Safety Data Sheet SDS

Hexane 0.0001% to 0.6%, in Air

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:	**Hexane 0.0001% to 0.6%, in Air**
Synonyms:	**Hexane in Air; n-Hexane in Air**
Common Name:	**Hexane in Air**
SDS Number:	**NLB 2080**
Revision Date:	**6/1/2018**
Version:	**2**
CAS Number:	**Not Available - Gas Mixture**
EPA Number:	**Not Availble**
Chemical Family:	**Gas Mixture**
Chemical Formula:	**C6H14 in Air**
Product Use:	**Calibration of analyitical instrumentation**
Supplier Details:	**NorLab a division of Norco 898 W. Gowen Rd. Boise, ID 83705**
Contact:	**Quality Dept.**
Phone:	**208-336-1643**
Fax:	**208-433-6160**
Internet:	**www.norlab-gas.com**

For Transportation Emergency Contact CHEMTREC: 800-424-9300

2 HAZARDS IDENTIFICATION

Classification of Substance

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):
Physical, Gases Under Pressure, Compressed Gas

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: WARNING

GHS Hazard Pictograms:

GHS Hazard Statements:

H280 - Contains gas under pressure; may explode if heated
CGA-HG24 - SUPPORTS COMBUSTION.

GHS Precautionary Statements:

P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P281 - Use personal protective equipment as required.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P271 - Use only outdoors or in a well-ventilated area.
P410+412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
CGA-PG05 - Use a back flow preventive device in the piping.
CGA-PG06 - Close valve after each use and when empty.
CGA-PG10 - Use only with equipment rated for cylinder pressure.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry:	**Eyes; Inhalation; Skin;**
Target Organs:	**Repeated exposure to Hexane may damage the nervous system causing peripheral neuropathy often characterized by weakness and numbness in the arms and legs. Symptoms generally disappear within a few months after exposure stops. Any type of paresthesia may be aggravated by hexane exposure.**

Hexane 0.0001% to 0.6%, in Air

Inhalation: Gas mixture contains sufficient oxygen to support life (at least 99.4% of mix is air). Inhalation of high concentrations of hexane vapors may depress the central nervous system causing dizziness, difficulty in walking, respiratory tract irritation, numbness of the extremities and may result in eventual respiratory paralysis at very high concentrations. Symptoms may include headaches, weakness in the fingers and toes, blurred vision, appetite and weight loss, nausea, and throat irritation.

Skin Contact: Contact with rapidly expanding gas near the point of release may cause frostbite with redness, skin color change to gray or white, and blistering.

Eye Contact: None anticipated. Contact with rapidly expanding gas near the point of release may cause frostbite.

Ingestion: Not anticipated. Product is a gas at normal conditions.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients

CAS#	%	Chemical Name
110-54-3	0.0001-0.6%	Hexane
7782-44-7	20.9%	Oxygen
7727-37-9	78.5-79.0999%	Nitrogen

20.9% Oxygen in Nitrogen Indicates an Air Balance.

4 FIRST AID MEASURES

Inhalation: PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO PRODUCT. RESCUE PERSONNEL SHOULD BE EQUIPED WITH SELF-CONTAINED BREATHING APPARATUS. Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, given assisted (artificial) respiration and supplemental oxygen. Further treatment should be symptomatic and supportive.

Skin Contact: None required for gas. For frostbite, immerse skin in lukewarm water. DO NOT USE HOT WATER. Obtain medical attention.

Eye Contact: None Required for gas. If frostbite is suspected, flush eyes with cool water for 15 minutes and obtain immediate medical attention.

Ingestion: Not a direct hazard.

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5 FIRE FIGHTING MEASURES

Flammability:	**Not Flammable**
Flash Point:	**None**
Flash Point Method:	**Not Applicable**
Burning Rate:	**Not Applicable**
Autoignition Temperature:	**None**
Lower Explosive Limit:	**None**
Upper Explosive Limit:	**None**

Fire and Explosion Hazards:
Nonflammable. Cylinders may rupture violently or vent rapidly from pressure when involved in a fire situation.

Extinguishing Media:
None required. Use as appropriate for surrounding materials

Fire Fighting Instructions:
Firefighters should wear respiratory protection (SCBA) and full turnout or Bunker gear. Continue to cool fire-exposed cylinders until well after flames are extinguished.

6 ACCIDENTAL RELEASE MEASURES

Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. Evacuate all personnel from affected area. Ventilate enclosed areas. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with inert gas prior to attempting repairs. If leak is in container or valve, contact the appropriate emergency telephone number listed in section 1 or call your closest Norco/NorLab location.

7 HANDLING AND STORAGE

Handling Precautions:

Use only in well-ventilated areas. Valve protection caps must remain in place unless the cylinder is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure (<3000 PSIG) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous backflow into the cylinder.

For additional recommendations, consult Compressed Gas Association Pamphlets P-1.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid from in an enclosed space such as a car trunk, van or station wagon.

Storage Requirements:

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavy traffic areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125 degrees F (52 degrees C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure limits in Air below TLV & PEL limits. Maintain atmospheric Oxygen content at or above 19.5%

Personal Protective Equipment:

Hexane cas#:(110-54-3) [0.0001-0.6%]
Oxygen cas#:(7782-44-7) [20.9%]
Nitrogen cas#:(7727-37-9) [78.5-79.0999%]

Personal protective equipment

Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact: Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 480 min Material tested:Camatril (KCL 730 / Aldrich Z677442, Size M)

Splash contact: Material: Nitrile rubber Minimum layer thickness: 0.2 mm Break through time: 30 min Material tested:Dermatril P (KCL 743 / Aldrich Z677388, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection: Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Hexane cas#:(110-54-3) [0.0001-0.6%]

Components with workplace control parameters

TWA 50 ppm USA. ACGIH Threshold Limit Values (TLV)
Central Nervous System impairment
Eye irritation
Peripheral neuropathy
Substances for which there is a Biological Exposure Index or Indices
Danger of cutaneous absorption

TWA 50 ppm USA. NIOSH Recommended Exposure Limits
180 mg/m3

TWA 500 ppm USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
1,800 mg/m3
The value in mg/m3 is approximate.

TWA 50 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
180 mg/m3

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9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	**Colorless Gas**		
Physical State:	**Gas**	**Odor:**	**Faint ethereal and sweetish odor.**
Odor Threshold:	**65 to 248 ppm Hexane**	**Molecular Formula:**	**C6H14, in Air**
Particle Size:	**Not Applicable**	**Solubility:**	**Negligible**
Specific Gravity or Density:	**1 (Air = 1)**	**Softening Point:**	**Not Applicable**
Saturated Vapor Concentration:	**Not Determined**	**Percent Volatile:**	**100%**
Flammability:	**Not Flammable**		

10 STABILITY AND REACTIVITY

Chemical Stability:	**Stable**
Conditions to Avoldentification:	**Avoid open flames and high temperatures.**
Materials to Avoldentification:	**None known**
Hazardous Decomposition:	**Combustion will produce carbon dioxide and, possibly toxic chemicals such as carbon monoxide.**
Hazardous Polymerization:	**Will not occur.**

11 TOXICOLOGICAL INFORMATION

Hexane cas#:(110-54-3) [0.0001-0.6%]

Information on toxicological effects

Acute toxicity:
LD50 Oral - rat - 25,000 mg/kg
LC50 Inhalation - rat - 4 h - 48000 ppm
Dermal: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: Eyes - rabbit Result: Mild eye irritation

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:
Carcinogenicity - rat - Inhalation:
Tumorigenic:Carcinogenic by RTECS criteria. Tumorigenic Effects: Testicular tumors.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: 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.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals. Suspected human reproductive toxicant
Suspected of damaging fertility.

Specific target organ toxicity - single exposure: May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure: Ingestion - May cause damage to organs through prolonged or repeated exposure. - Nervous system

Aspiration hazard: May be fatal if swallowed and enters airways.

Additional Information:

RTECS: MN9275000

Prolonged or repeated contact with skin may cause:, defatting, Dermatitis, Contact with eyes can cause:, Redness, Blurred vision, Provokes tears., Effects due to ingestion may include:, Gastrointestinal discomfort, Central nervous system depression, Lung irritation, chest pain, pulmonary edema, giddiness, slowed reaction time, slurred speech, Headache, Dizziness, Drowsiness, Unconsciousness
Testes. - Irregularities - Based on Human Evidence

Oxygen cas#:(7782-44-7) [20.9%]

Information on toxicological effects

Acute toxicity:
Oral LD50 no data available
Inhalation LC50
Dermal LD50
Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: 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.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: Nausea, Dizziness, Unconsciousness, May be harmful.

Synergistic effects: no data available

Additional Information:

RTECS: RS2060000

Nitrogen cas#:(7727-37-9) [78.5-79.0999%]

Information on toxicological effects

Acute toxicity:
Oral LD50 no data available
Inhalation LC50
Dermal LD50
Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: 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.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: May be harmful., Nausea, Headache, Vomiting

Synergistic effects: no data available

Additional Information:

RTECS: QW9700000

12 ECOLOGICAL INFORMATION

Hexane cas#:(110-54-3) [0.0001-0.6%]

Information on ecological effects

Toxicity:
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 2.5 mg/l - 96.0 h.
Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 3,878.00 mg/l - 48 h.
other aquatic invertebrates
Toxicity to algae EC50 - Chlorella vulgaris (Fresh water algae) - 12,840.00 mg/l - 3 h.
EC50 - SKELETOMA - 0.30 mg/l - 8 h

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

Oxygen cas#:(7782-44-7) [20.9%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Nitrogen cas#:(7727-37-9) [78.5-79.0999%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations. Do not attempt to dispose of waste or unused quantities in returnable cylinders. Return in the shipping container, properly labeled, with any valve outlet plugs or caps secure and valve protection cap in place to NorLab for proper disposal. Non-refillable containers should be vented in a well-ventilated area then disposed of in compliance with local regulations, or returned to NorLab.

14 TRANSPORT INFORMATION

UN1956, Compressed gas, n.o.s., 2.2
Proper Shipping Name US:
UN 1956, Compressed Gas N.O.S., (Hexane, Air), 2.2

Proper Shipping Name Canada:
UN1956, Compressed Gas, N.O.S., (Hexane, Air), 2.2

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

RQ(5000LBS), Hexane (110-54-3) [0.0001-0.6%] CERCLA, HAP, MASS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Oxygen (7782-44-7) [20.9%] MASS, PA, TSCA

Nitrogen (7727-37-9) [78.5-79.0999%] MASS, PA, TSCA

WARNING This product can expose you to chemicals including n-Hexane, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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Regulatory CODE Descriptions
-----------------------------------------------------------------
RQ = Reportable Quantity
CERCLA = Superfund clean up substance
HAP = Hazardous Air Pollutants
MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
SARA313 = SARA 313 Title III Toxic Chemicals
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level
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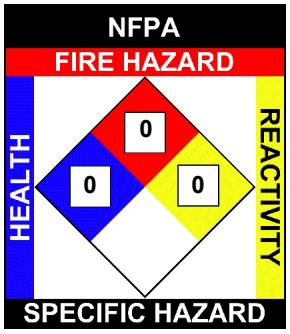
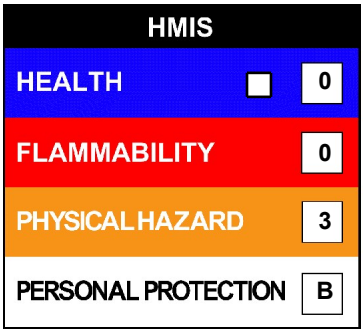
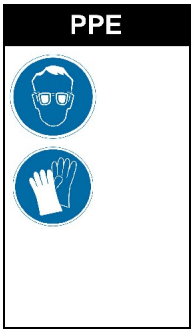
16	OTHER INFORMATION

NFPA: Health = 0, Fire = 0, Reactivity = 0, Specific Hazard = n/a
HMIS III: Health = 0, Fire = 0, Physical Hazard = 3
HMIS PPE: B - Safety Glasses, Gloves







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