

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-810
- **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

Aspiration hazard 1

H304 May be fatal if swallowed and enters airways.



GHS07

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

- **Signal word** Danger
- **Hazard-determining components of labeling:**
pentane
octane

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dodecane

hexadecane

- **Hazard statements**

Highly flammable liquid and vapor.

May cause drowsiness or dizziness.

May be fatal if swallowed and enters airways.

- **Precautionary statements**

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.

Avoid breathing dust/fume/gas/mist/vapors/spray

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.

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.

Call a poison center/doctor if you feel unwell.

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)**



- **HMIS-ratings (scale 0 - 4)**



- **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.

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· Dangerous components:		
109-66-0	pentane	80–100%
· Non-hazardous components		
111-65-9	octane	≤0.1%
111-84-2	nonane	≤0.1%
112-40-3	dodecane	≤0.1%
112-95-8	icosane	≤0.1%
124-18-5	decane	≤0.1%
544-76-3	hexadecane	≤0.1%
544-85-4	n-Dotriacontane	≤0.1%
593-45-3	octadecane	≤0.1%
629-59-4	tetradecane	≤0.1%
629-94-7	n-Heneicosane	≤0.1%
629-97-0	docosane	≤0.1%
630-01-3	hexacosane	≤0.1%
630-02-4	octacosane	≤0.1%
630-06-8	n-Hexatriacontane	≤0.1%
638-68-6	n-Triacontane	≤0.1%
646-31-1	tetracosane	≤0.1%
4181-95-7	n-Tetracontane	≤0.1%
7194-85-6	n-Octatriacontane	≤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.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **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** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

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* 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

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:**

109-66-0	pentane	3000* ppm
111-65-9	octane	230 ppm
111-84-2	nonane	600 ppm
112-40-3	dodecane	1.7 ppm
124-18-5	decane	6.6 ppm
544-76-3	hexadecane	35 mg/m ³
593-45-3	octadecane	230 ppm
629-59-4	tetradecane	3.1 ppm
630-02-4	octacosane	230 ppm

· **PAC-2:**

109-66-0	pentane	33000*** ppm
111-65-9	octane	385 ppm
111-84-2	nonane	830 ppm
112-40-3	dodecane	1.3 ppm
124-18-5	decane	73 ppm
544-76-3	hexadecane	380 mg/m ³
593-45-3	octadecane	385 ppm
629-59-4	tetradecane	34 ppm
630-02-4	octacosane	385 ppm

· **PAC-3:**

109-66-0	pentane	200000 ppm
111-65-9	octane	5000** ppm
111-84-2	nonane	5,000 ppm
112-40-3	dodecane	7.9 ppm
124-18-5	decane	440 ppm
544-76-3	hexadecane	2,800 mg/m ³
593-45-3	octadecane	5,000 ppm
629-59-4	tetradecane	200 ppm
630-02-4	octacosane	5,000 ppm

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

7 Handling and storage

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

109-66-0 pentane

PEL	Long-term value: 2950 mg/m ³ , 1000 ppm
REL	Long-term value: 350 mg/m ³ , 120 ppm
	Ceiling limit value: 1800* mg/m ³ , 610* ppm
	*15-min
TLV	Long-term value: 2950 mg/m ³ , 1000 ppm

- **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.
- **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

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- **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.

- **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:**

Nearly odorless

- **Odor threshold:**

Not determined.

- **Melting point/Melting range:**

-129.7 °C (-201.5 °F)

- **Boiling point/Boiling range:**

36.1 °C (97 °F)

- **Flammability:**

Highly flammable.

- **Explosion limits:**

- **Lower:**

1.4 Vol %

- **Upper:**

7.8 Vol %

- **Flash point:**

-35 °C (-31 °F)

- **Auto igniting:**

285 °C (545 °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):**

0.01 g/l

- **Partition coefficient (n-octanol/water):**

Not determined.

- **Vapor pressure at 20 °C (68 °F):**

573 hPa (429.8 mm Hg)

- **Vapor pressure:**

- **Density at 20 °C (68 °F):**

0.62624 g/cm³ (5.22597 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.

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· Solvent content:	
· Organic solvents:	99.7 %
· VOC content:	99.68 %
	996.8 g/l / 8.32 lb/gal
· Solids content:	0.1 %
· 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:** No irritant effect.
- **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:
- **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 2 (Self-assessment): hazardous for water
 - Do not allow product to reach ground water, water course or sewage system.
 - Danger to drinking water if even 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

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA | <p>UN1993</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG · IATA | <p>Flammable liquids, n.o.s. (Pentanes)
 FLAMMABLE LIQUID, N.O.S. (PENTANES), MARINE POLLUTANT
 Flammable liquid, n.o.s. (PENTANES)</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT |  |
| <ul style="list-style-type: none"> · Class · Label | <p>3 Flammable liquids
3</p> |
| <ul style="list-style-type: none"> · IMDG |   |
| <ul style="list-style-type: none"> · Class · Label | <p>3 Flammable liquids
3</p> |
| <ul style="list-style-type: none"> · IATA |  |
| <ul style="list-style-type: none"> · Class · Label | <p>3 Flammable liquids
3</p> |

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· Packing group · DOT, IMDG, IATA	<i>II</i>
· Environmental hazards: · Marine pollutant:	<i>Product contains environmentally hazardous substances: pentane 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. (PENTANES), 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):		
None of the ingredients is listed.		
· TSCA (Toxic Substances Control Act):		
109-66-0	pentane	ACTIVE
111-65-9	octane	ACTIVE
111-84-2	nonane	ACTIVE
112-40-3	dodecane	ACTIVE
112-95-8	icosane	ACTIVE
124-18-5	decane	ACTIVE
544-76-3	hexadecane	ACTIVE
544-85-4	n-Dotriacontane	ACTIVE
593-45-3	octadecane	ACTIVE
629-59-4	tetradecane	ACTIVE
629-94-7	n-Heneicosane	ACTIVE

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629-97-0	docosane	ACTIVE
630-01-3	hexacosane	ACTIVE
630-02-4	octacosane	ACTIVE
630-06-8	n-Hexatriacontane	ACTIVE
638-68-6	n-Triacontane	ACTIVE
646-31-1	tetracosane	ACTIVE
4181-95-7	n-Tetracontane	ACTIVE
7194-85-6	n-Octatriacontane	INACTIVE

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **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**

GHS02

GHS07

GHS08

· **Signal word** Danger· **Hazard-determining components of labeling:**

pentane

octane

dodecane

hexadecane

· **Hazard statements**

Highly flammable liquid and vapor.

May cause drowsiness or dizziness.

May be fatal if swallowed and enters airways.

· **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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*Ground / bond container and receiving equipment.**Use explosion-proof [electrical/ventilating/lighting] equipment.**Use non-sparking tools.**Take action to prevent static discharge.**Avoid breathing dust/fume/gas/mist/vapors/spray**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.**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.**Call a poison center/doctor if you feel unwell.**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** 03/07/2024

- **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

Flammable liquids 2: Flammable liquids – Category 2

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

Aspiration hazard 1: Aspiration hazard – Category 1

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