ChemicalBook

Chemical Safety Data Sheet MSDS / SDS

6,6'-DIHYDROXY-4,4,4',4',7,7'-HEXAMETHYL-2,2'-SPIROBICHROMAN, 2-PROPANOL ADDUCT

Revision Date:2026-05-31 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name	: 6,6'-DIHYDROXY-4,4,4',4',7,7'-HEXAMETHYL-2,2'-SPIROBICHROMAN, 2-PROPANOL ADDUCT
CBnumber	: CB2685254
CAS	: 40278-59-9
EINECS Number	: 400-270-3
Synonyms	: 6,6'-Dihydroxy-4,4,4',4',7,7'-hexamethyl-2,2'-spirobichroman

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	: For R&D use only. Not for medicinal, household or other use.
Uses advised against	: none

Company Identification

Company	: Chemicalbook
Address	: Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone	: 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)

Signal word Warning

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash skin thouroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P391 Collect spillage. Hazardous to the aquatic environment

P405 Store locked up.

P501 Dispose of contents/container to.....

Hazard statements

H371 May cause damage to organs

H411 Toxic to aquatic life with long lasting effects

SECTION 3: Composition/information on ingredients

Substance

Product name	: 6,6'-DIHYDROXY-4,4,4',4',7,7'-HEXAMETHYL-2,2'-SPIROBICHROMAN, 2-PROPANOL ADDUCT
Synonyms	: 6,6'-Dihydroxy-4,4,4',4',7,7'-hexamethyl-2,2'-spirobichroman
CAS	: 40278-59-9
EC number	: 400-270-3
MF	: C23H28O4
MW	: 368.47

SECTION 4: First aid measures

If inhaled

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician.

In case of skin contact

Take off all contaminated clothing immediately. If on skin, rinse well with water. Call a POISON CENTER or doctor/ physician.

In case of eye contact

Rinse with plenty of water. If easy to do, remove contact lens, if worn. Call a POISON CENTER or doctor/ physician.

If swallowed

Call a POISON CENTER or doctor/ physician. Rinse mouth.

Most important symptoms and effects, both acute and delayed

None known.

SECTION 5: Firefighting measures

Suitable extinguishing media

Dry powder, Foam, Water spray, Carbon dioxide (CO2)

Specific hazards during fire fighting

No information available.

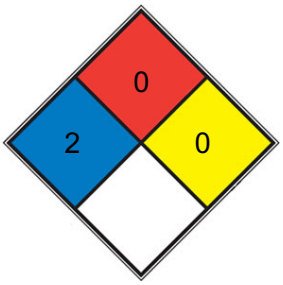
Specific extinguishing methods

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for fire-fighters

Use personal protective equipment.

NFPA 704



■	HEALTH	2	Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. diethyl ether, ammonium phosphate, iodine)
■	FIRE	0	Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)
■	REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,N2)
□	SPEC. HAZ.		

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

Environmental precautions

Should not be released into the environment.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust.

SECTION 7: Handling and storage

Handling

Technical measures

Prevent dispersion of dust.

Local/Total ventilation

Ensure adequate ventilation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Use a local exhaust ventilation.

Advice on safe handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Wash hands and face thoroughly after handling.

Avoidance of contact

Oxidizing agents

Storage

Conditions for safe storage

Keep container tightly closed. Store in a cool and shaded area. Store locked up.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

Components	CAS RN	Value type (Form of ex- posure)	Control parameters / Permissible con- centration	Basis
Ethanol	64-17-5	STEL	1,000 ppm	ACGIH
Isopropyl Alcohol	67-63-0	PC-TWA	350 mg/m3	CN OEL
		PC-STEL	700 mg/m3	CN OEL
		TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH

Components CAS RN Value type Control parameters Basis (Form of ex- / Permissible conposure) centration

Ethanol 64-17-5 STEL 1,000 ppm ACGIH

Isopropyl Alcohol 67-63-0 PC-TWA 350 mg/m3 CN OEL

PC-STEL 700 mg/m3 CN OEL

TWA 200 ppm ACGIH

STEL 400 ppm ACGIH

Engineering measures

Install a closed system or local exhaust.

Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection

Dustproof gas mask

Self-contained breathing apparatus

Eye/face protection

Safety glasses

Safety goggles

Face-shield

Skin and body protection

Impervious protective clothing

Hand protection

Impervious gloves *Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

solid

Color

white

Odor

No data available

Odor Threshold

No data available

pH

No data available

Melting point/freezing point

210 °C

Boiling point/boiling range

559.2±50.0 °C(Predicted)

Flash point

No data available

Evaporation rate

No data available

Flammability

No data available

Upper explosion limit / Upper flammability limit

No data available

Lower explosion limit / Lower flammability limit

No data available

Vapor pressure

No data available

Solubility(ies)

soluble in Alcohol

Water solubility

No data available

Solubility in other solvents

soluble Solvent: Alcohol

Partition coefficient: n-octanol/water

No data available

Autoignition temperature

No data available

Decomposition temperature

No data available

Viscosity

Viscosity, dynamic

No data available

Viscosity, kinematic

No data available

Molecular weight

368.47 g/mol

Density and/or relative density

1.23±0.1 g/cm3(Predicted)

Physical state

powder to crystal

SECTION 10: Stability and reactivity

Reactivity

No data available

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

None under normal processing.

Incompatible materials

Oxidizing agents

Hazardous decomposition products

SECTION 11: Toxicological information

Acute toxicity

Components

Ethanol

Acute oral toxicity

LDLo (Humans): 1,400 mg/kg Assessment: The substance or mixture has no acute oral toxicity

LD50 (Rat)

7 g/kg

Acute inhalation toxicity

LC50 (Rat): 124,700 mg/m3 Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity

LDLo (Rabbit): 20,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Isopropyl Alcohol

Acute oral toxicity

TDLo (Humans): 223 mg/kg Assessment: The component/mixture is minimally toxic after single ingestion.

TDLo (Humans, male)

14,432 mg/kg

LD50 (Rat)

5,045 mg/kg

Acute inhalation toxicity

TCLo (Humans): 35 ppm Exposure time: 4 h Test atmosphere: gas Assessment: The substance or mixture has no acute inhalation toxicity

LC50 (Rat)

16000 ppm Exposure time: 8 h Test atmosphere: gas

Acute dermal toxicity

LD50 (Rabbit): 12,800 mg/kg Assessment: The component/mixture is minimally toxic after single contact with skin.

Skin corrosion/irritation

Classified based on available data. For more details, see section 2.

Serious eye damage/eye irritation

Components

Ethanol

Result

Eye irritation

Isopropyl Alcohol

Result

Eye irritation

Respiratory or skin sensitization

Classified based on available data. For more details, see section 2.

Germ cell mutagenicity

Components

Ethanol

Germ cell mutagenicity - Assessment

Presumed to induce heritable mutations in the germ cells of humans.

Carcinogenicity

Classified based on available data. For more details, see section 2.

Reproductive toxicity

Components

Ethanol

Reproductive toxicity - Assessment

Known human reproductive toxicant

Isopropyl Alcohol

Reproductive toxicity - Assessment

Suspected human reproductive toxicant

STOT-single exposure

Product

Target Organs

Kidney, Central nervous system

Assessment

May cause damage to organs.

Components

6,6'-Dihydroxy-4,4,4',4',7,7'-hexamethyl-2,2'-spirobichroman

Target Organs

Kidney, Central nervous system

Assessment

May cause damage to organs.

Ethanol

Assessment

May cause respiratory irritation. May cause drowsiness or dizziness.

Isopropyl Alcohol

Assessment

May cause respiratory irritation.

Target Organs

Kidney, Central nervous system

Assessment

Causes damage to organs.

STOT-repeated exposure

Components

Ethanol

Target Organs

Liver

Assessment

Causes damage to organs through prolonged or repeated exposure.

Target Organs

Nervous system

Assessment

May cause damage to organs through prolonged or repeated exposure.

Isopropyl Alcohol

Target Organs

Liver, blood vessel, spleen

Assessment

May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Classified based on available data. For more details, see section 2.

Aspiration toxicity

Components

Isopropyl Alcohol

RTECS No.

KQ6300000 (Ethanol) NT8050000 (Isopropyl Alcohol)

SECTION 12: Ecological information

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity

Toxic to aquatic life.

Chronic aquatic toxicity

Toxic to aquatic life with long lasting effects.

Components:

6,6'-Dihydroxy-4,4,4',4',7,7'-hexamethyl-2,2'-spirobichroman:

Ecotoxicology Assessment

Acute aquatic toxicity

Toxic to aquatic life.

Chronic aquatic toxicity

Toxic to aquatic life with long lasting effects.

Ethanol:

Toxicity to fish

LC50 (Oryzias latipes (Japanese medaka)): 1,350 mg/l Exposure time: 48 h LC50 (Pimephales promelas (fathead minnow)): 12,720 mg/l Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 2 mg/l Exposure time: 48 h

Toxicity to algae/aquatic plants

EC50 (Selenastrum capricornutum (green algae)): 8.09 mg/l Exposure time: 48 h

Ecotoxicology Assessment

Acute aquatic toxicity

Toxic to aquatic life.

Chronic aquatic toxicity

This product has no known ecotoxicological effects.

Isopropyl Alcohol:

Toxicity to fish

LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h

Toxicity to algae/aquatic plants

EC50 (Selenastrum capricornutum (green algae)): > 1,000 mg/l Exposure time: 72 h

Persistence and degradability

No data available

Bioaccumulative potential

Components:

Ethanol:

octanol/water

Partition coefficient: noctanol/water

-0.31

Isopropyl Alcohol:

octanol/water

Partition coefficient: noctanol/water

0.05

Mobility in soil

Components:

Ethanol:

tal compartments

Distribution among environmental compartments

Koc: 0.20

Isopropyl Alcohol:

tal compartments

Distribution among environmental compartments

Koc: 1.5

Other adverse effects

No data available

SECTION 13: Disposal considerations

Disposal methods

Waste from residues

Disposal in accordance with local and national regulations. Entrust disposal to a licensed waste disposal company.

Contaminated packaging

Disposal in accordance with local and national regulations. Before disposal of used container, remove contents completely.

SECTION 14: Transport information

International Regulations

IATA-DGR

UN/ID No.

UN 3077

Proper shipping name

Environmentally hazardous substance, solid, n.o.s.

Class

9

Packing group

III

IMDG-Code

UN number

UN 3077

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Class

9

Packing group

III

EmS Code

F-A, S-F

Domestic regulation

GB 6944/12268

UN number

UN 3077

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Class

9

Packing group

III

SECTION 15: Regulatory information

CH BAGREG

Not in compliance with the inventory

TSCA

Substance(s) not listed on TSCA inventory

AICS

Not in compliance with the inventory

DSL

This product contains the following components that are not on the

Canadian DSL nor NDSL.

6,6'-Dihydroxy-4,4,4',4',7,7'-hexamethyl-2,2'-spirobichroman

ENCS

On the inventory, or in compliance with the inventory

ISHL

On the inventory, or in compliance with the inventory

KECI

Not in compliance with the inventory

PICCS

Not in compliance with the inventory

IECSC

On the inventory, or in compliance with the inventory

NZIoC

Not in compliance with the inventory

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration