

CAS IP FINDER, powered by STN™

SEARCHING FOR POLYMER INFORMATION USER GUIDE

Searching for Polymer Information

Overview of the guide

This guide is intended to facilitate the retrieval of polymer information in STN databases (or “files”) as found on CAS IP Finder, powered by STN™. It is assumed that you are experienced in STN search and retrieval techniques. For additional information about searching STN databases on CAS IP Finder, refer to [CAS IP Finder Support & Training](#) or CAS IP Finder [help](#) pages

This Guide is structured as follows:

- **Chapter 1** provides an overview of polymer information available on STN and defines polymer terminology.
- **Chapter 2** describes registration, assignment of CAS Registry Numbers®, and content of polymer records in the CAS REGISTRYSM database.
- **Chapter 3** describes search strategies for finding CAS Registry Numbers for polymers in REGISTRY.
- **Chapter 4** describes polymer subject indexing terms in the CASM/CAplusSM database.
- **Chapter 5** provides an overview of polymer searching in non-CAS databases on STN.

Chapter 1: Overview of polymer information on STN

Polymer information is found throughout STN in virtually every database. From the perspective of the polymer scientist, some databases will be of far greater interest than others, but relevant information on polymers and applications may be found almost anywhere in STN. This guide is aimed at assisting the polymer searcher in retrieving polymer information of interest from the most likely source databases.

Most papers dealing specifically with polymers are concerned about the following:

- Starting monomers
- Final polymer structure
- Post-treatment
- Polymer chemistry and properties
- Processing of polymers
- Polymer applications
- Polymer compositions and formulations
- Plastics manufacture and processing

Polymers in REGISTRY and CAplus

REGISTRY is the world's largest and most current source of CAS Registry Numbers (CAS RNs) for polymers that can be used in other databases to locate literature references for specific polymers. In databases that do not contain CAS RNs, REGISTRY provides polymer names for use in your searches.

REGISTRY has the following:

- More than 1 million polymeric substance records
- Daily updating with new polymer entries
- A unique CAS RN for each polymer record

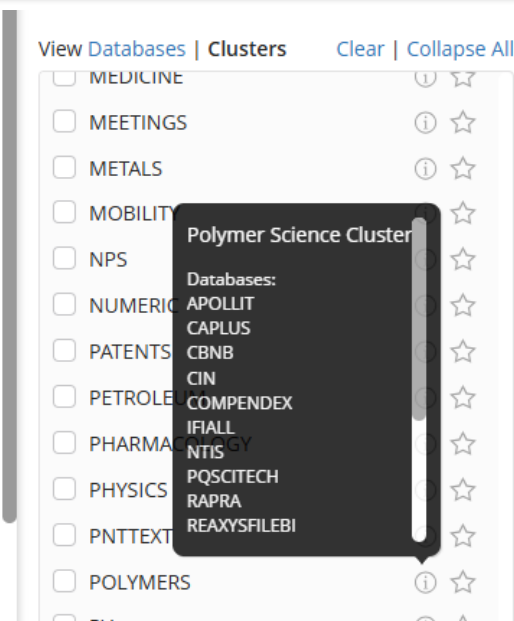
Most of these polymer records are linked to references in CAplus.

Polymer cluster

The polymer database cluster in STN consists of the databases with significant amounts of polymer information. To see which files, request a display of the cluster polymers definition or go to the Cluster tab within the application and click on information for Polymers.

=> D CLU POLYMERS

CLUSTER NAME	CLUSTER DEFINITION
POLYMERS	APOLLIT CAPLUS CBNB CIN COMPENDEX IFIALL NTIS PQSCITECH RAPRA REAXYSFILEBI SCISEARCH USPATFULL USPATOLD USPAT2 WPIDS WPINDEX WPIX WSCA Polymer Science Cluster



The STN Database Summary Sheets for these databases may be viewed within [Help](#).

Polymer definition and terminology

A polymer is a naturally occurring or synthetic macromolecule formed by linking together smaller molecules (monomers). REGISTRY also identifies smaller “mers”, e.g., dimmers, trimers, tetramers. By definition, polymers contain 10 or more monomer units. The polymer terms and their definitions are shown in this table:

Term	Definition	Example
Homopolymer	Polymer formed from a single monomer	Polytetrafluoroethylene MF = (C ₂ F ₄) _x
Copolymer	Polymer formed from two or more monomers	Styrene, polymer with ethene MF = (C ₈ H ₈ ·C ₂ H ₄) _x
Addition (Vinyl) polymer	Polymer formed through chain reaction in which one monomer is added to another	Styrene, polymer with ethene MF = (C ₈ H ₈ ·C ₂ H ₄) _x
Condensation polymer	Polymer formed by loss of a simple molecule such as water	1,4-butanediol-phthalic acid copolymer MF = (C ₈ H ₆ O ₄ ·C ₄ H ₁₀ O ₂) _x
Structural repeating unit (SRU)	Smallest structural unit that can repeat in the polymer backbone	Poly(butylene phthalate) MF = (C ₁₂ H ₁₂ O ₄) _n
Post-treated polymer	Polymer that is modified either partially or completely, after the basic polymer backbone has formed	Sulfonated polystyrene
Tacticity	The stereoregularity of the polymer	
Block polymer	Polymers where the monomers are arranged in blocks	–AAAA–BBBB– (A and B are monomers)
Alternating polymer	Polymers where the monomers alternate regularly	–A–B–A–B–A–B–A–B
Graft polymers	Polymers where the main backbone has attached to it macromolecular side chains of a different set of monomers	$\begin{array}{c} \text{B–B–B–B–} \\ \\ \text{–A–A–A–A–A–A–A–A} \end{array}$
Polymer blend	Homogeneous or heterogeneous physical mixture of two or more polymers	
Composite	Systems including a polymer matrix and a dispersed phase	Glass-fiber reinforced polyester
Cross-linking agents	Multifunctional materials providing cross-linking bridges in a polymer network	

Chapter 2: Polymers in REGISTRY

This chapter provides information on polymer registration, assignment of CAS RNs, and content of records in REGISTRY.

This chapter contains the following sections:

- Polymer registration by CAS
- Monomer-based registration
- Supplementary registration using structural repeating units
- Exceptions to monomer-based registration
- Polymers with specific tacticity
- Block, graft, and alternating copolymers
- Incompletely identified polymers

Polymer registration by CAS

Polymer class identifiers

Substances that are registered as polymers have the entry POLYMER and PMS in the Class Identifier (CI) field. These are the following:

- Polymeric substances with 11 or more repeating units
- Oligomers with an unknown or fractional number of monomer units or with 10 or less monomer units, if the exact structure is unknown (e.g., 1-Hexene, trimer CAS RN 72607-62-6)

L1	1 of 1
Chemical Name:	1-Hexene, trimer (CA INDEX NAME)
Class Identifier:	PMS
Molecular Formula:	(C ₆ H ₁₂) ₃
copyright 2025 ACS on STN REGISTRY	

CAS RN assignment

Each record is identified by a unique CAS Registry Number based on the monomer(s) actually used to form the polymer. Additional CAS RNs may be assigned to structural repeating units (SRUs).

Separate CAS RNs are not assigned for the following:



- Head-to-tail or head-to-head polymers
- Linear or branched polymers
- Polymer blends
- Most post-treated polymers

The above information may often be found in the CAlus index entry with the polymer CAS RN.

Post-treated polymers that do get their own CAS RN are the following:

- Salts of polymers such as metal salts, amine salts, or hydrochlorides

L1	1 of 1
1092479-21-4	
CAS Registry Number:	1092479-21-4 REGISTRY
Chemical Name:	2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with 2-methyloxirane, triblock, hydrochloride (CA INDEX NAME)
copyright 2025 ACS on STN REGISTRY	

- Polymer esters and polymer ethers
CN 1,4-Dioxane-2,5-dione, 3,6-dimethyl-, (3S,6S)-, polymer with oxirane, ester with 2,2- bis(hydroxymethyl)-1,3-propanediol (4:1), tetramethyl ether, diblock (CA INDEX NAME)
- Addition compounds, e.g. quaternized polymers
CN 2,5-Furandione, polymer with ethenylbenzene, 2-[(2-hydroxyethyl)-amino]ethyl ester, alternating, ammonium salt, compd. with 2,2'-iminobis[ethanol] (CA INDEX NAME)

Information excluded from REGISTRY records

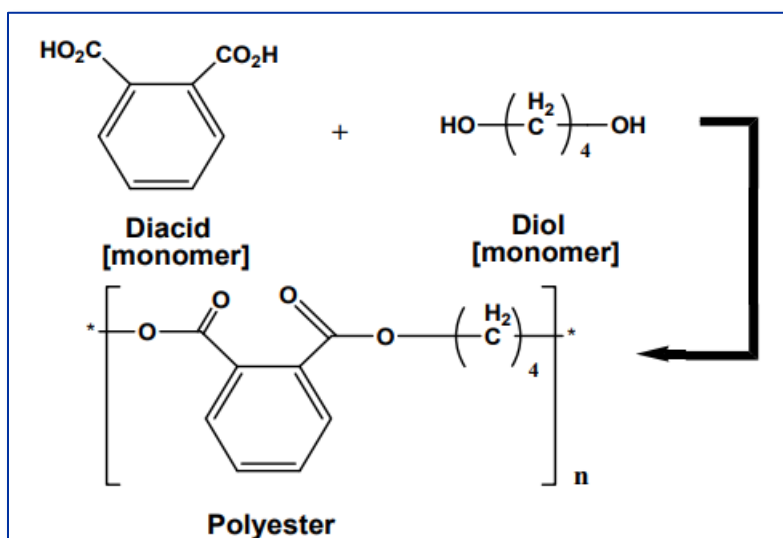
REGISTRY records for polymers do not include the following:

- Other substances that participate in the polymerization process, e.g., chain initiators and polymerization catalysts
- Ratios between the monomers
- Number of repeating units in the polymer backbone
- Molecular weight of the polymer
- Presence or absence of end groups for monomer-based polymer records

Monomer-based registration

Monomer definition

The **primary** way a polymer is structured and registered in REGISTRY is based on the **monomers making up the polymer**. A monomer is any multifunctional substance that is incorporated into the polymer through polymerization or cross-linking.



Definition of fields in the example record

The principal parts of the monomer-based record are the following:

- CAS RN for the polymer ①
- Locator (LC) field: listing other STN databases where this polymer is indexed by its CAS RN ②
- Each component (CM) monomer: displayed with its CAS RN, molecular formula, and structure ③
- Systematic CA Index name [(9CI) refers to the version of CA Index nomenclature used for the name (1972 rules).] ④
- Molecular Formula: two component formulas separated by a period and enclosed in parentheses with an "x" subscript to indicate the polymer ⑤
- Polymer class terms (PCTs) ⑥
- POLYLINK command: enabling the linking of related polymers ⑦
- References in CA and CAplus ⑧
- InChI (a text string structure-based unique chemical identifier) and InChI key (a condensed 27-character representation of the InChI) ⑨



Example of a monomerbased polymer record

The CAS Registry Number is the database key for the REGISTRY record. CAS RNs are assigned to the polymer and to the monomers.

L11 of 1

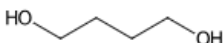
26352-63-6

CAS Registry Number:26352-63-6REGISTRY ①

Entered STN: 16 Nov 1984

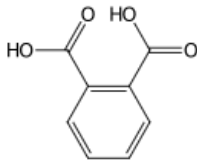
CAS Registry Number Locator:STN Files: CA, CAPLUS, CASFORMULTNS, CASREACT, CHEMLIST, IFIALL, TOXCENTER, [View all](#) ②

110-63-4
C4 H10 O2



③

88-99-3
C8 H6 O4



***PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

Chemical Name:	1,2-Benzenedicarboxylic acid, polymer with 1,4-butanediol (CA INDEX NAME)
	OTHER CA INDEX NAMES:
	1,4-Butanediol, polyester with phthalic acid (8CI)
	1,4-Butanediol, polymer with 1,2-benzenedicarboxylic acid (9CI)
	Phthalic acid, polyester with 1,4-butanediol (8CI) ④
	OTHER NAMES:
	1,4-Butanediol-phthalic acid copolymer
	Poly(butylene phthalate)
Class Identifier:	PMS
Molecular Formula:	(C8 H6 O4 . C4 H10 O2)x ⑤
Polymer Class Term:	Polyester, Polyester formed ⑥
RELATED POLYMERS AVAILABLE WITH POLYLINK ⑦	
155 REFERENCES IN FILE CA (1907 TO DATE)	
34 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA ⑧	
158 REFERENCES IN FILE CAPLUS (1907 TO DATE)	
INCH InChI=1S/C8H6O4.C4H10O2/c9-7(10)5-3-1-2-4-6(5)8(11)12;5-3-1-2-4-6/h1-4H,(H,9,10)(H,11,12);5-6H,1-4H2 ⑨	
INKY NIGVBLFCGSUSOT-UHFFFAOYSA-N	
copyright 2025 ACS on STN REGISTRY	

Additional monomer-based records

The polyester formed by the acid and alcohol monomers shown can also be prepared from other sets of monomers. Each of these different sets of monomers receives a different CAS RN even though they all result in the same final polymer. Two examples (partial records) are shown below for the following:

- Diacid halide and diol
- Acid anhydride and diol

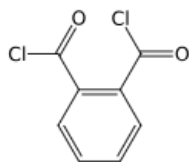
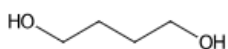
Other sets of monomers could have been used to prepare this polyester. Using the POLYLINK command identifies all such polymers that have been entered into REGISTRY.



86889-85-2

CAS Registry Number: 86889-85-2 REGISTRY

Entered STN: 16 Nov 1984



Chemical Name: 1,2-Benzenedicarbonyl dichloride, polymer with 1,4-butanediol (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

1,4-Butanediol, polymer with 1,2-benzenedicarbonyl dichloride (9CI)

OTHER NAMES:

1,4-Butanediol-phthaloyl chloride copolymer

Molecular Formula: (C8 H4 Cl2 O2 . C4 H10 O2)x

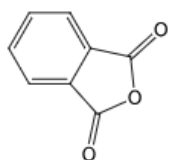
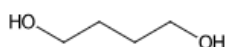
RELATED POLYMERS AVAILABLE WITH POLYLINK

32472-86-9

CAS Registry Number:

32472-86-9 | REGISTRY

Entered STN: 16 Nov 1984



Chemical Name:

1,3-Isobenzofurandione, polymer with 1,4-butanediol (CA INDEX NAME)

OTHER CA INDEX NAMES:

1,4-Butanediol, polymer with 1,3-isobenzofurandione (9CI)

Phthalic anhydride, polyester with 1,4-butanediol (8CI)

OTHER NAMES:

1,4-Butanediol-phthalic anhydride copolymer

Phthalic anhydride- 1,4-butanediol copolymer

Molecular Formula:

(C8 H4 O3 . C4 H10 O2)x

RELATED POLYMERS AVAILABLE WITH POLYLINK

Supplementary registration using structural repeating units

Rules

In addition to the monomer-based representations, an additional record with its own CAS RN is created in REGISTRY for the **structural repeating unit** (SRU) of the polymer in the following cases:

- **Condensation** polymers from **2 symmetrical** monomers.
 $\text{HO}_2\text{C}-(\text{CH}_2)_4-\text{CO}_2\text{H} + \text{HO}-(\text{CH}_2)_3-\text{OH}$
- Ring-opening polymerization if only one final structure is possible.
 Lactone $\rightarrow$ Polyester
- The author stresses the SRU and provides supporting evidence for its structure.



SRU entries are rarely made for addition polymers.

Assignment of CAS RNs

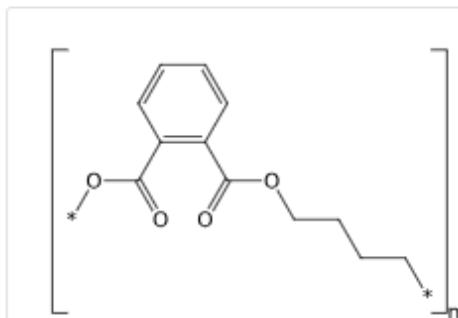
The SRU entry gets a different CAS RN than the monomer-based entries.

26499-89-8

CAS Registry Number: 26499-89-8 REGISTRY

Entered STN: 16 Nov 1984

CAS Registry Number Locator: STN Files: CA, CAPLUS, CASREACT, IFIALL, TOXCENTER, USPAT2, USPATFULL, [View all](#)



Chemical Name: Poly(oxycarbonyl-1,2-phenylenecarbonyloxy-1,4-butanediyl) (CA INDEX NAME)

OTHER CA INDEX NAMES:

Poly(oxyphthaloyloxymethylene) (8CI)

OTHER NAMES:

1,4-Butanediol-phthalic acid copolymer, SRU

1,4-Butanediol-phthalic anhydride copolymer, sru

1,4-Butanediol-phthaloyl chloride copolymer, sru

Phthalic anhydride-1,4-butanediol copolymer, SRU

Phthalic anhydride-THF copolymer, SRU

Poly(butylene phthalate), SRU

Class Identifier: PMS

Molecular Formula: (C12 H12 O4)n

Polymer Class Term: Polyester

RELATED POLYMERS AVAILABLE WITH POLYLINK

158 REFERENCES IN FILE CA (1907 TO DATE)

47 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

158 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Appearance of SRU records

The SRU record has some differences from monomer-based records:

- Different CAS RN
- Repeating unit name
- Single component formula with “n” subscript instead of “x”
- Polymer backbone structure

End groups

Most SRUs do not have end groups specified as part of their structure. The remaining SRUs do have end groups. Separate CAS RNs are assigned for each case.

SRU without end groups

L2

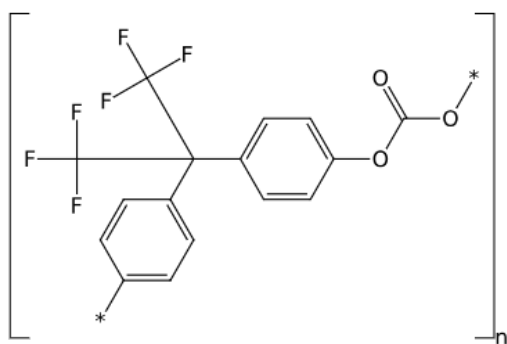
32291-26-2

CAS Registry Number: 32291-26-2 REGISTRY

Entered STN: 16 Nov 1984

CAS Registry Number Locator: STN Files: CA, CAPLUS, CASFORMULTNS, CASREACT, TOXCENTER, USPAT2, USPATFULL

Deleted CAS Registry Number: 156147-43-2



Chemical Name: Poly[oxy carbonyloxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (CA INDEX NAME)

OTHER CA INDEX NAMES:
Poly[oxy carbonyloxy-p-phenylene[trifluoro-1-(trifluoromethyl)ethylidene]-p-phenylene] (8CI)

OTHER NAMES:
1,1,1,3,3,3-Hexafluoro-2,2-bis(4-hydroxyphenyl)propane-phosgene copolymer, sru
2,2-Bis(4-hydroxyphenyl)-1,1,1,3,3,3-hexafluoropropane-phosgene copolymer, SRU
2,2-Bis(4-hydroxyphenyl)hexafluoropropane-phosgene copolymer, sru
4,4'-(Hexafluoroisopropylidene)bisphenol bis(chloroformate) homopolymer, sru
Bisphenol AF polycarbonate sru
Bisphenol AF-phosgene copolymer, SRU
Bisphenol AF-trichloromethyl chloroformate copolymer, sru
Carbonic acid-hexafluorobisphenol A copolymer, sru

Class Identifier: PMS

Molecular Formula: (C₁₆ H₈ F₆ O₃)_n

Polymer Class Term: Polycarbonate

Source of Registration: CA

RELATED POLYMERS AVAILABLE WITH POLYLINK

100 REFERENCES IN FILE CA (1907 TO DATE)

4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

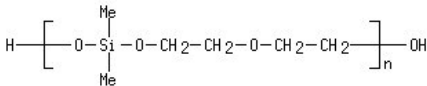
100 REFERENCES IN FILE CAPLUS (1907 TO DATE)

SRU with end groups

L31 of 1

31242-71-4

CAS Registry Number: 31242-71-4 REGISTRY
Entered STN: 16 Nov 1984



Chemical Name:

Poly[oxy(dimethylsilylene)oxy-1,2-ethanediyl],
α-hydro-ω-hydroxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
Poly[oxy(dimethylsilylene)oxyethyleneoxyethylene],
α-hydro-ω-hydroxy- (8CI)

Class Identifier:

PMS

Molecular Formula:

(C6 H14 O3 Si)n H2 O

Polymer Class Term:

Polyether

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Exceptions to monomer-based registration

List of exceptions

There are four exceptions to the monomer-based rule for registration:

- Five common polymers normally indexed only at their SRU
- Polymer structure too large¹ or unknown
- Polymer identified only by a trade name
- Polymer indexed only as a concept,² i.e., a controlled vocabulary index heading in the CA/CAPLUS database

¹ These may be indexed in terms of the monomers, but there is no monomer structure.

² Beginning in 1994, there are far fewer such cases.



Very common polymers

Certain very common polymers are indexed only at the SRU entry in CAPLUS unless they are prepared from non-standard monomers:

Nylon 6	RN 25038-54-4
Nylon 66	RN 32131-17-2
PEG (polyethylene glycol)	RN 25322-68-3
PPG (polypropylene glycol)	RN 25322-69-4
PET (poly(ethylene terephthalate))	RN 25038-59-9

Polymer too large or unknown

If the structure of the polymer is too large or is not known, no structure is available in the REGISTRY record. One example is a copolymer with very many different monomer components.

L1

1 of 1

153699-89-9

CAS Registry Number:

153699-89-9

REGISTRY

Entered STN:

18 Mar 1994

CAS Registry Number Locator:

STN Files: CA, CAPLUS

Deleted CAS Registry Number:

153301-21-4

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

Chemical Name:

1,3-Benzenedicarboxylic acid, polymer with 1,4-benzenedicarboxylic acid, Burnock D 750, 1,4-butanediol, 2-butyl-2-ethyl-1,3-propanediol, butyl 2-methyl-2-propenoate, 1,4-dihydroxy-2-butanedisulfonic acid monosodium salt, 1,6-diisocyanatohexane, 1,3-diisocyanatomethylbenzene, 2-(dimethylamino)ethyl 2-methyl-2-propenoate, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, ethenylbenzene, 2-ethylhexyl 2-methyl-2-propenoate, hexanedioic acid, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanedisulfonic acid monosodium salt and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

1,2-Ethanediol, polymer contg. (9CI)
1,3-Propanediol, 2,2-dimethyl-, polymer contg. (9CI)
1,3-Propanediol, 2-butyl-2-ethyl-, polymer contg. (9CI)
1,4-Benzenedicarboxylic acid, polymer contg. (9CI)
1,4-Butanediol, polymer contg. (9CI)
1-Propanesulfonic acid, 2-methyl-2-[(1-oxo-2-propenyl)amino]-, monosodium salt, polymer contg. (9CI)
2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt, polymer contg. (9CI)
2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer contg. (9CI)
2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester, polymer contg. (9CI)
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer contg. (9CI)
2-Propenoic acid, 2-methyl-, butyl ester, polymer contg. (9CI)
2-Propenoic acid, 2-methyl-, methyl ester, polymer contg. (9CI)
2-Propenoic acid, 2-methyl-, polymer contg. (9CI)
Benzene, 1,3-diisocyanatomethyl-, polymer contg. (9CI)
Benzene, ethenyl-, polymer contg. (9CI)
Burnock D 750, polymer contg. (9CI)
Hexane, 1,6-diisocyanato-, polymer contg. (9CI)
Hexanedioic acid, polymer contg. (9CI)

Class Identifier: PMS, MAN
Molecular Formula: Unspecified
Polymer Class Term: Manual registration
Source of Registration: CA

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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Identified only by a trade name

If the polymer is only identified by a trade name with no known structure or a partially known structure, no monomer-based registration can be created. The polymer gets a “manual registration.” (Note the MF and PCT.)

L21 of 1

1048665-85-5

CAS Registry Number:1048665-85-5REGISTRY

Entered STN: 11 Sep 2008

CAS Registry Number Locator:STN Files: CA, CAPLUS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

Chemical Name:Biocycle 2000-0 (CA INDEX NAME)

Class Identifier:PMS, MAN

Editor Note:A hydroxybutyric acid polymer (PHB Industries)

Molecular Formula:Unspecified

Polymer Class Term:Manual registration

Source of Registration:CA

3 REFERENCES IN FILE CA (1907 TO DATE)

3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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Indexed as a concept

In some cases, the polymer may be indexed in CA/Capplus only as a subject indexing term and not as a substance with a CAS RN.

For example, certain rubbers (prior to 1987) and fibers (prior to 1992) were indexed **only** at a subject heading in Caplus. No CAS RNs were used. Since that time, CAS RNs for many, but not all, of the rubber and fiber index entries back to 1967 have been added.

A comprehensive search strategy may not be easily devised by the novice polymer searcher, so consulting an experienced polymer searcher is advisable. The CA Lexicon in Caplus alerts

searchers to existing and previous indexing policies.

```
=> e polyester fibers+HNTE,NOTE/CT
```

```
E1      178439  --> Polyester fibers/CT
```

```
HNTE Valid heading during volume 76 (1972) to present.
```

```
NOTE Fibers from all polyesters and polythioesters are  
indexed here.
```

```
***** END *****
```

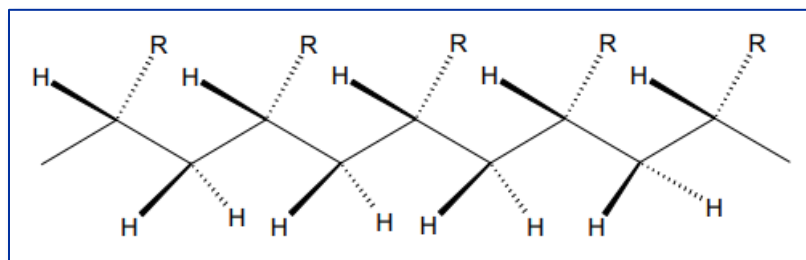
Polymers with specific tacticity

Tacticity definitions

Tacticity is the stereoregularity of the substituent groups on the polymer backbone. Each form gets a separate CAS RN.

Isotactic example

Isotactic (all substituents on same side of backbone)



55929-71-0

CAS Registry Number: 55929-71-0 REGISTRY

Entered STN: 16 Nov 1984

CAS Registry Number Locator: STN Files: CA, CAPLUS, CASREACT, CHEMLIST, IFIALL, TOXCENTER, USPAT2, [View all](#)

592-41-6

C6 H12



115-07-1

C3 H6



****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

Chemical Name: 1-Hexene, polymer with 1-propene, isotactic (CA INDEX NAME)

OTHER CA INDEX NAMES:

1-Propene, polymer with 1-hexene, isotactic (9CI)

OTHER NAMES:

1-Hexene-propene isotactic copolymer

1-Hexene-propylene isotactic copolymer

Isotactic 1-hexene-propene copolymer

Isotactic 1-hexene-propylene copolymer

Isotactic propylene-1-hexene polymer

Propylene-1-hexene isotactic copolymer

Class Identifier: PMS

Molecular Formula: (C6 H12 . C3 H6)x

Polymer Class Term: Polyolefin

Source of Registration: CA

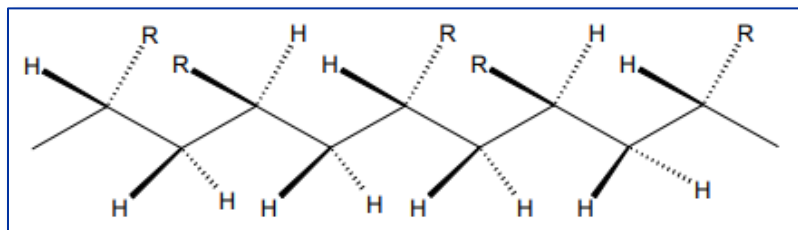
62 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

62 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Syndiotactic example

Syndiotactic (alternating arrangement of substituents):



133006-21-0

CAS Registry Number:

133006-21-0 REGISTRY

Entered STN: 05 Apr 1991

CAS Registry Number Locator:

STN Files: CA, CAPLUS, CASREACT, USPATFULL

592-41-6

C₆ H₁₂



115-07-1

C₃ H₆



Chemical Name:

1-Hexene, polymer with 1-propene, syndiotactic (CA INDEX NAME)

OTHER CA INDEX NAMES:

1-Propene, polymer with 1-hexene, syndiotactic (9CI)

OTHER NAMES:

1-Hexene-propylene copolymer, syndiotactic

1-Hexene-propylene syndiotactic copolymer

Syndiotactic 1-hexene-propylene copolymer

Class Identifier:

PMS

Molecular Formula:

(C₆ H₁₂ . C₃ H₆)_x

Polymer Class Term:

Polyolefin

Source of Registration:

CA

15 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

15 REFERENCES IN FILE CAPLUS (1907 TO DATE)

INCH InChI=1S/C6H12.C3H6/c1-3-5-6-4-2;1-3-2/h3H,1,4-6H2,2H3;3H,1H2,2H3

INKY GJTGYNPBJNRYKI-UHFFFAOYSA-N



Atatic example

Atactic (irregular or unknown arrangement of substituents; if no tacticity is specified, atactic is assumed):

25895-44-7

CAS Registry Number: 25895-44-7

REGISTRY

Entered STN: 16 Nov 1984

CAS Registry Number Locator:

STN Files: CA, CAPLUS, CASFORMULTNS, CASREACT, CHEMLIST, IFIALL, TOXCENTER, [View all](#)

Deleted CAS Registry Number:

1404225-70-2

1821166-89-5

592-41-6

C6 H12



115-07-1

C3 H6



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

Chemical Name:

1-Hexene, polymer with 1-propene (CA INDEX NAME)
OTHER CA INDEX NAMES:
1-Hexene, polymer with propene (8CI)
1-Propene, polymer with 1-hexene (9CI)
Propene, polymer with 1-hexene (8CI)
OTHER NAMES:
1,2-Hexylene-1,2-propylene copolymer
1-Hexene-1-propene copolymer
1-Hexene-propene copolymer
1-Hexene-propene polymer
1-Hexene-propylene copolymer
1-Hexene-propylene polymer
[View all](#)

Class Identifier:

PMS, COM

Molecular Formula:

(C6 H12 . C3 H6)x

Polymer Class Term:

Polyolefin

Source of Registration:

CA

710 REFERENCES IN FILE CA (1907 TO DATE)

61 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

712 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Other stereoregular terms

There are other stereoregular terms associated with polymers, e.g., threodiisotactic, meso-diisotactic, erythro-diisotactic, racemo-diisotactic, threodisyndiotactic, meso-disyndiotactic, erythro-disyndiotactic, and racemodisyndiotactic. Polymers with these tacticities also receive separate CAS RNs.

Block, Graft, and Alternating Copolymers

Assignment of CAS RNs

Block polymers in records from 1982 to the present receive their own CAS RNs and are identified with a more precise, searchable chemical name segment: diblock, triblock, tetrablock, or pentablock.

850562-36-6	
CAS Registry Number:	850562-36-6 REGISTRY
Entered STN:	17 May 2005
CAS Registry Number Locator:	STN Files: CA, CAPLUS, USPATFULL
592-41-6 C6 H12 	
115-07-1 C3 H6 	
Chemical Name:	1-Hexene, polymer with 1-propene, triblock (CA INDEX NAME)
	OTHER NAMES: 1-Hexene-propylene triblock copolymer
Class Identifier:	PMS
Molecular Formula:	(C6 H12 . C3 H6)x
Polymer Class Term:	Polyolefin
Source of Registration:	CA
2 REFERENCES IN FILE CA (1907 TO DATE)	
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)	
INCH InChI=1S/C6H12.C3H6/c1-3-5-6-4-2;1-3-2/h3H,1,4-6H2,2H3;3H,1H2,2H3	
INKY GJTGYNPBJNRYKI-UHFFFAOYSA-N	
copyright 2026 ACS on STN REGISTRY	



Indexing at plain polymer

Prior to 1987, block, graft, and alternating copolymers were indexed at the CAS RN for the “plain” polymer with terms such as “block” or “graft” in the modifying phrase following the CAS RN in CAplus. Records from 1967 to 1986 have been enhanced with the addition of block CAS RNs.

Block polymer search strategy

A search of the three block polymer CAS RNs in CAplus for the 1-hexene 1- propene copolymer yields 26 retrievals.

```
=> s (181961-64-8 or 755025-68-4 or 850562-36-6)/RN

      21 181961-64-8
      0 181961-64-8D
      21 181961-64-8/RN
          (181961-64-8 (NOTL) 181961-64-8D )
      5 755025-68-4
      0 755025-68-4D
      5 755025-68-4/RN
          (755025-68-4 (NOTL) 755025-68-4D )
      2 850562-36-6
      0 850562-36-6D
      2 850562-36-6/RN
          (850562-36-6 (NOTL) 850562-36-6D )
L19      26 (181961-64-8 OR 755025-68-4 OR 850562-36-6)/RN
```

A search of the “plain” copolymer CAS RN with the block terms retrieves 89 hits.

```
=> s 25895-44-7/rn and (block or triblock or diblock)

      698 25895-44-7
      60 25895-44-7D
      642 25895-44-7/RN
          (25895-44-7 (NOTL) 25895-44-7D )
1166026 BLOCK
      85023 TRIBLOCK
      46045 DIBLOCK
L21      89 25895-44-7/RN AND (BLOCK OR TRIBLOCK OR DIBLOCK)
```

The two searches combined give 107 hits.

=> s L19 or L21
L24 107 L19 OR L21

Incompletely Identified Polymers

Polymers with incomplete information

For some polymers, some of the monomers are specific structures while others may be incomplete or have unknown structures. Two types of cases are illustrated:

- Incompletely described substances
- EPDM (ethylene-propylene-diene monomer) polymers

IDS polymers

There are many incompletely described substances (IDS) in REGISTRY. Some are also polymers.

L271 of 1

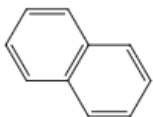
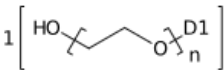
69778-08-1

CAS Registry Number:69778-08-1REGISTRY

Entered STN: 16 Nov 1984

CAS Registry Number Locator:STN Files: CA, CAPLUS, CASFORMULTNS, TOXCENTER, USPAT2, USPATFULL

Deleted CAS Registry Number:83856-15-9, 220880-78-4, 1427577-23-8



Chemical Name: Poly(oxy-1,2-ethanediyl), α -naphthalenyl- ω -hydroxy- (CA INDEX NAME)

OTHER NAMES:

Blaunon BN 10

Blaunon BN 7

BNO 12

Newcol NN 15

Newcol NS 20

Pionin D 7240

Polyethylene glycol mononaphthyl ether

Polyethylene oxide mononaphthyl ether

Takesurf D 7213W

Class Identifier: IDS, PMS, COM

Molecular Formula: $(C_2 H_4 O)_n C_{10} H_8 O$

Polymer Class Term: Polyether

Source of Registration: CA

222 REFERENCES IN FILE CA (1907 TO DATE)

9 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

224 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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In this polymer, the location of the naphthalenyl attachment is unknown.

EPDM polymers that are rubbers

EDPM rubber is an index heading in CAplus.

```
IT    EPDM rubber
      RL: POF (Polymer in formulation); TEM (Technical or
engineered material use); USES (Uses)
      (fire-, heat-, and voltage-resistant halogen-free
polyolefin compns. for elec. wire jackets)
```

The Lexicon entry shows the current policy:

```
=> E EPDM RUBBER+HN,NT,OLD/CT

E1      53283  --> EPDM rubber/CT
          HNTE Valid heading during volume 126 (1997) to present.
          NOTE Ethylene-propylene-nonconjugated diene copolymer.
E2      OLD Rubber, synthetic (L) EPDM/CT
```

Diene monomer known

When the diene monomer is specified, an entry is made both at the copolymer RN and the index heading.

EPDM rubber
Role: PEP (Physical, engineering or chemical process); PROC (Process) (ethylene-methylenenorbornene-propene, Vistalon 5600, Vistalon 7000; producing bales of EPDM rubbers with low levels of dusting agent from pellets)
25034-77-9 Ethylene-methylenenorbornene-propene copolymer
Role: PEP (Physical, engineering or chemical process); PROC (Process) (rubber; producing bales of EPDM rubbers with low levels of dusting agent from pellets)

EPDM with no CAS RN

EPDM (pre-1997) is indexed with no CAS RN when the diene was unknown.

```
IT    Synthetic rubber, uses
      RL: MOA (Modifier or additive use); USES (Uses)
          (EPDM, fracture and morphol. of polypropylene/EPDM
           blends)
```

EPDM indexing 1977-present

Since 1997, EPDM rubber with the diene unknown is indexed in CAPIUS at the CAS RNs for the known monomers with “D” and/or “DP” appended to the CAS RN to indicate derivatives. (Non-specific derivatives do not get a separate CAS RN in REGISTRY.)

Index Term and Role:
EPDM rubber
Role: TEM (Technical or engineered material use); USES (Uses) (prodn. of calcium bromide-resistant irradiatn. crosslinking cable sheath material)
74-85-1 D , Ethene, polymers with α -olefin, maleated
Role: POF (Polymer in formulation); SCLM (Substance in claims); TEM (Technical or engineered material use); USES (Uses) (metallocene linear low d.; prodn. of calcium bromide-resistant irradiatn. crosslinking cable sheath material)



Chapter 3: Search Strategies in REGISTRY

Begin your polymer search in REGISTRY. Once the polymers of interest have been found, the L-number(s) may then be crossed into CAplus to retrieve the relevant references. Append the L-number by /D to search for non-specific derivatives.

Types of searches

REGISTRY offers a number of alternatives for polymer searching. The following are discussed in this chapter:

- Name searching
- Component CAS RN searching
- POLYLINK Command
- Polymer Class Term searching
- Structure searching

Name Searching

Overview of name searching

Search in the Basic Index, Chemical Name (/CN), or the Chemical Name Segment (/CNS) fields. Search for

- Monomer names
- Polymer names
- Trade names

Monomer name search

This approach is useful when you know the monomer name(s). Use EXPAND to verify search terms prior to searching. Use (L) proximity to link the monomer names. Use both ?POLY?/CNS and PMS/CI to limit the search to polymers.

```

=> S STYRENE (L) ACRYLIC ACID AND (?POLY?/CNS OR PMS/CI)

53993 STYRENE
79169 ACRYLIC
47335767 ACID
77665 ACRYLIC ACID
      (ACRYLIC(W)ACID)
15916 STYRENE (L) ACRYLIC ACID
3189841 ?POLY?/CNS
2641240 PMS/CI
L3      15901 STYRENE (L) ACRYLIC ACID AND (?POLY?/CNS OR PMS/CI)

```

Polymer name search

Use hyphens to separate the monomer names (preferably in alphabetic order) in the polymer and EXPAND in the /CN field, and then search E3 if it is present.

```

=> E ACRYLIC ACID-METHYL METHACRYLATE-STYRENE COPOLYMER/CN 5

E1      1      ACRYLIC ACID-METHYL METHACRYLATE-STYRENE BLOCK COPOLYMER/CN
E2      1      ACRYLIC ACID-METHYL METHACRYLATE-STYRENE BLOCK GRAFT COPOLYM
            ER/CN
E3      1 --> ACRYLIC ACID-METHYL METHACRYLATE-STYRENE COPOLYMER/CN
E4      1      ACRYLIC ACID-METHYL METHACRYLATE-STYRENE COPOLYMER 2-(DIMETH
            YLAMINO)ETHANOL SALT/CN
E5      1      ACRYLIC ACID-METHYL METHACRYLATE-STYRENE COPOLYMER CALCIUM A
            ND SODIUM SALT/CN

=> S E3

```

Polymer names may also begin with “Poly”. Again, verify name with EXPAND in the /CN field.

```

=> E POLYETHYLENE/CN

E1      1      POLYETHYLEE GLYCOL DIETHER WITH 1,4-BUTANEDIOL (2:1)/CN
E2      1      POLYETHYLEE GLYCOL MONOETHER WITH ETHANOL/CN
E3      1 --> POLYETHYLENE/CN
E4      1      POLYETHYLENE ACETATE/CN
E5      1      POLYETHYLENE CAPROLACTAM-POLYVINYL ACETATE-POLYETHYLENE GLYC
            OL GRAFT COPOLYMER/CN
E6      1      POLYETHYLENE CATENANE COMPD. WITH DOCOSADIENE/CN
E7      1      POLYETHYLENE COPOLYMER WAX 520/CN
E8      1      POLYETHYLENE DIGLUCAMIDE-PROPYLENE OXIDE COPOLYMER/CN
E9      1      POLYETHYLENE DINONYL PHENYL ETHER SULFATE AMMONIUM SALT/CN
E10     1      POLYETHYLENE ETHER GLYCOL/CN
E11     1      POLYETHYLENE FIBERS/CN
E12     1      POLYETHYLENE FIBERS, ETHYLENE-PROPENE/CN

=> S E3

```



EXPAND handles the presence of hyphens, whereas SEARCH does not so an attempt to directly search a polymer name with hyphens needs to be enclosed in quotations. Alternatively EXPAND first on the name and search the E-number.

```
=> S "POLY(HEXAFLUORO-1,3-BUTADIENE)"/CN  
  
L6          1 "POLY(HEXAFLUORO-1,3-BUTADIENE)"/CN
```

Trade name search

When searching a trade name, be sure to look for variations in spelling and punctuation.

```
=> S SARAN SL 159/CN  
  
L7          1 SARAN SL 159/CN
```

Be alert to ambiguous trade names or acronyms, e.g., PET.

Component CAS Registry Number Searching

Component CAS RN search

Search the CAS RN for each monomer in the Component Registry Number (CRN) field. Link multiple CAS RNs using AND operators. Specify the number of components in the /NC numeric field.

```
=> S 95-13-6/CRN AND 80-62-6/CRN AND NC>2  
  
          995 95-13-6/CRN  
          156017 80-62-6/CRN  
          4258021 NC>2  
L8          20 95-13-6/CRN AND 80-62-6/CRN AND NC>2
```

POLYLINK Command

The same polymer may be created from several different sets of monomers. In a monomer-based registration, each set of monomers will have a separate CAS RN. In addition, condensation polymers, e.g., polyamides, polycarbonates, may be registered and indexed on the basis of their SRUs. Comprehensive searching requires finding all such registrations. With the POLYLINK command, you can retrieve the CAS RNs for the monomer-based and structural repeating unit representations for a given condensation polymer or a set of polymers.

POLYLINK may be used on

- An individual CAS Registry Number
- Any REGISTRY answer set, an E-number list, or an ANALYZE list of CAS Registry Numbers

POLYLINK example

The polymer formed between 1,4-butanediol and terephthalic acid may also be formed in various ways. If you know the CAS RN for one of the records (26062-94-2 in this example), you can easily find all related CAS RNs.

```
=> POLYLINK 26062-94-2
L1      23 POLYLINK 26062-94-2
=> d scan cn
```

L1

CA Index Name: 3,8-Dioxabicyclo[8.2.2]tetradeca-10,12,13-triene-2,9-dione, homopolymer

copyright 2026 ACS on STN REGISTRY

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1): 23

L1

CA Index Name: 1,4-Benzenedicarboxylic acid, polymer with 1,4-butanediol and C,C'-1,4-butanediyl bis(C-methyl carbonate)

copyright 2026 ACS on STN REGISTRY

L1

CA Index Name: 1H-Imidazolium, 3-ethyl-1-methyl-, 1,4-benzenedicarboxylate (2:1), polymer with 1,4-dichlorobutane

copyright 2026 ACS on STN REGISTRY

• • •



L1	
CA Index Name:	1,4-Benzenedicarboxylic acid, 1,4-dimethyl ester, polymer with 1,4-butanediol
copyright 2026 ACS on STN REGISTRY	

L1	
CA Index Name:	1,4-Benzenedicarboxylic acid, polymer with 1,4-bis(4-hydroxybutyl) 1,4-benzenedicarboxylate
copyright 2026 ACS on STN REGISTRY	

ALL ANSWERS HAVE BEEN SCANNED

Polymer Class Terms

Assignment of Polymer Class Terms

Polymer Class Terms (PCTs) categorize the various polymers in REGISTRY into 42 classes. For many categories, there is also a FORMED subcategory where the linkage is formed as part of the polymerization. PCTs are assigned to all polymers except oligomers (dimers, trimers, tetramers, etc.) and coordination compound polymers that would only receive the class POLYOTHER or one of the MANUAL class terms. If the classification for a polymer is uncertain, it receives the class POLYOTHER.

Polymer class terms are assigned algorithmically. Each term represents the structural characteristics of the polymer backbone and reflects

- the types of linkages formed in the polymerization process
- linkages already present within the monomer backbone
- linkages present in structural repeating unit (SRU) backbones

FORMED

If, when assigning the polymer class terms, the system identifies that a linkage for a certain class was formed during the polymerization process, a second polymer class term with the word FORMED added is indexed. When you search a class term without the word FORMED, you also retrieve the FORMED polymers. FORMED terms are present for all classes except resins, addition polymers, double stranded polymers, and polynucleotides.

PCT list

AMINO RESIN	POLYCARBODIIMIDE	POLYPHENYL
CHLOROPOLYMER	POLYCARBODIIMIDE FORMED	POLYPHENYL FORMED
DOUBLE STRAND	POLYCARBONATE	POLYPHOSPHAZENE
EPOXY RESIN	POLYCARBONATE FORMED	POLYPHOSPHAZENE FORMED
FLUOROPOLYMER	POLYCYANURATE	POLYQUINOXALINE
MANUAL COMPONENT	POLYCYANURATE FORMED	POLYQUINOXALINE FORMED
MANUAL REGISTRATION	POLYESTER	POLYSTYRENE
PHENOLIC RESIN	POLYESTER FORMED	POLYSULFIDE
POLYACETYLENE	POLYETHER	POLYSULFIDE FORMED
POLYACRYLIC	POLYETHER FORMED	POLYSULFONAMIDE
POLYAMIC ACID	POLYHYDRAZIDE	POLYSULFONAMIDE FORMED
POLYAMIC ACID FORMED	POLYHYDRAZIDE FORMED	POLYSULFONE
POLYAMIDE	POLYIMIDE	POLYSULFONE FORMED
POLYAMIDE FORMED	POLYIMIDE FORMED	POLYTHIOESTER
POLYAMINE	POLYIONENE	POLYTHIOESTER FORMED
POLYAMINE FORMED	POLYIONENE FORMED	POLYTHIOETHER
POLYANHYDRIDE	POLYISOCYANURATE	POLYTHIOETHER FORMED
POLYANHYDRIDE FORMED	POLYISOCYANURATE FORMED	POLYUREA
POLYAZOMETHINE	POLYKETONE	POLYUREA FORMED
POLYAZOMETHINE FORMED	POLYKETONE FORMED	POLYURETHANE
POLYBENZIMIDAZOLE	POLYNUCLEOTIDE	POLYURETHANE FORMED
POLYBENZIMIDAZOLE FORMED	POLYOLEFIN	POLYVINYL
POLYBENZOXAZOLE	POLYOTHER	
POLYBENZOXAZOLE FORMED	POLYOTHER ONLY	



PCT search examples

Combine the PCT term(s) with other search terms using AND/NOT operators.

PCT and name term:

```
=> S ?POLYPROPYLENE?/CNS AND POLYETHER/PCT AND POLYSULFONE/PCT

      8002 ?POLYPROPYLENE?/CNS
      736116 POLYETHER/PCT
      33612 POLYSULFONE/PCT
L10      12 ?POLYPROPYLENE?/CNS AND POLYETHER/PCT AND POLYSULFONE/PCT
```

=> d 6

L10 6 of 12

865188-06-3

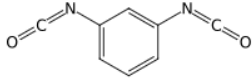
CAS Registry Number: 865188-06-3 | REGISTRY

Entered STN: 13 Oct 2005

CAS Registry Number Locator: STN Files: CA, CAPLUS

26471-62-5
C9 H6 N2 O2
IDS

1 [D1—]

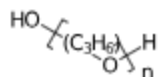


The chemical structure shows a benzene ring with isocyanate groups (-N=C=O) attached at the 1 and 4 positions. The structure is drawn with the benzene ring in the center, and the isocyanate groups extending from the top and bottom vertices.

25322-69-4

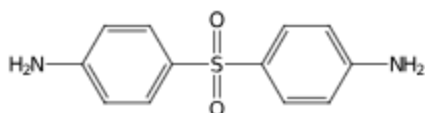
(C₃ H₆ O)_n H₂ O

IDS, PMS



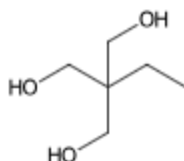
80-08-0

C₁₂ H₁₂ N₂ O₂ S



77-99-6

C₆ H₁₄ O₃



Chemical Name:

1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with
1,3-diisocyanatomethylbenzene, α-hydro-ω-
hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 4,4'-sulfonylbis[benzenamine]
(9CI) (CA INDEX NAME)

OTHER NAMES:

4,4'-Diaminodiphenyl sulfone-polypropylene
glycol-TDI-trimethylolpropane copolymer

Class Identifier:

PMS

Molecular Formula:

(C₁₂ H₁₂ N₂ O₂ S . C₉ H₆ N₂ O₂ . C₆ H₁₄ O₃ . (C₃ H₆ O)_n H₂ O)_x

Polymer Class Term:

Polyether, **Polysulfone**, Polyurea, Polyurea formed, Polyurethane, Polyurethane formed

Source of Registration:

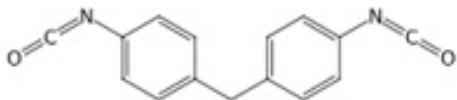
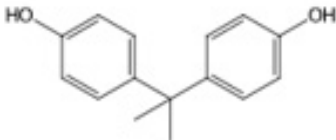
CA

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)



PCT and CAS RN

=> S 80-05-7/CRN AND POLYETHER FORMED/PCT AND POLYURETHANE/PCT	
55847 80-05-7/CRN	
218115 POLYETHER FORMED/PCT	
202188 POLYURETHANE/PCT	
L1	395 80-05-7/CRN AND POLYETHER FORMED/PCT AND POLYURETHANE/PCT
=> D SCAN	
L1	
	
	
	
	
Class Identifier:	PMS
CA Index Name:	Oxirane, methyl-, polymer with oxirane, ether with 4,4'-(1-methylethylidene)bis[phenol] (2:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene] (9Cl)
Molecular Formula:	(C15 H16 O2 . C15 H10 N2 O2 . 2 (C3 H6 O . C2 H4 O)x)x

PCT as a subset for structure searching

PCT searches provide excellent answer sets for use in subset structure searches. For example, find polyureas containing fluorine where the polyurea is formed during the polymerization.

=> S POLYUREA FORMED/PCT

L1 53907 POLYUREA FORMED/PCT

L2 STRUCTURE UPLOADED

=> S L2 SUB=L1 FUL

FULL SUBSET SEARCH INITIATED 09:53:15 FILE 'REGISTRY'
FULL SUBSET SCREEN SEARCH COMPLETED - 2,304 TO ITERATE

100.0% PROCESSED 2,304 ITERATIONS 202 ANSWERS
SEARCH TIME: 00.00.01

L3 202 SEA SUB=L1 SSS FUL L2

=> D

L3 1 of 202

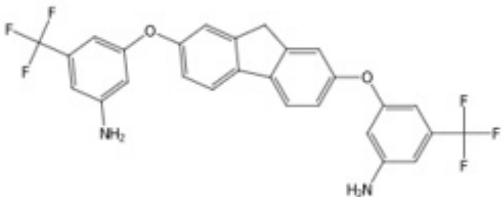
3115252-96-2

CAS Registry Number: 3115252-96-2 | REGISTRY

Entered STN: 16 Feb 2026

CAS Registry Number Locator: STN Files: CA, CAPLUS, CASREACT

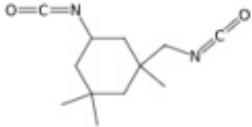
3115252-94-0
C27 H18 F6 N2 O2



31692-79-2
(C2 H6 O Si)n H2 O
PMS



4098-71-9
C12 H18 N2 O2



Chemical Name:	INDEX NAME NOT YET ASSIGNED
Class Identifier:	PMS
Molecular Formula:	(C27 H18 F6 N2 O2 . C12 H18 N2 O2 . (C2 H6 O Si)n H2 O)x
Polymer Class Term:	Polyether, Polyether, Polyurea, Polyurea formed
Source of Registration:	CA
1 REFERENCES IN FILE CA (1907 TO DATE)	
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)	
copyright 2026 ACS on STN REGISTRY	

Structure searching

Structure searching for monomers in polymers is no different than other structure searching. To limit the search to polymers only, polymer screens (filters) may be added. This may be done with the SCREEN command online or using the structure drawing tools in IP Finder powered by STN.

Polymer screens

The polymer screens are

- 2043 Any polymer with a structure or a manual CAS RN
- 2067 Homopolymer or copolymer (non-SRU)
- 2068 Any SRU
- 2069 SRU with end groups
- 2070 SRU without end groups

Copolymer search strategy

The search strategy for structure searching a copolymer is:

1. Draw a separate fragment for each monomer (probably not more than four).
2. Upload each fragment into a REGISTRY session.
 - L1 STRUCTURE UPLOADED
 - L2 STRUCTURE UPLOADED
3. Use the SCREEN command for the polymer screen (non-SRU)
 - => SCR 2067
 - L3 SCREEN CREATED
4. Run a SAMPLE SEARCH.
 - => S (L1 and L2) and L3
 - L4 10 SEA SSS SAM (L1 AND L2) AND L3
5. Review answers.

6. Run FULL search.

=> S L4 FULL

7. Display answers.

L51 of 184

3117713-51-3

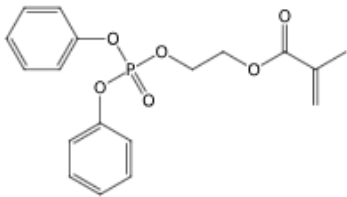
CAS Registry Number:3117713-51-3REGISTRY

Entered STN: 03 Mar 2026

CAS Registry Number Locator:STN Files: CA, CAPLUS, CASREACT

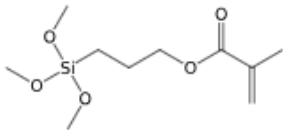
16069-23-1

C18 H19 O6 P



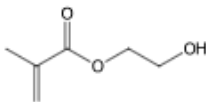
2530-85-0

C10 H20 O5 Si



868-77-9

C6 H10 O3



Chemical Name:INDEX NAME NOT YET ASSIGNED

Class Identifier:PMS

Molecular Formula:(C18 H19 O6 P . C10 H20 O5 Si . C6 H10 O3)x

Polymer Class Term:Polyacrylic

Source of Registration:CA

1 REFERENCES IN FILE CA (1907 TO DATE)

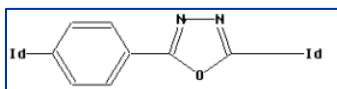
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)



SRU without end groups: search strategy

The search strategy for structure searching for a SRU without end groups is (SAMPLE search omitted)

1. Draw the SRU and save the structure to upload in step 2.



The “Id” dummy nodes are necessary to show the SRU end points. This example is for an SRU without end groups.

2. Retrieve structure matches for the SRU without end groups (screen 2070).

```
=> SCR 2070

L1    SCREEN CREATED

=>
Uploading structure file: sru_woeg

L2    STRUCTURE UPLOADED

=> S L2 AND L1 FUL

FULL SEARCH INITIATED 12:49:16 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      1,346 TO ITERATE

100.0% PROCESSED      1,346 ITERATIONS      39 ANSWERS
SEARCH TIME: 00.00.01

L3          39 SEA SSS FUL L2 AND L1
```

3. Optionally view first answer

2824959-37-5

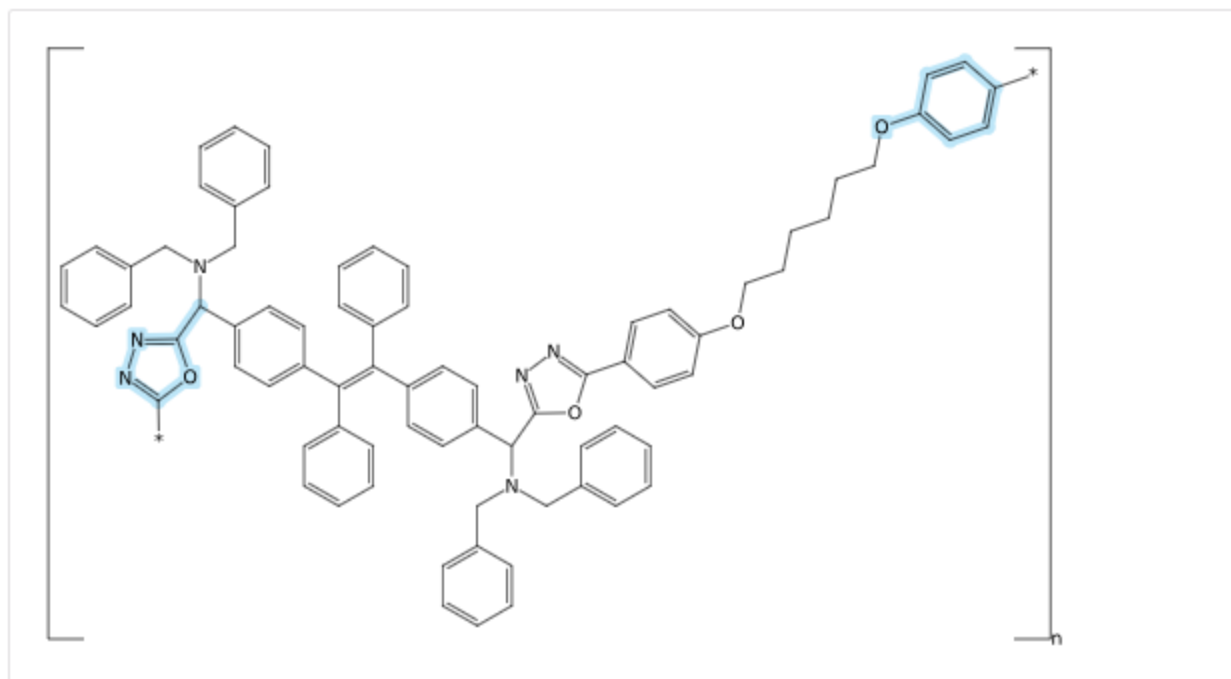
CAS Registry Number:

2824959-37-5 REGISTRY

Entered STN: 16 Sep 2022

CAS Registry Number Locator:

STN Files: CA, CAPLUS, CASREACT, TOXCENTER



Chemical Name:

Poly[1,3,4-oxadiazole-2,5-diyl[[bis(phenylmethyl)amino]methylene]-1,4-phenylene(1,2-diphenyl-1,2-ethenediyl)-1,4-phenylene[[bis(phenylmethyl)amino]methylene]-1,3,4-oxadiazole-2,5-diyl-1,4-phenyleneoxy-1,6-hexanediyoxy-1,4-phenylene] (CA INDEX NAME)

Class Identifier:

PMS

Molecular Formula:

(C78 H68 N6 O4)_n

Polymer Class Term:

Polyether

Source of Registration:

CA

RELATED POLYMERS AVAILABLE WITH POLYLINK

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

4. Use POLYLINK to retrieve related monomer-based polymer registrations.



=> POLYLINK 2824959-37-5

L4 2 POLYLINK 2824959-37-5

=> D L4 2

L4

2 of 2

2824959-31-9

CAS Registry Number: 2824959-31-9 | REGISTRY

Entered STN: 16 Sep 2022

CAS Registry Number Locator: STN Files: CA, CAPLUS, CASREACT, TOXCENTER

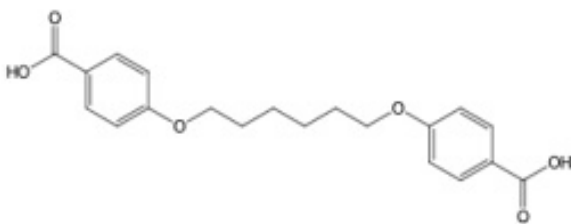
1353290-58-0

C₂₈ H₂₀ O₂



74774-53-1

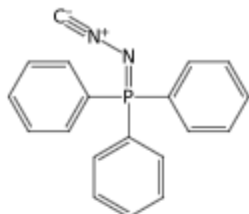
C₂₀ H₂₂ O₆



Display continues next page

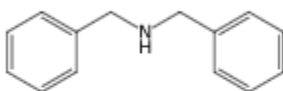
73789-56-7

C₁₉H₁₅N₂P



103-49-1

C₁₄H₁₅N



Chemical Name: Benzoic acid, 4,4'-[1,6-hexanediylbis(oxy)]bis-, polymer with 4,4'-(1,2-diphenyl-1,2-ethenediyl)bis[benzaldehyde], N-(phenylmethyl)benzenemethanamine and N-(triphenylphosphoranylidene)isocyanamide (CA INDEX NAME)

Class Identifier: PMS

Molecular Formula: (C₂₈H₂₀O₂ . C₂₀H₂₂O₆ . C₁₉H₁₅N₂P . C₁₄H₁₅N)_x

Polymer Class Term: Polyether, Polystyrene

Source of Registration: CA

RELATED POLYMERS AVAILABLE WITH POLYLINK

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

INCH InChI=1S/C28H20O2.C20H22O6.C19H15N2P.C14H15N/c29-19-21-11-15-25(16-12-21)27(23-7-3-1-4-8-23)28(24-9-5-2-6-10-24)26-17-13-22(20-30)14-18-26;21-19(22)15-5-9-17(10-6-15)25-13-3-1-2-4-14-26-18-11-7-16(8-12-18)20(23)24;1-20-21-22(17-11-5-2-6-12-17,18-13-7-3-8-14-18)19-15-9-4-10-16-19;1-3-7-13(8-4-1)11-15-12-14-9-5-2-6-10-14/h1-20H;5-12H,1-4,13-14H2,(H,21,22)(H,23,24);2-16H;1-10,15H,11-12H2

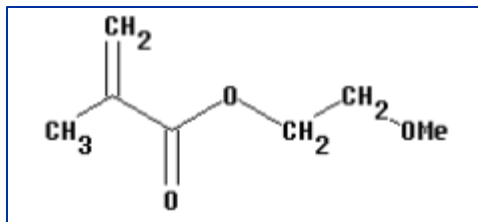
INKY YAJIENXRQMSUJZ-UHFFFAOYSA-N

SRU with end groups: search strategy

The search strategy for structure searching for an SRU with end groups is (SAMPLE search omitted)

1. Draw the SRU with the end groups attached.





IP Finder will identify the “O-CH₂-CH₂” repeating group.

2. Retrieve the matches for the SRU with the specified end groups using the query and screen 2069.

```
=> scr 2069

L1    SCREEN CREATED
=>
Uploading structure file: sruwendgroup
L2    STRUCTURE UPLOADED

=> s 12 and 11 full

FULL SEARCH INITIATED 10:18:56 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      73,685 TO ITERATE

100.0% PROCESSED      73,685 ITERATIONS      32,195 ANSWERS
SEARCH TIME: 00.00.01

L3    32195 SEA SSS FUL L2 AND L1
```

3. Display answers

L3
2 of 32176

3123171-71-8

CAS Registry Number: 3123171-71-8 REGISTRY

Entered STN: 22 Apr 2026

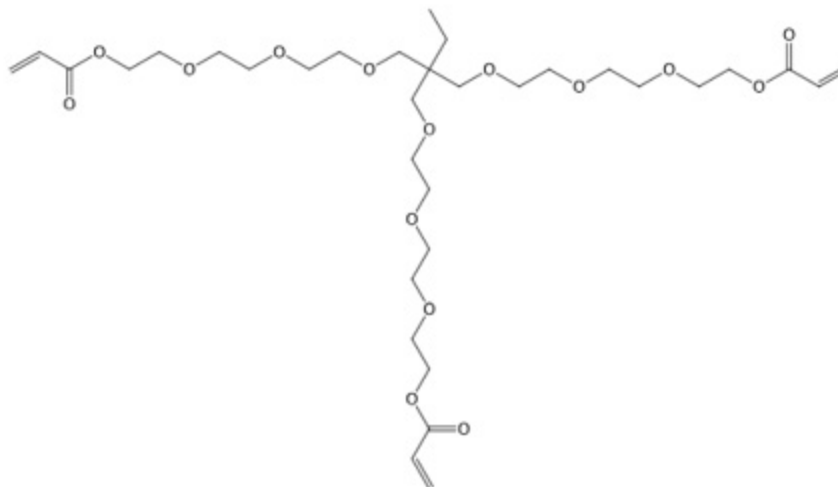
CAS Registry Number Locator: STN Files: CAPLUS

3080352-43-5

C63 H104 O24

111244-71-4

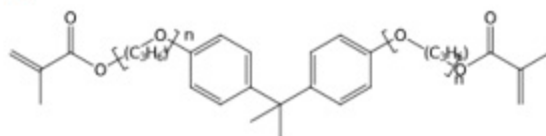
C33 H56 O15



42610-22-0

(C3 H6 O)n (C3 H6 O)n C23 H24 O4

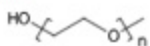
IDS, PMS



9004-74-4

(C2 H4 O)n C H4 O

PMS



Chemical Name:

INDEX NAME NOT YET ASSIGNED

Class Identifier:

PMS

Molecular Formula:

(C63 H104 O24 . C33 H56 O15 . (C3 H6 O)n (C3 H6 O)n C23 H24 O4 . (C2 H4 O)n C H4 O)x

Polymer Class Term:

Polyacrylic, Polyether

Source of Registration:

CA

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

copyright 2026 ACS on STN REGISTRY



Chapter 4: Using Polymer Subject Indexing Terms

Polymers are indexed in CAplus³ as CAS Registry Numbers and by using Controlled vocabulary (/CT) index entries for specific polymers or for polymer classes.

Chapter 3 discussed search strategies for finding CAS RNs in REGISTRY that you can then crossover as an L-number to CAplus.

This chapter focuses on using polymer subject indexing terms in CAplus.

Finding Controlled Terms (CTs)

Policies for the assignment of Controlled Vocabulary (CT) indexing terms can change over time. The CA Lexicon in the /CT field of CA/CAplus can alert you to present and past indexing policies.

Use the EXPAND command in the usual way as well as with the CA Lexicon thesaurus in the /CT field. Enter HELP LEXICON in at an arrow prompt (=>) in CAplus for further details.

```
=> e rubber, butadiene-styrene/ct
```

E#	FREQUENCY	AT	TERM
--	-----	--	----
E1	1		RUBBER, BUTADIENE-STYRENE, USES/CT
E2	1		RUBBER, BUTADIENE-STYRENE, USES AND MISCELLANEOUS/CT
E3	41	2 -->	RUBBER, BUTADIENE-STYRENE/CT
E4	0	2	RUBBER, BUTADIENE-STYRENE (L) (ANILINOPHENYL)METHACRYL AMIDE- AND (PHENYLTHIOETHYL)VINYLBENZENE-GRAFTED/CT
E5	0	2	RUBBER, BUTADIENE-STYRENE (L) ACRYLIC-GRAFTED/CT
E6	0	2	RUBBER, BUTADIENE-STYRENE (L) AMINE-TERMINATED/CT
E7	0	2	RUBBER, BUTADIENE-STYRENE (L) BLOCK/CT
E8	0	2	RUBBER, BUTADIENE-STYRENE (L) BLOCK POLYMERS/CT
E9	0	2	RUBBER, BUTADIENE-STYRENE (L) BLOCK, DIBLOCK/CT
E10	0	2	RUBBER, BUTADIENE-STYRENE (L) BLOCK, EPOXIDIZED/CT
E11	0	2	RUBBER, BUTADIENE-STYRENE (L) BLOCK, GRAFT/CT
E12	0	2	RUBBER, BUTADIENE-STYRENE (L) BLOCK, MALEATED/CT

³ When searching using the CA Lexicon, it is recommended that the searches be done in the HCAPLUS database, which does not use search term pricing. In CAplus OR ZCAplus, Lexicon searches may become quite costly.

The presence of the “AT” column indicates that the terms are in the CA Lexicon. The number of terms connected with the (L) operator should prompt us to search the /CT using truncation.

```
=> S RUBBER, BUTADIENE-STYRENE?/CT  
  
L1          9310 RUBBER, BUTADIENE-STYRENE?/CT
```

The CA Lexicon shows current and past indexing practice.

```
=> E RUBBER, BUTADIENE-STYRENE+PFT,OLD/CT  
  
E1          41  --> Rubber, butadiene-styrene/CT  
E2         133715  NEW Styrene-butadiene rubber/CT  
***** END *****
```

We can search on the current term and use the thesaurus to bring in other related terms in the search as well.

```
=> S E2+OLD,PFT,NT  
  
L2         136417 "STYRENE-BUTADIENE RUBBER"+OLD,PFT,NT/CT (1762 TERMS)
```

Combine the two searches for the total result.



=> D HIT 1

L3

1 of 145168

Index Term and Role:

Styrene-butadiene rubber

Role: TEM (Technical or engineered material use); USES (Uses)

(anode active material for lithium secondary battery, method of prepg. the same and lithium secondary battery including the same)

Styrene-butadiene rubber

Role: TEM (Technical or engineered material use); USES (Uses)

(anode active material for lithium secondary battery, method of prepg. the same and lithium secondary battery including the same)

Additional answers

Additional answers may be found using the CAS RN for the known butadiene-styrene copolymer or its non-specific derivatives.

```
=> S 9003-55-8(L)RUBBER

** REGISTRY INITIATED **
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L5      130522 L4
L6      98012 L5 (L)RUBBER

=> S L6 NOT L3

L7      1269 L6 NOT L3
```

=> D HIT 2

L7

2 of 1269

Index Term and Role:

9003-55-8

Role: TEM (Technical or engineered material use); USES (Uses)

(rubber; neg. electrode and battery having long neg. electrode current collector)

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Further answers may be obtained by considering specific derivatives of the butadiene-styrene copolymer.

```

=> FILE REG

=> S (BUTADIENE STYRENE COPOLYMER) AND 2/NC

L8          36 (BUTADIENE STYRENE COPOLYMER) AND 2/NC

=> FILE CAPLUS

=> S L8(L)RUBBER

L9          136339 L8(L)RUBBER

=> S L9 NOT (L3 OR L6)

L10         1230 L9 NOT (L3 OR L6)

```

Polymer class index terms

Many index terms for polymer classes may be used in the /CT field.

Index Term and Role:

Polyurethanes

Role: TEM (Technical or engineered material use); USES (Uses)

(adhesive; prodn. of self-regulating multilayer electrothermal structure contg. polyethylene terephthalate and polypropylene)



Searching for rubbers

Elastomers or rubbers are characterized by their ability to stretch or contract rapidly. Elastomers are obtained from natural sources and by synthetic means. A Controlled Term entry is made for the rubber regardless whether a CAS RN is also used.

Indexing for rubbers

Rubber indexing policy:

```
=> E RUBBER+OLD,NT/CT
```

```
E1      225623  --> Rubber/CT
```

```
NOTE Studies on elastomers or rubber of unknown origin are indexed here. Studies on elastomers or rubber of natural origin are indexed at Natural rubber or its narrower terms. Studies on elastomers or rubber of synthetic origin are indexed at Synthetic rubber or its narrower terms.
```

```
E2      7      OLD Elastomers/CT
```

Rubber in the CA Lexicon

A search of “rubber” using the CA Lexicon terms retrieves many hits in CAPLUS.

```
=> S RUBBER+NT/CT
```

```
L1      750752 RUBBER+NT/CT (29 TERMS)
```

```
=> D L1 HIT
```

L1

1 of 750752

Index Term and Role:

Styrene-butadiene rubber

Role: TEM (Technical or engineered material use); USES (Uses)

(anode active material for lithium secondary battery, method of prep. the same and lithium secondary battery including the same)

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Searching RUBBER/CW yields additional rubber retrievals, but not everything the CA Lexicon terms found.

```
=> S RUBBER+NT/CT
L1      750752 RUBBER+NT/CT (29 TERMS)
=> S RUBBER/CW
L2      759880 RUBBER/CW
=> S L2 NOT L1
L3      9792 L2 NOT L1
=> D HIT
```

L4 1 of 5121

Energy consumption of the world is increasing hence the prices of fuels are increasing. Fossil fuels are the major source of energy but they are depleting in nature and they may exhaust in future. So we cannot depend on these sources and biofuels can be considered as **substitute** for fossil fuels, hence lot of researchers are doing extensive research on biofuels. So it is important to study the performance of different biofuels to find suitable one in terms of food crisis and better engine performance. Accordingly in this study the performance and emissions characteristics of Rubber seed oil, Mahua oil and microalgae oil biodiesels are studied. The results of this comparison study carried with HCP-B20, MO-B20 and RSO-B20 biodiesel blends indicates that the performance of HCP-B20 blend is better and emissions are lower compared to MO-B20 and RSO-B20 blends. The higher content of oxygen present in the microalgae biodiesel leads to higher rate of combustion reactions, in turn complete flame propagation and improved combustion. The BTE is lower with HCP-B20, MO-B20 and RSO-B20 compared to PD. Added advantage with this microalgae biofuel is, it is non-edible, it doesn't require fertile land for its growth. So HCP-B20 blend may be viable for the com. application.

Index Term and Role:

Rubber tree

(seed oil; comparative study on direct injection diesel engine performance and emissions using HCP microalgae biodiesel, Mahua oil biodiesel, rubber seed oil biodiesel and petroleum diesel)

The term “rubbers” also appears in the controlled indexing.

```
=> S RUBBERS/CW
L5      119348 RUBBERS/CW
=> D HIT
```

• • •

Index Term and Role:

Preservatives Recycling of plastics and **rubbers**

(Recyclable material)



Generic rubber searches

Generic searches for rubbers may be approached in several ways as the following examples illustrate.

Search the Basic Index (with plurals set on, see Settings):

Abbreviation	☐ OFF
Audit	☐ OFF
Logoff History (LHIST)	☒ ON
Multiple-step (Mstep)	☒ ON
Plurals	☒ ON ✓
Spellings	☐ OFF
Structure Editor Toolbars	Floating ▾

```
=> SET PLURALS ON PERM

SET COMMAND COMPLETED

=> s rubber

          992701 RUBBER
          194315 RUBBERS
L20      1093772 RUBBER
                (RUBBER OR RUBBERS)
```

The Controlled Words or the Lexicon provide more controlled results (index heading words only):

```
=> S RUBBER?/CW

L2      862344 RUBBER?/CW

=> S RUBBER+PFT,NT/CT

L3      750757 RUBBER+PFT,NT/CT (127 TERMS)
```

The Controlled Term index entry itself still provides a large number of answers ranging in time from 1907 to the present.

```
=> s RUBBER/CT  
  
L25      224512 RUBBER/CT
```

Rubber uses and applications

Many of the common uses and applications of rubbers are indexed at the use. Often a separate index entry is made for the rubber.

```
IT  Gloves  
      (manufg. method for injection molded rubber gloves  
      with low cost and improved phys. property)  
IT  Natural rubber  
      Synthetic rubber  
      RL: PEP (Physical, engineering or chemical process); PYP  
      (Physical process); TEM (Technical or engineered material  
      use); PROC (Process); USES (Uses)  
      (manufg. method for injection molded rubber gloves  
      with low cost and improved phys. property)
```

In other cases, no rubber term is indexed.

```
IT  Tires  
      (treads, isoprene rubber compns. for, for low heat  
      buildup and roll resistance and high skid resistance)
```



Chapter 5: Polymer Searching in non-CAS Databases

Almost every STN database includes some polymer information. More than 20 databases have over 100,000 hits on the term POLYMER? in the Basic Index. In addition to standard search techniques, STN provides some special features to facilitate polymer searching:

- POLYMERS database cluster
- INDEX command
- CAS RN crossover
- SELECT NAME and ANALYZE NAME

Polymers Database Cluster

The polymer science database cluster consists of:

```
=> D CLU Polymers
```

CLUSTER NAME	CLUSTER DEFINITION
POLYMERS	APOLLIT CAPLUS CBNB CIN COMPENDEX IFIALL NTIS PQSCITECH RAPRA REAXYSFILEBI SCISEARCH USPATFULL USPATOLD USPAT2 WPIDS WPINDEX WPIX WSCA Polymer Science Cluster

SET CLUSTER

Users may create customized polymer database clusters using the SET CLUSTER command. Enter SET CLUSTER at an arrow prompt (=>) followed by the name of the cluster you want to create. Cluster names must:

- Begin with a period (.)
- Have 2-16 characters
- Contain only letters A-Z, numbers (0-9), and periods (.)

You will be prompted to define the cluster. Enter one or more valid database names, user-defined clusters, system-defined clusters, or combinations of these. Separate the names with a space or a comma. The defined cluster is then saved permanently on your login ID.

```
=> SET CLUSTER
ENTER CLUSTER NAME OR (?):.MYCLUSTER
ENTER LIST OF FILE NAMES OR (?):CAPLUS BIOSIS
MORE FILES, (NONE), OR ?:.
CLUSTER '.MYCLUSTER' DEFINED AS 'CAPLUS, BIOSIS'
SET COMMAND COMPLETED
```

INDEX

The INDEX command may be used with the POLYMERS cluster or other clusters or databases to create a multifile search environment for the purpose of trying out possible search strategies.

```
=> INDEX POLYMERS

INDEX 'APOLLIT, CAPLUS, CBNB, CIN, COMPENDEX, IFIALL, NTIS, PQSCITECH, RAPRA,
      REAXYSFILEBI, SCISEARCH, USPATFULL, USPATOLD, USPAT2, WPIDS, WPINDEX,
      WPIX, WSCA' ENTERED AT 16:03:25 ON 21 APR 2026

18 FILES IN THE FILE LIST IN STNINDEX
```

For example, searching polyurethane:

```
=> S POLYURETHANE?
    . . .
L1  QUE POLYURETHANE?

=> D RANK

F1    568483  CAPLUS
F2    553186  USPATFULL
F3    484218  WPIDS
F4    484218  WPINDEX
F5    484218  WPIX
F6    249408  USPAT2
    . . .

=> FIL F1 F2 F4; S L1

FILE 'CAPLUS' ENTERED AT 16:29:45 ON 21 APR 2026
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
COPYRIGHT (C) 2026 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPATFULL' ENTERED AT 16:29:45 ON 21 APR 2026
CA INDEXING COPYRIGHT (C) 2026 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPINDEX' ENTERED AT 16:29:45 ON 21 APR 2026
COPYRIGHT (C) 2026 CLARIVATE

L4    1605887 L1
```



=> D HIT 1 FROM EACH

L4 ANSWER 1 OF 1605887 CAPLUS COPYRIGHT 2026 ACS on STN

TI 3D **polyurethane** scaffolds for exploring osteogenic differentiation and mechanical stimulation of mesenchymal stromal cells

AB Bone marrow-derived mesenchymal stromal cells (MSC) support bone regeneration by differentiating into osteogenic lineages in response to biochem. and mech. cues such as fluid-flow and compression, processes replicable in vitro using bioreactors and 3D scaffolds. Human MSC were cultured on medium-stiffness and hard 3D **polyurethane** (PU) scaffolds, characterized by at. force microscopy, SEM (SEM), and stiffness measurements, and subjected to fluid-flow and compression. Two-dimensional PU and polystyrene (PS) substrates served as controls. Cultures were maintained in expansion or osteogenic medium. Cell attachment and morphol. were analyzed by SEM and F-actin staining:

L4 ANSWER 568484 OF 1605887 USPATFULL on STN

DETD The coupling agent may be used with, or part of, coupling methods including bonding, adhering, attaching. Candidate methods include (i) adhering the substrate to the image sensor chip 105, using a thermosetting polymer (e.g., epoxy, **polyurethane**, polyuria, vinyl ester, cyanoacrylate), a UV curable (acrylate) or a pressure sensitive adhesive, or (ii) bonding through a fusing or welding operation.

L4 ANSWER 1121670 OF 1605887 WPINDEX COPYRIGHT 2026 CLARIVATE on STN

TI Sealing connection device of **polyurethane** insulating material cold insulation pipeline, has mounting frame whose surface is fixedly connected with central pipeline through matching of mounting component

TT SEAL CONNECT DEVICE **POLYURETHANE** INSULATE MATERIAL COLD PIPE MOUNT FRAME SURFACE FIX CENTRAL THROUGH MATCH COMPONENT

NOV NOVELTY - The utility model provides a sealing connection device of **polyurethane** insulating material cold insulation pipeline, comprising: a connecting mechanism, comprising a first connecting pipeline, a second connecting pipeline and a central pipeline, one end of the first connecting pipeline is connected with the central pipeline, the other end

• • •

Polymer Databases with CAS RNs

The major polymer databases in addition to CA/Caplus that have CAS RNs are:

- CBNB, CIN
- IFIALL
- USPATFULL, USPAT2

CAS RN Crossover

Follow these steps for crossover of CAS RNs from REGISTRY to another database:

Step	Definition
1	Create an answer set in REGISTRY, limiting answers to relevant CAS RNs <pre>=> s polyamide/pct ran=870967-04-7</pre><pre>L1 85888 POLYAMIDE/PCT</pre>
2	Enter target database(s) <pre>=> file caplus uspatfull</pre>
3	Search the REGISTRY L-number <pre>=> s l1 and 2025/py</pre><pre>L2 5196 FILE CAPLUS</pre><pre>L3 459 FILE USPATFULL</pre> <pre>TOTAL FOR ALL FILES</pre><pre>L4 5655 L1 AND 2025/PY</pre>

Note: Verify crossover fees prior to using CAS RN crossover.

Select Name

Searching for polymers in databases that do not contain CAS RN requires the use of polymer names. The SELECT NAME feature allows you to extract polymer names from a polymer search in REGISTRY and use them as search terms in other databases.

Step	Definition
1	Create a polymer answer set in REGISTRY. <pre>=> S ACRYLONITRILE (L) CHLOROETHYLENE AND PMS/CI AND 2/NC AND 1/CL</pre><pre>L1 3 ACRYLONITRILE (L) CHLOROETHYLENE AND PMS/CI AND 2/NC AND 1/CL</pre>

Continued on next page



2	Display names of individual answers. <pre>=> D IN 1-3 L1 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2026 ACS on STN IN 2-Propenenitrile, polymer with 1-bromo-1-chloroethene (9CI) L1 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2026 ACS on STN IN 2-Propenenitrile, 2-methyl-, polymer with chloroethene L1 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2026 ACS on STN IN 2-Propenenitrile, polymer with chloroethene</pre>
3	Use SELECT NAME to create an E-number list for answer 3. <pre>=> SEL NAME L1 3 E1 THROUGH E19 ASSIGNED</pre>
4	Use DISPLAY SEL to see the extracted name and E-numbers <pre>=> DISPLAY SEL ALL E1 1 ACROPOR AN 200/BI E2 1 ACROPOR AN 450/BI E3 1 ACROPOR AN/BI E4 1 ACROPOR ANH/BI E5 1 ACROPOR WA/BI E6 1 ACROPOR/BI E7 1 ACROPORE/BI E8 1 ACRYLONITRILE-CHLOROETHYLENE COPOLYMER/BI E9 1 ACRYLONITRILE-VINYL CHLORIDE COPOLYMER/BI E10 1 ACRYLONITRILE-VINYL CHLORIDE POLYMER/BI E11 1 AMICON XM 300/BI E12 1 DIAFLO XM 300/BI E13 1 DYNEL NYGL/BI E14 1 DYNEL/BI E15 1 METRICEL DM 450/BI E16 1 PM 6545/BI E17 1 SKHN 6/BI E18 1 VINYL CHLORIDE-ACRYLONITRILE COPOLYMER/BI E19 1 VINYON N/BI</pre>
5	Enter the target database(s). <pre>=> FIL APOLLIT COMPENDEX INPADOCDB NTIS RAPRA SCISEARCH WPINDEX</pre>

Continued on next page

6

Search the E-numbers, then display one hit from each file

```
=> S E1-E19

L2      269 ("ACROPOR AN 200"/BI OR "ACROPOR AN 450"/BI OR "ACROPOR AN"/BI
        OR "ACROPOR ANH"/BI OR "ACROPOR WA"/BI OR ACROPOR/BI OR ACROPORE
        /BI OR "ACRYLONITRILE-CHLOROETHYLENE COPOLYMER"/BI OR "ACRYLONIT
        RILE-VINYL CHLORIDE COPOLYMER"/BI OR "ACRYLONITRILE-VINYL CHLORI
        DE POLYMER"/BI OR "AMICON XM 300"/BI OR "DIAFLO XM 300"/BI OR
        "DYNEL NYGL"/BI OR DYNEL/BI OR "METRICEL DM 450"/BI OR "PM 6545"
        /BI OR "SKHN 6"/BI OR "VINYL CHLORIDE-ACRYLONITRILE COPOLYMER"/B
        I OR "VINYON N"/BI)

=> D L2 HIT 1 FROM EACH

L2      ANSWER 1 OF 269 APOLLIT COPYRIGHT 2026 FIZ KA on STN
TI      Nanocomposites of vinyl chloride-acrylonitrile copolymer and silica
CT      ACRYLONITRILE-VINYL CHLORIDE COPOLYMERS; COMPOSITES;
        COPOLYMERIZATION; CRYSTALLINITY; CRYSTALLIZATION; DSC; ELECTRON
        MICROSCOPY; EMULSION POLYMERIZATION; FILLERS; IRRADIATION; MAIN CHAIN;
        * * *

L2      ANSWER 45 OF 269 INPADOCDB COPYRIGHT 2026 EPO/FIZ KA on STN
ABEN    The invention discloses a composite diaphragm material for electrolysis
        and a preparation process thereof, and belongs to the technical field of
        diaphragm materials. The composite diaphragm material is formed by
        compounding a filter membrane A and a filter membrane B. The filter
        membrane A is prepared from the following raw materials in parts by
        weight: 12-18 parts of modified vinyl chloride-acrylonitrile
        copolymer, 65-70 parts of N, N-dimethylformamide, 15-20 parts of
        * * *

L2      ANSWER 229 OF 269 RAPRA COPYRIGHT 2026 WTI AG on STN.
ST      EPM (ETHYLENE PROPYLENE MONOMER); ORGANIC MOLECULAR METALS; INDOLE;
        ACRYLONITRILE-STYRENE COPOLYMERS; FOURIER TRANSFORM INFRARED
        SPECTROSCOPY; PYRROLE DERIVATIVE; ACRYLONITRILE-VINYL CHLORIDE
        COPOLYMERS; EPM-Copolymer; synthetisches Metall (Polymer); Indol;
        * * *

L2      ANSWER 248 OF 269 COMPENDEX COPYRIGHT 2026 EEI on STN.
AB      Synthetic vascular grafts developed beginning in the 1950s as a
        consequence of observations of Voorhees in the late 1940s and early
        1950s that a synthetic fabric made from Vinyon "N" became coated
        with a smooth, relatively nonthrombogenic surface when implanted in the
        * * *
```

ANALYZE NAME

ANALYZE NAME works similarly to SELECT NAME (above), but creates an L-number with the extracted terms instead of an E-number table.

Step	Definition
1	Create a polymer answer set in REGISTRY. => S ACRYLONITRILE (L) CHLOROETHYLENE AND PMS/CI AND 2/NC AND 1/CL L1 3 ACRYLONITRILE (L) CHLOROETHYLENE AND PMS/CI AND 2/NC AND 1/CL

Continued on next page



Display names of individual answers.

2

```
=> D IN 1-3
L1 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2026 ACS on STN
IN 2-Propenenitrile, polymer with 1-bromo-1-chloroethene (9CI)
L1 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2026 ACS on STN
IN 2-Propenenitrile, 2-methyl-, polymer with chloroethene
L1 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2026 ACS on STN
IN 2-Propenenitrile, polymer with chloroethene
```

Use ANALYZE to create an L-number answer set of extracted terms

3

```
=> ANALYZE NAME L1 3
L2 ANALYZE L1 3 NAME : 19 TERMS
=> D L2
L2 ANALYZE L1 3 NAME : 19 TERMS

TERM #   # OCC   # DOC   % DOC NAME
-----
    1      1      1 100.00 ACROPOR AN 200
    2      1      1 100.00 ACROPOR AN 450
    3      1      1 100.00 ACROPOR AN
    4      1      1 100.00 ACROPOR ANH
    5      1      1 100.00 ACROPOR WA
    6      1      1 100.00 ACROPOR
    7      1      1 100.00 ACROPORE
    8      1      1 100.00 ACRYLONITRILE-CHLOROETHYLENE COPOLYMER
    9      1      1 100.00 ACRYLONITRILE-VINYL CHLORIDE COPOLYMER
   10      1      1 100.00 ACRYLONITRILE-VINYL CHLORIDE POLYMER
   11      1      1 100.00 AMICON XM 300
   12      1      1 100.00 DIAFLO XM 300
   13      1      1 100.00 DYNEL NYGL
   14      1      1 100.00 DYNEL
   15      1      1 100.00 METRICEL DM 450
   16      1      1 100.00 PM 6545
   17      1      1 100.00 SKHN 6
   18      1      1 100.00 VINYL CHLORIDE-ACRYLONITRILE COPOLYMER
   19      1      1 100.00 VINYON N
***** END OF L2 *****
```

Continued on next page

4	Enter cluster file POLYMERS and search for L2 terms in the Bibliographic field. <pre> => FIL POLYMERS => S L2/BI 6 FILES SEARCHED... 12 FILES SEARCHED... L3 6201 L2/BI </pre>
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