

Safety Data Sheet

1. Product and company identification

Product name : 1-HEXANOL DRY H
Part No. : D312142-1
Name of manufacturer : HIRANUMA Co., Ltd.
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2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Flammable liquids : Category 3
Pyrophoric liquids : Out of category

Human health hazard

Acute toxicity (oral)
: Out of category
Acute toxicity (dermal)
: Out of category
Acute toxicity (inhalation: dust, mists)
: Out of category

Skin corrosion · Irritation
: Category 2

Serious eye damage · Eye irritation
: Category 2A

Skin sensitization : Out of category

Environmental hazard

Hazardous to the aquatic environment—acute hazard
: Category 3

Hazardous to the aquatic environment—chronic hazard
: Category 3

Pictogram or symbol



Signal word	: Warning
Hazard statement	: Flammable liquid and vapor Causes skin irritation Causes serious eye irritation Harmful to aquatic life Harmful to aquatic life with long lasting effects
Cautions	
Safety measurements	: Keep away from ignition sources such as heat, sparks, or open flame. Keep containers tightly closed. Ground container and receiving equipment in case of transport and stirring. Use explosion-proof apparatus. Use only non-sparking tools. Avoid release to the environment. Wear appropriate protective gloves, glasses, clothing, face shield, or mask. Wash protective equipment thoroughly after use.
First-aid measures	: If in eyes : Rinse cautiously with water for several minutes. Get medical treatment. If on skin : Remove contaminated clothing and the substance. Wash with plenty of water. Wash hands thoroughly after handling.
Storage	: Store in a cool and well-ventilated area.
Disposal	: Dispose of contents and containers appropriately in accordance with related regulations.

3. Composition/Information on ingredients

Substance/Mixture

	: Substance
Chemical name or commercial name	: n-Hexyl alcohol
Synonyms	: Hexanol

Ingredients and composition

: n-Hexyl alcohol min. 98.0%

Chemical formula : CH₃(CH₂)₅OH

CAS No. : 111-27-3

TSCA Inventory : Registered

EINECS No. : 2038523

Dangerous and hazardous ingredients

: n-Hexyl alcohol

4. First aid measures

Inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

Skin contact : Wash the affected areas under running water.

Eye contact : Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.

Ingestion : Give the victim water or salt water and make him vomit. Get medical attention.

Anticipated acute and delayed symptoms

: If inhaled vapor, causes cough, throat ache.

Protection for first aid person

: Savers wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Extinguishing media : Dry chemical powder, carbon dioxide, dry sand, foam

Prohibited extinguishing media

: Water spray

Particular fire fighting

: Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Foam extinguisher is effective for a large scale fire.

Protection for firefighters

: Wear breathing apparatus.

6. Accidental release measures

Cautions for personnel

: Wear proper protective equipment and avoid contact with skin and inhalation of vapor. Keep personnel removed from and upwind of fire. Shut off all sources of ignition. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Cautions for environment

: Attention should be given not to cause damage to the environment by flowing of spillage to rivers. In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.

Removal measure : Absorb spill with inert material (e.g., diatomaceous earth, sand) and flush residual area with copious amounts of water.

Prevention of second accident

: Remove nearby sources of ignition and prepare extinguishing media.

7. Cautions of handling and storage

Handling

Engineering measures

: Wear proper equipment not to contact with skin or inhale the vapor. Fire is strictly prohibited.
Ventilate well at working places.

Cautions for safety handling

: Use with an enclosed system or a local exhaust ventilation.

Cautions

: Do not contact with oxidizing substances.

Storage

Adequate storage condition

: Store in a dark, cool place and tightly closed.

Safety adequate container materials

: Glass, fluorine resin, stainless steel
Do not use vinyl chloride resin, acrylic resin, polystyrene etc.

8. Exposure control/Personal protection

Engineering measures

: Use only with adequate ventilation and in closed systems.

Control parameters

ACGIH(2009) : Not established

Protective equipment

Respiration protective equipment

: If necessary, wear chemical cartridge respirator with an organic vapor cartage

Hands protective equipment

: Impervious protective gloves

Eyes protective equipment

: Safety goggles

Skin and body protective equipment

: Protective clothing, protective boots

9. Physical and chemical properties

Appearance : Liquid

Color : Colorless

Odor : Acrid odor

Boiling point : 157.1 °C

Melting point : -45 °C

Flash point : 65 °C

Auto-ignition point : 292 °C

Explosion characteristics

Explosion limit : upper : 7.7vol% lower : 1.2vol%

Vapor pressure : 1hPa (24 °C)

Vapor density : 3.5

Density : 0.819g/cm³ (20 °C)

Solubility

Solubility in solvents

: Water ; 0.58%(20 °C)

Organic solvents ; Soluble in ethanol, propylene glycol.

log Pow : 2.03

Other data : Viscosity : 5.2cP(20 °C)

10. Stability and reactivity

Stability : Stable under normal conditions.

Reactivity : May react with oxidizing substances.

Incompatible conditions

: Light, heat

Incompatible materials : Oxidizing substances

Hazardous decomposition products

: Carbon monoxide

11. Toxicological information

Acute toxicity : Oral : Out of category
Dermal : Out of category
Inhalation (vapor) : Not possible to classify because of insufficient data.
Inhalation (dust, mist) : Out of category
rat oral LD50=4000mg/kg
rat inhalation LC50>21mg/l/1H (as mist)
rabbit skin LD50=2538mg/kg

Skin corrosiveness

: Causes skin irritation(category 2)
In a human patch test, the substance was applied to the skin for up to four hours. The irritation response was significantly lower than that of the positive control. In a rabbit test compliant with OECD TG 404, the substance was indicated to be moderately irritating. With unknown doses and administration periods, the substance caused moderate irritation and erythema and swelling like a first degree burn. Based on these results, it was classified into category 2.

Irritation to skin, eyes

: Causes serious eye irritation(category 2A)
In a rabbit test, the averaged score values 72 hours after application were 2 for corneal clouding, 1.25 for iritis, 2.5 for conjunctival redness, and 2.5 for chemosis, but these signs completely subsided within 21 days after application. In a rabbit test, the substance was considered to be moderately irritating, and in another rabbit test, a 5% solution caused severe eye erosion while a 1% solution still caused severe irritation. Based on these results, the substance was classified into Category 2A.

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Not possible to classify because of insufficient data.
Skin sensitization : Out of category
Based on the description that no sensitization was observed in a human patch test or an allergic test in guinea pigs.

Mutagenicity : Not possible to classify because of insufficient data.

Carcinogenic effects : Not possible to classify because of insufficient data

Effects on the reproductive system

: Not possible to classify because of insufficient data.

As for its developmental toxicity, oral administration to rats during the organogenetic period caused clinical signs and decreased body weight gains in parental animals, but no embryotoxic or teratogenic effects were observed. However, the study did not provide data on sexual functions or fertility of parental animals, and thus, it was not possible to classify because of insufficient data.

Specific target organ systemic toxicity single exposure

: Not possible to classify because of insufficient data.

It is documented that rats were given the substance of 440mg/kg (for males) and 90mg/kg (for females) by gavage, and the renal cortex was hyperaemic with cloudy swelling). However, this report lacks detailed data, and it was not possible to classify.

Specific target organ systemic toxicity repeated exposure

: Not possible to classify because of insufficient data.

In a test in which rats were fed a diet containing the substance for three weeks, a dose of 330mg/kg bw (converted for 90 days), that was over the guidance range, showed no effect other than minimal changes such as the blood lipid level. In addition, in a test in which rats were fed a diet containing the substance for 13 weeks, doses that were over the guidance range resulted in NOAEL of 250mg/kg bw and LOAEL of 500mg/kg bw. These doses would be equivalent to the guidance values of out of category (oral). However, since no data of other administration routes is available, it was not possible to classify.

Aspiration hazard : Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity : Harmful to aquatic life(category 3)

Harmful to aquatic life with long lasting effects(category 3)

Fish(Pimephales promelas) LC50=97.7mg/L/96H

Rediability and degradability

: Not available

Bioaccumulative potential

: Not available

13. Disposal consideration

Residual disposal : Burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.

Containers : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class : Class 3 (Flammable liquids) P. G. III

UN number : 2282

Marine regulation information

UN No. : 2282

Proper shipping name

: HEXANOLS

Class : 3

Sub risk : -

Packing group : III

Marine pollutant : Not applicable

Aviation regulation information

UN No. : 2282

Proper shipping name

: Hexanols

Class : 3

Sub risk : -

Packing group : III

15. Regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

References

1) Company data on file (SDS provided by manufacturer)

2) NITE: National Institute of Technology and Evaluation

* The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product. The Safety Data Sheet(SDS) is prepared based on JIS Z7253, and it has the same required elements on the Material Safety Data Sheet(MSDS) which is prepared based on JIS Z7250:2010.