

Safety Data Sheet acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

1 Identification

- **Product identifier**
- **Trade name:** *UST-270*
- **Other means of identification**
- **Application of the substance / the mixture** *For Laboratory Use Only*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*NSI Lab Solutions
7212 ACC Blvd.,
Raleigh, NC 27617
USA*
- **Information department:** *Product safety department*
- **Emergency telephone number:** *During normal opening times: +1 (919) 789-3000*

* 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable liquids 2

H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Reproductive toxicity 2

H361 Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (repeated exposure) 2 H373 May cause damage to the nervous system through prolonged or repeated exposure.

Aspiration hazard 1

H304 May be fatal if swallowed and enters airways.



GHS07

Skin irritation 2

H315 Causes skin irritation.

Specific target organ toxicity (single exposure) 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** *The product is classified and labeled according to the Globally Harmonized System (GHS).*
- **Hazard pictograms**



GHS02



GHS07



GHS08

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· **Signal word** *Danger*· **Hazard-determining components of labeling:***n-hexane**octane**dodecane**hexadecane*· **Hazard statements***Highly flammable liquid and vapor.**Causes skin irritation.**Suspected of damaging fertility or the unborn child.**May cause drowsiness or dizziness.**May cause damage to the nervous system through prolonged or repeated exposure.**May be fatal if swallowed and enters airways.*· **Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**Ground / bond container and receiving equipment.**Use explosion-proof [electrical/ventilating/lighting] equipment.**Use non-sparking tools.**Take action to prevent static discharge.**Do not breathe dust/fume/gas/mist/vapors/spray.**Wash thoroughly after handling.**Use only outdoors or in a well-ventilated area.**Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.**If swallowed: Immediately call a poison center/doctor.**Specific treatment (see on this label).**Do NOT induce vomiting.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].**If inhaled: Remove person to fresh air and keep comfortable for breathing.**If exposed or concerned: Get medical advice/attention.**Call a poison center/doctor if you feel unwell.**Get medical advice/attention if you feel unwell.**Take off contaminated clothing and wash it before reuse.**If skin irritation occurs: Get medical advice/attention.**In case of fire: Use CO₂, powder or water spray to extinguish.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Information pertaining to particular dangers for man and environment:**· **Classification system:**· **NFPA ratings (scale 0 - 4)***Health = 1**Fire = 3**Reactivity = 0*· **HMS-ratings (scale 0 - 4)***Health = 1**Fire = 3**Reactivity = 0*

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- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Classification according to (d)(1)(ii) of § 1910.1200**
The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.
- **Hazards not otherwise classified**
There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

* 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
110-54-3	n-hexane	80–100%
· Non-hazardous components		
111-65-9	octane	≤0.1%
112-40-3	dodecane	≤0.1%
124-18-5	decane	≤0.1%
544-76-3	hexadecane	≤0.1%
629-94-7	n-Heneicosane	≤0.1%
14167-59-0	n-Tetratriacontane	≤0.1%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.

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- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **Protective Action Criteria for Chemicals**

· PAC-1:

110-54-3	n-hexane	400 ppm
111-65-9	octane	230 ppm
112-40-3	dodecane	1.7 ppm
124-18-5	decane	6.6 ppm
544-76-3	hexadecane	35 mg/m ³

· PAC-2:

110-54-3	n-hexane	2900 ppm
111-65-9	octane	385 ppm
112-40-3	dodecane	1.3 ppm
124-18-5	decane	73 ppm
544-76-3	hexadecane	380 mg/m ³

· PAC-3:

110-54-3	n-hexane	8600 ppm
111-65-9	octane	5000** ppm
112-40-3	dodecane	7.9 ppm
124-18-5	decane	440 ppm
544-76-3	hexadecane	2,800 mg/m ³

- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

* 8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

110-54-3 n-hexane

PEL	Long-term value: 1800 mg/m ³ , 500 ppm
REL	Long-term value: 180 mg/m ³ , 50 ppm
TLV	Long-term value: 176 mg/m ³ , 50 ppm
	Skin; BEI

- **Ingredients with biological limit values:**

110-54-3 n-hexane

BEI	0.5 mg/L
	Medium: urine
	Time: end of shift
	Parameter: 2,5-Hexanedione without hydrolysis

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

* 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

· Physical state	Liquid
· Color:	Colorless
· Odor:	Characteristic
· Odor threshold:	Not determined.
· Melting point/Melting range:	-95 °C (-139 °F)
· Boiling point/Boiling range:	69 °C (156.2 °F)
· Flammability:	Highly flammable.
· Explosion limits:	
· Lower:	1.2 Vol %
· Upper:	7.4 Vol %
· Flash point:	-26 °C (-14.8 °F)
· Auto igniting:	240 °C (464 °F)
· Decomposition temperature:	Not determined.
· pH-value:	Not determined.
· Viscosity:	
· Kinematic:	Not determined.
· Dynamic:	Not determined.
· Solubility in / Miscibility with	
· Water at 20 °C (68 °F):	0.1 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Vapor pressure at 20 °C (68 °F):	160 hPa (120 mm Hg)
· Vapor pressure at 50 °C (122 °F):	540 hPa (405 mm Hg)
· Density at 20 °C (68 °F):	0.66 g/cm ³ (5.5077 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Particle characteristics	Not applicable.

- **Other information**

· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Solvent content:	
· Organic solvents:	99.6 %
· VOC content:	99.60 %
	996.0 g/l / 8.31 lb/gal

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- | | |
|------------------------------|-----------------|
| · Solids content: | 0.0 % |
| · Change in condition | |
| · Evaporation rate | Not determined. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

* 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
- **Interactive effects** No interactive effects between components are known.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Alternative sources for toxicological information** No non-standard sources for toxicological information where used.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **Other adverse effects**
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 3 (Self-assessment): extremely hazardous for water
 - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 - Danger to drinking water if even extremely small quantities leak into the ground.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---|
| · UN-Number | UN1993 |
| · DOT, IMDG, IATA | |
| · UN proper shipping name | Flammable liquids, n.o.s. (Hexanes) |
| · DOT | FLAMMABLE LIQUID, N.O.S. (HEXANES, OCTANES), MARINE POLLUTANT |
| · IMDG | |
| · IATA | Flammable liquid, n.o.s. (HEXANES) |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · IMDG | |
|   | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · IATA | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |

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· Packing group · DOT, IMDG, IATA	<i>II</i>
· Environmental hazards: · Marine pollutant:	<i>Product contains environmentally hazardous substances: n-hexane Symbol (fish and tree)</i>
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	<i>Not applicable.</i>
· Transport/Additional information: · DOT · Quantity limitations	<i>On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L</i>
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	<i>II Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml</i>
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	<i>Warning: Flammable liquids 33 F-E, S-E B</i>
· UN "Model Regulation":	<i>UN 1993 FLAMMABLE LIQUID, N.O.S. (HEXANES), 3, II, ENVIRONMENTALLY HAZARDOUS</i>

*15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Sara**

· Section 355 (extremely hazardous substances):		
None of the ingredients is listed.		
· Section 313 (Specific toxic chemical listings):		
110-54-3	n-hexane	
· TSCA (Toxic Substances Control Act):		
110-54-3	n-hexane	ACTIVE
111-65-9	octane	ACTIVE
112-40-3	dodecane	ACTIVE
124-18-5	decane	ACTIVE
544-76-3	hexadecane	ACTIVE
629-94-7	n-Heneicosane	ACTIVE
· Hazardous Air Pollutants		
110-54-3	n-hexane	
· Proposition 65		
· Chemicals known to cause cancer:		
None of the ingredients is listed.		

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· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
110-54-3	n-hexane
· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· Carcinogenic categories	
· EPA (Environmental Protection Agency)	
110-54-3	n-hexane II
· TLV (Threshold Limit Value)	
None of the ingredients is listed.	
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** *Danger*
- **Hazard-determining components of labeling:**
 - n-hexane
 - octane
 - dodecane
 - hexadecane
- **Hazard statements**
 - Highly flammable liquid and vapor.
 - Causes skin irritation.
 - Suspected of damaging fertility or the unborn child.
 - May cause drowsiness or dizziness.
 - May cause damage to the nervous system through prolonged or repeated exposure.
 - May be fatal if swallowed and enters airways.
- **Precautionary statements**
 - Obtain special instructions before use.
 - Do not handle until all safety precautions have been read and understood.
 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - Ground / bond container and receiving equipment.
 - Use explosion-proof [electrical/ventilating/lighting] equipment.
 - Use non-sparking tools.
 - Take action to prevent static discharge.
 - Do not breathe dust/fume/gas/mist/vapors/spray.
 - Wash thoroughly after handling.
 - Use only outdoors or in a well-ventilated area.
 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 - If swallowed: Immediately call a poison center/doctor.
 - Specific treatment (see on this label).
 - Do NOT induce vomiting.
 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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If inhaled: Remove person to fresh air and keep comfortable for breathing.
 IF exposed or concerned: Get medical advice/attention.
 Call a poison center/doctor if you feel unwell.
 Get medical advice/attention if you feel unwell.
 Take off contaminated clothing and wash it before reuse.
 If skin irritation occurs: Get medical advice/attention.
 In case of fire: Use CO₂, powder or water spray to extinguish.
 Store in a well-ventilated place. Keep container tightly closed.
 Store in a well-ventilated place. Keep cool.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.
 • **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Environment protection department.
- **Contact:** - Department Technical Manager
- **Date of previous version** 11/01/2024
- **Date of preparation** 06/30/2026
- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flammable liquids 2: Flammable liquids – Category 2

Skin irritation 2: Skin corrosion/irritation – Category 2

Reproductive toxicity 2: Reproductive toxicity – Category 2

Specific target organ toxicity (single exposure) 3: Specific target organ toxicity (single exposure) – Category 3

Specific target organ toxicity (repeated exposure) 2: Specific target organ toxicity (repeated exposure) – Category 2

Aspiration hazard 1: Aspiration hazard – Category 1

- *** Data compared to the previous version altered.**