

SIGMA-ALDRICH®281042 Sigma-Aldrich

Tetradecafluorohexane

99%

Synonym: **Perfluorohexane**

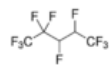
CAS Number [355-42-0](#) | Linear Formula $\text{CF}_3(\text{CF}_2)_4\text{CF}_3$ | Molecular Weight 338.04 | Beilstein/REAXYS Number 1802113 | EC Number [206-585-0](#) | MDL number [MFCD00000437](#)
PubChem Substance ID [24856965](#)

[SDS](#) [Specification Sheet \(PDF\)](#)[Similar Products](#)

SKU-Pack Size	Availability	Pack Size	Price (USD)	Quantity
281042-25ML	Available to ship on 10/23/19 - FROM 25 ML	60.00	0	★ i

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Product Recommendations

$\text{CF}_3(\text{CF}_2)_4\text{CF}_3$	$\text{CF}_3(\text{CF}_2)_5\text{CF}_3$	$\text{CF}_3(\text{CF}_2)_6\text{CF}_3$	$\text{CF}_3(\text{CF}_2)_7\text{CF}_3$	
379247 Tetradecafluorohexane A mixture of perfluorinated hexanes, 95%	374369 Hexadecafluoroheptane technical grade, 85%	359238 Perfluorooctane 98%	406414 Perfluorononane 97%	94884 1,1,1,2,3,4,4,5,5,5-Decafluoropentane technical, ~60% (GC)

Properties

Related Categories	Alkyl , Building Blocks , Chemical Synthesis , F-Tagged , Fluorinated Building Blocks , More...
InChI Key	ZJIJAJXFLBMLCK-UHFFFAOYSA-N
assay	99%
refractive index	<i>n</i>_{20/D} 1.252 (lit.)
bp	58-60 °C (lit.)
mp	-74 °C (lit.)
density	1.669 g/mL at 25 °C (lit.)

Description

General description

Tetradecafluorohexane in the gas phase reacts spontaneously with lithium amalgam, to give a solid and intimate mixture of lithium fluoride and elemental polymeric carbon with a small amount of superstoichiometric lithium^[5].

Application

Tetradecafluorohexane has been used:

- as a fluorocarbon organic solvent in the preparation of temperature-induced phase-separation solution^[1]
- to investigate boiling heat transfer mechanisms^[2]
- as a photosensitizer in fluorous biphasic singlet oxygenation^[3]
- as a novel reaction medium for photooxidation reactions^[4]

Packaging

25 mL in ampule

Safety Information

Symbol



GHS07

Signal word	Warning
Hazard statements	H315-H319-H335
Precautionary statements	P305 + P351 + P338
Personal Protective Equipment	Eyeshields, full-face respirator (US), Gloves, multi-purpose combination respirator cartridge (US)
RIDADR	NONH for all modes of transport
WGK Germany	2
RTECS	MO4310000

Documents

Certificate of Analysis

Enter Lot No.



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$\text{CF}_3(\text{CF}_2)_6\text{CF}_2\text{Br}$ 343862 1-Bromoheptadecafluorooctane 99%	$\text{CF}_3(\text{CF}_2)_{13}\text{CF}_3$ 446807 Perfluoropentadecane ≥98%	 77264 Octadecafluorodecahydronaphthalene <i>(cis+trans)</i> , ≥94% (GC)	 CDS003190 perfluoro(methylcyclopentane) AldrichCPR	 282316 Perfluoro-1,3-dimethylcyclohexane technical grade, 80%
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 P9900 Perfluorodecalin 95%	H_2O W4502 Water Molecular Biology Reagent	 330760 Mineral oil heavy	 330779 Mineral oil light	 M8265 Molecular Cloning: A Laboratory Manual, 3rd ed., Vols 1,2 and 3 J.F. Sambrook and D.W. Russell, ed., Cold Spring Harbor Laboratory Press, 2001. 2100.
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Tube radial distribution phenomenon with a two-phase separation solution of a fluorocarbon and hydrocarbon organic solvent mixture in a capillary tube and metal compounds separation.

Koichi Kitaguchi et. al

Analytical sciences : the international journal of the Japan Society for Analytical Chemistry, 30(6), undefined (2014-6-13)

A fluorocarbon and hydrocarbon organic solvent mixture is known as a temperature-induced phase-separation solution. When a mixed solution of tetradecafluorohexane as a fluorocarbon organic solvent and

hexane as a hydrocarbon organic solvent (e.g., 71...[Read More](#)

Yoshinori Hayashi Journal of Heat Transfer 118, 429-429, (1996)

Yuyue Ren Journal of the American Chemical Society 118, 5312-5312, (1996)

Zhan-Hui Zhang Synthetic Communications 26, 1861-1861, (1996)

Reaction of hexafluorobenzene and tetradecafluorohexane with lithium amalgam. Kavan L and Dousek FP. Journal of Fluorine Chemistry 41(3), 383-391, (1988)

[read abstract](#)

Perfluoroalkyl substances and extractable organic fluorine in surface sediments and cores from Lake Ontario.

Leo W Y Yeung et. al

Environment international, 59, undefined (2013-8-6)

Fourteen perfluoroalkyl substances (PFASs) including short-chain perfluorocarboxylates (PFCAs, C4-C6) and perfluoroalkane sulfonates (PFSAs, C4 and C6) were measured in surface sediment samples from 26 stations collected in 2008 and sediment core sam...[Read More](#)

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A New Dip Coating Method to Obtain Large-Surface Coatings with a Minimum of Solution.

Davide R Ceratti et. al

Advanced materials (Deerfield Beach, Fla.), 27(34), undefined (2015-7-23)

A new, simple bi-phasic dip-coating method is developed. This method is considered as a great improvement of the technique for research, development and production, since expensive, rare, harmful, or time-evolving solutions can now be easily deposite...[Read More](#)

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Repeated measurements of per- and polyfluoroalkyl substances (PFASs) from 1979 to 2007 in males from Northern Norway: assessing time trends, compound correlations and relations to age/birth cohort.

Therese Haugdahl Nøst et. al

Environment international, 67, undefined (2014-3-25)

Longitudinal biomonitoring studies can provide unique information on how human concentrations change over time, but have so far not been conducted for per- and polyfluoroalkyl substances (PFASs) in a background exposed population. The objectives of t...[Read More](#)

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Temporal trends (1999-2010) of perfluoroalkyl acids in commonly consumed food items.

Jana H Johansson et. al

Environmental pollution (Barking, Essex : 1987), 188, undefined (2014-3-4)

The aim of this study was to determine how dietary exposure to PFAAs has changed over the period when major production changes occurred. Archived samples (1999-2010) of eggs, milk and farmed rainbow trout were analyzed by ultra performance liquid chr...[Read More](#)

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Translational, rotational and vibrational relaxation dynamics of a solute molecule in a non-interacting solvent.

Michael P Grubb et. al

Nature chemistry, 8(11), undefined (2016-10-22)

Spectroscopically observing the translational and rotational motion of solute molecules in liquid solutions is typically impeded by their interactions with the solvent, which conceal spectral detail through linewidth broadening. Here we show that uni...[Read More](#)

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Decline in perfluorooctane sulfonate and perfluorooctanoate serum concentrations in an Australian population from 2002 to 2011.

L-M L Toms et. al

Environment international, 71, undefined (2014-7-2)

Some perfluoroalkyl and polyfluoroalkyl substances (PFASs) have become widespread pollutants detected in human and wildlife samples worldwide. The main objective of this study was to assess temporal trends of PFAS concentrations in human blood in Aus...[Read More](#)

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Intracellular growth of nanoscale perfluorocarbon droplets for enhanced ultrasound-induced phase-change conversion.

Amanda L Martin et. al

Ultrasound in medicine & biology, 38(10), undefined (2012-8-28)

Perfluorocarbon (PFC) nanodroplets (NDs) have been proposed as phase-change contrast agents for ultrasound imaging. Since the ultrasound energy required to convert PFC droplets to microbubbles is inversely related to size, the conversion of PFC NDs a...[Read More](#)

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Perfluorinated compounds affect the function of sex hormone receptors.

Lisbeth Stigaard Kjeldsen and Eva Cecilie Bonefeld-Jørgensen

Environmental science and pollution research international, 20(11), undefined (2013-6-15)

Perfluorinated compounds (PFCs) are a large group of chemicals used in different industrial and commercial applications. Studies have suggested the potential of some PFCs to disrupt endocrine homeostasis, increasing the risk of adverse health effects...[Read More](#)

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Sonochemical synthesis of liquid-encapsulated lysozyme microspheres.

Meifang Zhou et. al

Ultrasonics sonochemistry, 17(2), undefined (2009-10-24)

Liquid-encapsulated lysozyme microspheres were successfully synthesized using a sonochemical method. The encapsulation of four different liquids, namely, sunflower oil, tetradecane, dodecane and perfluorohexane on the formation, stability and morphol...[Read More](#)

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Perfluoroalkyl substances in soft tissues and tail feathers of Belgian barn owls (Tyto alba) using statistical methods for left-censored data to handle non-detects.

Veerle L B Jaspers et. al

Environment international, 52, undefined (2012-12-26)

Perfluoroalkyl substances (PFASs) were investigated in tail feathers and soft tissues (liver, muscle, preen gland and adipose tissue) of barn owl (Tyto alba) road-kill victims (n=15) collected in the province of Antwerp (Belgium). A major PFAS produc...[Read More](#)
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