
Use explosion-proof equipment.
Keep product and empty container away from heat and sources of ignition.
No sparking tools should be used.
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

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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 with local exhaust 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
Gloves must be inspected prior to use.
Replace when worn.
- Skin and body protection : Wear as appropriate:
Solvent-resistant apron
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 : 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.

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Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Propan-1-ol	71-23-8	TWA : time weighted average	(100 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Propan-1-ol	71-23-8	STEL : Short term exposure limit	625 mg/m3 (250 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Propan-1-ol	71-23-8	SKIN_DE S : Skin designati on:	Can be absorbed through the skin.	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Propan-1-ol	71-23-8	REL : Recomm ended exposure limit (REL):	500 mg/m3 (200 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Propan-1-ol	71-23-8	PEL : Permissi ble exposure limit	500 mg/m3 (200 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Propan-1-ol	71-23-8	STEL : Short term exposure limit	625 mg/m3 (250 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Propan-1-ol	71-23-8	TWA : time weighted average	500 mg/m3 (200 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid, clear
Color	: colourless
Odor	: alcohol-like
pH	: Note: not applicable
Melting point/freezing point	: -126.2 °C
Boiling point/boiling range	: 97.2 °C
Flash point	: 73 °F (23 °C) Method: closed cup
Lower explosion limit	: 2 %(V)
Upper explosion limit	: 13.7 %(V)
Vapor pressure	: 20 hPa at 20 °C(68 °F)
Vapor density	: 2.1 Note: (Air = 1.0)
Density	: 0.8053 g/cm ³ at 20 °C
Water solubility	: Note: completely soluble

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Ignition temperature : 412 °C

Molecular weight : 60.09 g/mol

SECTION 10. STABILITY AND REACTIVITY

Chemical stability : Stable under recommended storage 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 : Oxidizing agents
Strong acids and strong bases
Amines
May attack many plastics, rubbers and coatings.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
Propan-1-ol : LD50: 5,400 mg/kg
Species: ratAcute inhalation toxicity : LC50: > 33.8 mg/l , vapour
Exposure time: 4 h
Species: ratAcute dermal toxicity : LD50: 4,049 mg/kg
Species: rabbit

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Skin irritation	: Species: rabbit Result: slight irritation
Eye irritation	: Species: rabbit Result: Moderate eye irritation
Sensitisation	: Maximisation Test Species: guinea pig Result: Did not cause sensitisation on laboratory animals.
Genotoxicity in vitro	: Test Method: Ames test Metabolic activation: with and without metabolic activation Result: negative

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish	: LC50: 4,480 mg/l Exposure time: 96 h Species: Pimephales promelas (fathead minnow)
	: LC50: 4.3 g/l Exposure time: 48 h Species: Leuciscus idus (Golden orfe)
Toxicity to daphnia and other aquatic invertebrates	: EC50: 3,644 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea)

Further information on ecology

Additional ecological information	: Bioaccumulation is unlikely. Inherently biodegradable.
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SECTION 13. DISPOSAL CONSIDERATIONS

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

SECTION 14. TRANSPORT INFORMATION

DOT UN/ID No. : UN 1274
Proper shipping name : n-Propanol
Class : 3
Packing group : III
Hazard Labels : 3

IATA UN/ID No. : UN 1274
Description of the goods : n-Propanol
Class : 3
Packaging group : III
Hazard Labels : 3
Packing instruction (cargo aircraft) : 366
Packing instruction (passenger aircraft) : 355
Packing instruction (passenger aircraft) : Y344

IMDG UN/ID No. : UN 1274
Description of the goods : n-Propanol
Class : 3
Packaging group : III
Hazard Labels : 3
EmS Number : F-E, S-D
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances : On TSCA Inventory

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Control Act

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

NZIOC - 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

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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 : Propan-1-ol 71-23-8

New Jersey RTK : Propan-1-ol 71-23-8

Pennsylvania RTK : Propan-1-ol 71-23-8

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

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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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