Polymer Information on STN®

A Quick Reference Guide

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Preface

This quick reference guide, Polymer Information on STN, provides an overview of most STN databases containing polymer information and shows annotated search examples in some databases. The examples highlight basic search techniques for obtaining chemical and chemical engineering information, patents, property data, regulatory information and business news. Search examples do not illustrate all of the options or databases on STN with polymer information.

Please contact your local STN Service Center for suggestions and help with specific search questions.

STN databases with polymer information

Information	Databases
Polymer substance information	REGISTRY
Chemistry, chemical engineering, and materials research	APOLLIT, CA, CAPLUS, CEABA-VTB, COMPENDEX, INSPEC, METADEX, PIRA, PQSCITECH, RAPRA, TRIBO, WSCA
Patents	AUPATFULL, CA, CANPATFULL, CAPLUS, ENCOMPPAT, EPFULL, FRANCEPAT, FRFULL, IFICDB, IFIPAT, IFIUDB, IFICDB, INPADOCDB, JAPIO, JPFULL, PATDD, PATDPA, PATDPAFULL, PCTFULL, RAPRA, RDISCLOSURE, USPAT2, USPATFULL, WPINDEX, WPIDS, WPIX
Business and news	CBNB, CIN
Regulatory information	CHEMLIST
Property data	APOLLIT, PQSCITECH, REAXYSFILE, REGISTRY
Biological, medical, and pharmaceutical research and applications	BIOSIS, BIOTECHABS, CABA, CAPLUS, CEABA-VTB, DDFB, DDFU, DRUGB, EMBAL, EMBASE, FSTA, IMSRESEARCH, IPA, MEDLINE, TOXCENTER, USAN
Chemical reactions	CASREACT, CHEMINFORMRX
Multidisciplinary technical databases	DISSABS, NTIS, PASCAL, SCISEARCH

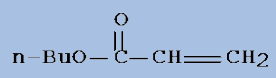
Overview of searching in CAS REGISTRY

In CAS REGISTRY℠ you can search substance information for polymers and obtain the CAS Registry Number®. The L-number answer set from REGISTRY can be searched in any of the STN databases containing CAS Registry Numbers.

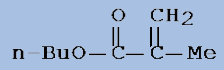
The primary representation of polymers in REGISTRY is based on the monomers making up the polymer. A monomer is anything that is incorporated in the polymeric backbone, including crosslinking agents.

Sample record

```
RN   29035-74-3  REGISTRY
ED   Entered STN:  16 Nov 1984
CN   2-Propenoic acid, 2-methyl-, butyl ester, polymer with butyl 2-propenoate
     (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   2-Propenoic acid, butyl ester, polymer with butyl 2-methyl-2-propenoate (9CI)
CN   Acrylic acid, butyl ester, polymer with butyl methacrylate (8CI)
CN   Methacrylic acid, butyl ester, polymer with butyl acrylate (8CI)
OTHER NAMES:
CN   Bioflex
CN   Butyl acrylate-butyl methacrylate copolymer
CN   Butyl acrylate-butyl methacrylate polymer
CN   Butyl acrylate-n-butyl methacrylate copolymer
CN   Butyl methacrylate-butyl acrylate copolymer
CN   Elitan 40
CN   N 560
CN   n-Butylmethacrylate-n-Butylacrylate copolymer
MF   (C8 H14 O2 . C7 H12 O2)x
CI   PMS, COM
PCT  Polyacrylic
LC   STN Files:   BIOSIS, CA, CAPLUS, CASREACT, CHEMLIST, CIN, IFICDB, IFIPAT,
       IFIUDB, PIRA, TOXCENTER, USPAT2, USPATFULL

     CM   1

     CRN  141-32-2
     CMF  C7 H12 O2
```



```
     CM   2

     CRN  97-88-1
     CMF  C8 H14 O2
```



```
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**
             220 REFERENCES IN FILE CA (1907 TO DATE)
               5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             220 REFERENCES IN FILE CAPLUS (1907 TO DATE)
```

REGISTRY search options

Search Terms	Field Code	Example
CAS Registry Number for the polymer	/RN (or none)	S 29035-74-3/RN
CAS Registry Numbers for the monomers	/CRN	S 141-32-2/CRN AND 97-88-1/CRN
Chemical name	/CN	S BIOFLEX/CN S 2-PROPENOIC ACID, 2-METHYL-, BUTYL ESTER?/CN
Chemical name fragments	/BI (or none)	S 2 PROPENOIC ACID AND 2-METHYL
Molecular formula for the monomer	/BI (or none)	S C8H14O2 AND C7H12O2
Complete molecular formula	/MF	S “(C8H14O2.C7H12O2)X”/MF
Class identifier	/CI	S PMS/CI
Polymer class term	/PCT	S POLYACRYLIC/PCT
Locator for the CAS Registry Number	/LC	S PROMT/LC
Structure		S L1 (L1 is a structure built online with the STRUCTURE command or uploaded from STN Express® or STN® on the Web℠)

The POLYLINK command is used to locate related REGISTRY records for condensation polymers that may be registered using either their monomers or structural repeating units (SRU).

```
=> FILE ZREGISTRY

=> S NYLON 6/CN
L1            1 NYLON 6/CN

=> POLYLINK L1
L2           24 POLYLINK L1
```

Overview of searching in CAplus

CAplus[SM] includes indexed documents as well as the most recent references in the process of being indexed. Records include bibliographic information, abstracts and indexing. Indexing includes supplementary terms (keywords), index entries consisting of CAS Registry Numbers for specific polymers, subject headings, roles for specific polymers and polymer class headings, and text phrases.

Sample record

```
AN   1995:610528  CAPLUS  Full-text
DN   123:11251
OREF 123:2293a,2296a
ED   Entered STN:  15 Jun 1995
TI   Manufacture of printed circuit boards with moisture-resistant and
     dielectric treatments
IN   Obara, Masakatsu; Oomori, Eiji
PA   Hitachi Chemical Co Ltd, Japan
SO   Jpn. Kokai Tokkyo Koho, 4 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
CC   38-3 (Plastics Fabrication and Uses)
     Section cross-reference(s): 76
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    --------------------   --------
PI   JP 06268357          A     19940922    JP 1993-51983          19930312
PRAI JP 1993-51983              19930312
CLASS
 PATENT NO.      CLASS  PATENT FAMILY CLASSIFICATION CODES
 --------------  -----  ----------------------------------------------
 JP 06268357     IPCI   H05K0003-28 [ICM,5]
                 IPCR   H05K0003-28 [I]
AB   The title process consists of applying alkyl (meth)acrylate (co)polymer with
     glass transition temperature 0-80° (e.g., Bu acrylate-Bu methacrylate
     copolymer), drying or hardening, applying polyurethane compns. (e.g., blend of
     Millionate MTL and Polybd R 45HT), and curing.
ST   moisture resistance printed circuit board; dielec printed circuit board;
     alkyl acrylate copolymer coated printed circuit; polyurethane coated
     printed circuit board
IT   Electric insulators and Dielectrics
     Water-resistant materials
        (manufacture of printed circuit boards with moisture-resistant and dielec.
        treatments)
IT   Urethane polymers, uses
     RL: DEV (Device component use); PRP (Properties); TEM (Technical or
     engineered material use); USES (Uses)
        (manufacture of printed circuit boards with moisture-resistant and dielec.
        treatments)
IT   Rubber, butadiene, uses
     RL: DEV (Device component use); PRP (Properties); TEM (Technical or
     engineered material use); USES (Uses)
        (hydroxy-terminated, polymer with MDI; manufacture of printed circuit
        boards with moisture-resistant and dielec. treatments)
```

```
IT   Electric circuits
        (printed, boards, manufacture of printed circuit boards with
        moisture-resistant and dielec. treatments)
IT   29035-74-3, Butyl acrylate-butyl methacrylate copolymer   61089-52-9D,
     Millionate MTL, polymer with polyols
     RL: DEV (Device component use); PRP (Properties); TEM (Technical or
     engineered material use); USES (Uses)
        (manufacture of printed circuit boards with moisture-resistant and dielec.
        treatments)
IT   9003-17-2
     RL: DEV (Device component use); PRP (Properties); TEM (Technical or
     engineered material use); USES (Uses)
        (rubber, hydroxy-terminated, polymer with MDI; manufacture of printed
        circuit boards with moisture-resistant and dielec. treatments)
```

CAplus search options

In addition to bibliographic information, you can use the following types of terms in your polymer searches in CAplus.

Search Terms	Field Code	Example
CAS Registry Numbers for specific polymers	/BI (or none)	S 29035-74-3
CAS Registry Numbers with roles	/BI, /RL	S 29035-74-3/USES,PRP S 29035-74-3 (L) (USES OR PRP)/RL
Index headings	/CT	S URETHANE POLYMERS/CT
Index headings for classes of polymers with roles	/CT, /RL	S URETHANE POLYMERS/CT (L) USES/RL
Words in the Basic Index	/BI (or none)	S ?ACRYLATE? (S) ?POLYMER? S CIRCUIT BOARD# AND POLYMER#

In addition, L-number answer sets from REGISTRY may be searched in CAplus (see examples on pages 10, 14, 16, 17 and 20).

Searching polymer chemical names in REGISTRY

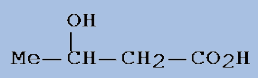
When you have a name for a specific substance, search it in REGISTRY to obtain its CAS Registry Number and other names, if available. Each substance is identified by the CA index name. In addition, other chemical names and trade names from the chemical literature may be included. All substance names are searched in the Chemical Name (/CN) field.

Use CAplus to access references indexed with the CAS Registry Number for the substance, as well as the most recent references that have not yet been indexed.

Find recent references to the biosynthetic preparation of poly(3-hydroxybutyrate)

```
=> FILE REGISTRY

=> E POLY(3-HYDROXYBUTYRATE)/CN 6
E1            1     POLY(3-HYDROXYBUTANOIC ACID-3-HYDROXYVALERIC ACID)/CN
E2            1     POLY(3-HYDROXYBUTYL VINYL ETHER)/CN
E3            1 --> POLY(3-HYDROXYBUTYRATE)/CN
E4            1     POLY(3-HYDROXYBUTYRATE) DEPOLYMERASE/CN
E5            1     POLY(3-HYDROXYBUTYRATE) DEPOLYMERASE (ALCALIGENES FAECALIS S
                    TRAIN AE122 CLONE PPD181/PPD3107 GENE PHAZ PRECURSOR)/CN
E6            2     POLY(3-HYDROXYBUTYRATE) DEPOLYMERASE (AZOARCUS STRAIN EBN1 G
                    ENE PHBZ)/CN

=> S E3
L1            1 "POLY(3-HYDROXYBUTYRATE)"/CN
```

```
=> D

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2013 ACS on STN
RN   26063-00-3  REGISTRY
ED   Entered STN:  16 Nov 1984
CN   Butanoic acid, 3-hydroxy-, homopolymer  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Butyric acid, 3-hydroxy-, homopolymer (6CI)
CN   Butyric acid, 3-hydroxy-, polyesters (8CI)
OTHER NAMES:
CN   (±)-3-Hydroxybutanoic acid homopolymer
CN   β-Hydroxybutanoic acid homopolymer
CN   β-Hydroxybutyric acid homopolymer
CN   β-Hydroxybutyric acid polymer
CN   3-Hydroxybutyric acid homopolymer
CN   3-Hydroxybutyric acid polymer
CN   Poly(β-hydroxybutyric acid)
CN   Poly(3-hydroxybutanoic acid)
CN   Poly(3-hydroxybutyrate)
CN   Poly(3-hydroxybutyric acid)
CN   Poly(DL-β-hydroxybutyric acid)
CN   Poly-β-hydroxybutyrate
CN   Poly-β-oxybutyrate
DR   25053-23-0, 61728-68-5
MF   (C4 H8 O3)x
CI   PMS, COM
PCT  Polyester, Polyester formed
LC   STN Files:   ADISNEWS, ANABSTR, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS,
       CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSNB, EMBASE, IFICDB, IFIPAT,
       IFIUDB, IPA, MEDLINE, MSDS-OHS, NAPRALERT, PIRA, TOXCENTER, USPAT2,
       USPATFULL, USPATOLD

**RELATED POLYMERS AVAILABLE WITH POLYLINK**

     CM   1

     CRN  300-85-6
     CMF  C4 H8 O3
```



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

           5285 REFERENCES IN FILE CA (1907 TO DATE)
            116 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
           5292 REFERENCES IN FILE CAPLUS (1907 TO DATE)
```

```
=> POLYLINK
ENTER (L1), L# OR ?:L1

L2            7 POLYLINK L1

=> D IN 1-7

L2   ANSWER 1 OF 7  REGISTRY  COPYRIGHT 2013 ACS on STN
IN   Oxirane, 2-methyl-, polymer with carbon monoxide, alternating

L2   ANSWER 2 OF 7  REGISTRY  COPYRIGHT 2013 ACS on STN
IN   Butanoic acid, 3-hydroxy-, phenyl ester, homopolymer (9CI)

L2   ANSWER 3 OF 7  REGISTRY  COPYRIGHT 2013 ACS on STN
IN   Butanoic acid, 3-hydroxy-, methyl ester, homopolymer (9CI)

L2   ANSWER 4 OF 7  REGISTRY  COPYRIGHT 2013 ACS on STN
IN   Butanoic acid, 3-hydroxy-, ethyl ester, homopolymer (9CI)

L2   ANSWER 5 OF 7  REGISTRY  COPYRIGHT 2013 ACS on STN
IN   2-Oxetanone, 4-methyl-, homopolymer

L2   ANSWER 6 OF 7  REGISTRY  COPYRIGHT 2013 ACS on STN
IN   Poly[oxy(1-methyl-3-oxo-1,3-propanediyl)]

L2   ANSWER 7 OF 7  REGISTRY  COPYRIGHT 2013 ACS on STN
IN   Butanoic acid, 3-hydroxy-, homopolymer

=> FILE CAPLUS

=> S (L2/BPN OR L2/BMF) AND PY>2000
L3         571 (L2/BPN OR L2/BMF) AND PY>2000

=> D 1-2 TI HITRN

L3   ANSWER 1 OF 571  CAPLUS  COPYRIGHT 2013 ACS on STN
TI   Renewable sugars from oil palm wastes
IT   26063-00-3P, Poly(3-hydroxybutyrate)   26744-04-7P
     RL: BMF (Bioindustrial manufacture); BIOL (Biological study);
     PREP (Preparation)
        (renewable sugars from oil palm wastes and uses)

L3   ANSWER 2 OF 571  CAPLUS  COPYRIGHT 2013 ACS on STN
TI   A mutants polyhydroxyalkane acid binding protein and the method for
     manufacturing of polyhydroxyalkane acid using them.
IT   26063-00-3P, Poly(3-hydroxybutyric acid)   26744-04-7P
     RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic
     preparation); BIOL (Biological study); PREP (Preparation)
        (microbial; mutants polyhydroxyalkane acid binding protein and method
        for manufacturing of polyhydroxyalkane acid using them)
```

=> **S (POLYHYDROXYLBUTYR? OR POLY(S)HYDROXYBUTYR?) AND NONINDEXED/FS**
L4 370 (POLYHYDROXYLBUTYR? OR POLY(S)HYDROXYBUTYR?) AND NONINDEXED/FS

=> **D ALL**

L4 ANSWER 1 OF 370 CAPLUS COPYRIGHT 2013 ACS on STN
AN 2013:603087 CAPLUS Full-text
ED Entered STN: 18 Apr 2013
TI Waste cooking oil as substrate for biosynthesis of **poly**(3-**hydroxybutyrate**) and **poly**(3-**hydroxybutyrate**-co-3-hydroxyhexanoate): turning waste into a value-added product
AU Kamilah, Hanisah; Tsuge, Takeharu; Yang, Tajul Aris; Kumar, Sudesh
CS Ecobiomaterial Research Laboratory, School of Biological Sciences, Universiti Sains Malaysia, 11800, Malay.
SO Malaysian Journal of Microbiology (2013), 9(1), 51-59
CODEN: MJMACL; ISSN: 2231-7538
URL: http://web.usm.my/mjm/issues/vol9/Research%207.pdf
PB Malaysian Society for Microbiology
DT Journal; (online computer file)
LA English
CC 60 (Waste Treatment and Disposal)
AB Aims: Improper disposal of domestic wastes, such as waste cooking oil (WCO), contributes to the deterioration of the environment and may lead to health problems. In this study, we evaluated the potential of plant-based WCO as a carbon source for the com. biosynthesis of the bio-plastics, **poly**(3-**hydroxybutyrate**) and **poly**(3-**hydroxybutyrate**-co-3- hydroxyhexanoate). The consumption of WCO for this purpose would mitigate their pollution of the environment at the same time. Methodol. and Results: WCO collected from several cafeterias in USM was tested as the carbon source for polyhydroxyalkanoates (PHA) production A selection of suitable nitrogen source was first conducted in order to obtain an acceptable number of dry cell weight (DCW) and PHA content. Urea was found to be a suitable nitrogen source for the two bacterial strains used in our study, Cupriavidus necator H16 and its transformed mutant, C. necator PHB-4 harboring the PHA synthase gene of Aeromonas caviae (PHB-4/pBBREE32d13). With WCO as the sole carbon source, C. necator H16 yielded a relatively good dry cell weight (DCW = 25.4 g/L), with 71 wt% **poly**(3-**hydroxybutyrate**) P(3HB) content. In comparison, the DCW obtained with fresh cooking oil (FCO) was 24.8 g/L. The production of **poly**(3-**hydroxybutyrate**-co-3-hydroxyhexanoate) [P(3HB-co-3HHx)] from WCO by the transformant C. necator PHB-4 was comparable, yielding a DCW of 22.3 g/L and P(3HB-co-3HHx) content of 85 wt%. Lipase activities for both bacterial strains reached a maximum after 72 h of cultivation when time profile was conducted. Conclusion, Significance and Impact of Study: The use of WCO as a carbon source in the biosynthesis of the bioplastic, PHA, turns a polluting domestic waste into a value-added biodegradable product. This renewable source material can thus be exploited for the low cost production of PHA.
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE CITED REFERENCES
(1) Akaraonye, E; Journal of Chemical Technology & Biotechnology 2010, V85, P732 CAPLUS
(2) Bhubalan, K; Malaysian Journal of Microbiology 2010, V6, P81
(3) Boekema, B; Applied and Environmental Microbiology 2007, V73, P3838 CAPLUS
(4) Braunegg, G; European Journal of Applied Microbiology and Biotechnology 1978, V6, P29 CAPLUS
(5) Cavalheiro, J; Process Biochemistry 2009, V44, P509 CAPLUS
(6) Doi, Y; Macromolecules 1995, V28, P4822 CAPLUS
(7) Fukui, T; Journal of Bacteriology 1997, V179, P4821 CAPLUS
(8) Kahar, P; Polymer Degradation and Stability 2004, V83, P79 CAPLUS
(9) Kilcawley, K; Enzyme and Microbial Technology 2002, V31, P310 CAPLUS

(10) Kulkarni, K; Biotechnology Letters 1999, V21, P897
(11) Kulkarni, M; Journal of Industrial and Engineering Chemistry Research 2006, V45, P2901 CAPLUS
(12) Lee, S; International Journal of Biological Macromolecules 1999, V25, P31 CAPLUS
(13) Loh, S; Journal of Oil Palm Research 2006, V18, P247
(14) Loo, C; Biotechnology Letters 2005, V27, P1405 CAPLUS
(15) Loo, C; Journal of Malaysia polymer 2007, V2, P31
(16) Mansfield, M; Canadian Journal of Microbiology 1995, V41, P44
(17) Ng, K; Polymer Degradation and Stability 2010, V95, P1365 CAPLUS
(18) Nikel, P; Journal of Applied and Environmental Microbiology 2006, V72, P3949 CAPLUS
(19) Potter, M; Microbiology Monographs 2006, V1, P109
(20) Rao, U; Biochemical Engineering Journal 2010, V49, P13 CAPLUS
(21) Satoh, H; Water Science and Technology 1998, V38, P103 CAPLUS
(22) Song, J; Journal of Microbiology and Biotechnology 2008, V18, P1408 CAPLUS
(23) Sudesh, K; Progress in Polymer Science 2000, V25, P1503 CAPLUS
(24) Taguchi, S; Biochemical Engineering Journal 2003, V16, P107 CAPLUS
(25) Tsuge, T; Journal of Bioscience and Bioengineering 2002, V94, P579 CAPLUS
(26) Tsuge, T; Macromolecular Bioscience 2004, V4, P238 CAPLUS
(27) Yamane, T; FEMS Microbiological Reviews 1992, V103, P257 CAPLUS
(28) Yunus, A; Journal of Asia Pacific Molecular Biology and Biotechnology 2008, V16, P1

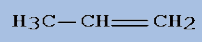
Searching CAS Registry Numbers for monomers in REGISTRY

In REGISTRY, each polymer is identified by its own CAS Registry Number in the RN field. Each monomer making up a polymer has its own record and is identified by its own CAS Registry Number in the CRN field. When you know the specific monomers used to prepare a polymer, you can search the CAS Registry Numbers for the monomers in the Component Registry Number (/CRN) field to locate polymers formed from those specific monomers.

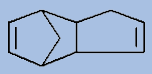
Find literature on the polymeric compositions of ethylene, propylene, and dicyclopentadiene

```
=> FILE REGISTRY

=> S ETHYLENE/CN
L1            1 ETHYLENE/CN

=> D RN

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2013 ACS on STN
RN   74-85-1  REGISTRY


=> S PROPYLENE/CN
L2            1 PROPYLENE/CN

=> D RN

L2   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2013 ACS on STN
RN   115-07-1  REGISTRY


=> S DICYCLOPENTADIENE/CN
L3            1 DICYCLOPENTADIENE/CN

=> D RN

L3   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2013 ACS on STN
RN   77-73-6  REGISTRY
```

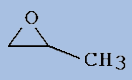
```
=> S 74-85-1/CRN AND 115-07-1/CRN AND 77-73-6/CRN
L4         195 74-85-1/CRN AND 115-07-1/CRN AND 77-73-6/CRN

=> D 2

L4   ANSWER 2 OF 195  REGISTRY  COPYRIGHT 2013 ACS on STN
RN   1415349-67-5  REGISTRY
ED   Entered STN:  21 Dec 2012
CN   Oxirane, 2-methyl-, polymer with ethene, oxirane, 1-propene and
     3a,4,7,7a-tetrahydro-4,7-methano-1H-indene, graft  (CA INDEX NAME)
OTHER NAMES:
CN   Dicyclopentadiene-ethylene-ethylene oxide-propylene-propylene oxide graft
     copolymer
MF   (C10 H12 . C3 H6 O . C3 H6 . C2 H4 O . C2 H4)x
CI   PMS
PCT  Polyether, Polyether formed, Polyolefin, Polyother
SR   CA
LC   STN Files:   CA, CAPLUS

     CM   1

     CRN  115-07-1
     CMF  C3 H6
```



```
     CM   2

     CRN  77-73-6
     CMF  C10 H12
```



```
     CM   3

     CRN  75-56-9
     CMF  C3 H6 O
```



```
     CM   4

     CRN  75-21-8
     CMF  C2 H4 O
```

CM 5

CRN 74-85-1
CMF C2 H4

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Searching polymer class terms in REGISTRY

You can easily search for broad classes of polymers by using polymer class terms in REGISTRY. Polymer class terms are assigned to polymers in REGISTRY by analyzing the types of linkages in the polymer backbone. You can search polymer class terms in the /PCT field of REGISTRY.

The following polymer class terms are available:

Amino resin
Chloropolymer
Double strand
Epoxy resin
Fluoropolymer
Manual component
Manual registration
Other
Phenolic resin
Polyacetylene
Polyacrylic
Polyamic acid
Polyamic acid formed
Polyamide
Polyamide formed
Polyamine
Polyamine formed
Polyanhydride
Polyanhydride formed
Polyazomethine
Polyazomethine formed
Polybenzimidazole
Polybenzimidazole formed
Polybenzoxazole
Polybenzoxazole formed
Polycarbodiimide
Polycarbodiimide formed
Polycarbonate
Polycarbonate formed
Polycyanurate
Polycyanurate formed
Polyester
Polyester formed
Polyether
Polyether formed
Polyhydrazide
Polyhydrazide formed
Polyimide
Polyimide formed
Polyionene
Polyionene formed
Polyisocyanurate
Polyisocyanurate formed
Polyketone
Polyketone formed
Polynucleotide
Polyolefin
Polyother
Polyother only
Polyphenyl
Polyphenyl formed
Polyphosphazene
Polyphosphazene formed
Polyquinoxaline
Polyquinoxaline formed
Polystyrene
Polysulfide
Polysulfide formed
Polysulfonamide
Polysulfonamide formed
Polysulfone
Polysulfone formed
Polythioester
Polythioester formed
Polythioether
Polythioether formed
Polyurea
Polyurea formed
Polyurethane
Polyurethane formed
Polyvinyl

Find references to liquid crystalline polyazomethines

```
=> FILE REGISTRY

=> S POLYAZOMETHINE/PCT
L1        7833 POLYAZOMETHINE/PCT

=> FILE CAPLUS

=> S L1 (S) LIQ? CRYST?
L2         264 L1 (S) LIQ? CRYST?

=> D TI HITRN

L2   ANSWER 1 OF 264  CAPLUS  COPYRIGHT 2013 ACS on STN
TI   In-situ analysis of the structural formation process of liquid-crystalline
     epoxy thermosets by simultaneous SAXS/WAXS measurements using synchrotron
     radiation
IT   214267-89-7, 4,4'-Diaminodiphenylmethane-Terephthalylidene-bis-
     (4-amino-3-methylphenol) diglycidyl ether copolymer   410546-84-8
     , m-Phenylenediamine-Terephthalylidene-bis-(4-amino-3-methylphenol)
     diglycidyl ether copolymer   410546-86-0,
     4,4'-Diaminodiphenylethane-Terephthalylidene-bis-(4-amino-3-methylphenol)
     diglycidyl ether copolymer
     RL: PRP (Properties)
        (liquid crystalline; in-situ anal. of structural formation
        process of liquid-crystalline epoxy thermosets by
        simultaneous SAXS/WAXS measurements using synchrotron radiation)


=> S (?POLYAZOMETHIN? OR POLY(A)AZOMETHIN? OR AZOMETHIN? ?POLYMER?) (S) LIQ? CRYST?
L3         203 (?POLYAZOMETHIN? OR POLY(A)AZOMETHIN? OR AZOMETHIN? ?POLYMER?)
               (S) LIQ? CRYST?

=> S L2 OR L3
L4         346 L2 OR L3

=> D HIT 1

L4   ANSWER 1 OF 346  CAPLUS  COPYRIGHT 2013 ACS on STN
IT   214267-89-7, 4,4'-Diaminodiphenylmethane-Terephthalylidene-bis-
     (4-amino-3-methylphenol) diglycidyl ether copolymer   410546-84-8
     , m-Phenylenediamine-Terephthalylidene-bis-(4-amino-3-methylphenol)
     diglycidyl ether copolymer   410546-86-0,
     4,4'-Diaminodiphenylethane-Terephthalylidene-bis-(4-amino-3-methylphenol)
     diglycidyl ether copolymer
     RL: PRP (Properties)
        (liquid crystalline; in-situ anal. of structural formation
        process of liquid-crystalline epoxy thermosets by
        simultaneous SAXS/WAXS measurements using synchrotron radiation)
```

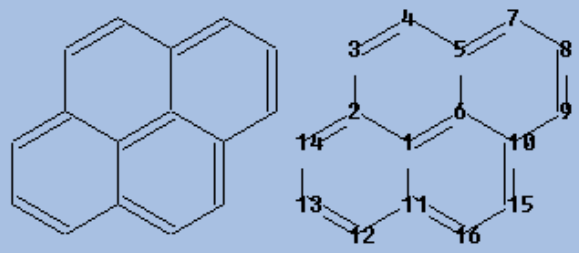
Searching structures in REGISTRY

Most polymers in REGISTRY have structures that you can search using complete structures or structure fragments.

You can conduct a structure search on the whole CAS REGISTRY or on a subset of REGISTRY. Polymer class terms are especially useful in defining a subset for polymer searches.

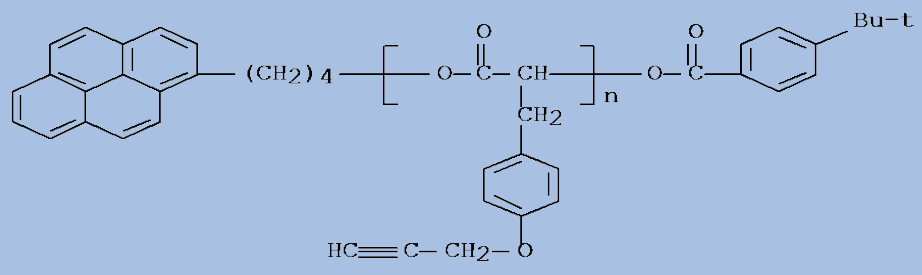
Find references to polyesters containing a pyrene structural fragment

```
=> FILE REGISTRY
=>
Uploading q:\My Documents\STN Express 8.5\Queries\pyrene.str
```




```
L1      STRUCTURE UPLOADED

=> S L1 SAM SSS
SAMPLE SEARCH INITIATED 11:48:43
SAMPLE SCREEN SEARCH COMPLETED -    21242 TO ITERATE

100.0% PROCESSED    21242 ITERATIONS                          50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:       416109 TO   433571
PROJECTED ANSWERS:           49136 TO    55264

L2          50 SEA SSS SAM L1

=> S POLYESTER/PCT
L3      272533 POLYESTER/PCT

=> S L1 SUBSET=L3 SAM SSS
SAMPLE SUBSET SEARCH INITIATED 11:49:14
SAMPLE SUBSET SCREEN SEARCH COMPLETED -       65 TO ITERATE

100.0% PROCESSED       65 ITERATIONS                          12 ANSWERS
SEARCH TIME: 00.00.01

PROJECTIONS (WITHIN SPECIFIED SUBSET):          ONLINE  **COMPLETE**
PROJECTED ITERATIONS (WITHIN SPECIFIED SUBSET):         817 TO     1783
PROJECTED ANSWERS (WITHIN SPECIFIED SUBSET):             33 TO      447

L4          12 SEA SUB=L3 SSS SAM L1
```

```
=> S L1 SUBSET=L3 SSS FULL
FULL SUBSET SEARCH INITIATED 11:49:52
FULL SUBSET SCREEN SEARCH COMPLETED -     1125 TO ITERATE

100.0% PROCESSED     1125 ITERATIONS                          188 ANSWERS
SEARCH TIME: 00.00.01

L5          188 SEA SUB=L3 SSS FUL L1

=> POLYLINK L5


L6          205 POLYLINK L5

=> FILE CAPLUS

=> S L6
L7         127 L6

=> D 10 BIB HITSTR

L7   ANSWER 10 OF 127  CAPLUS  COPYRIGHT 2013 ACS on STN
AN   2012:1576455  CAPLUS  Full-text
DN   157:693218
TI   Facile Functionalization of Polyesters through Thiol-yne Chemistry for the
     Design of Degradable, Cell-Penetrating and Gene Delivery Dual-Functional
     Agents
AU   Zhang, Zhonghai; Yin, Lichen; Xu, Yunxiang; Tong, Rong; Lu, Yanbing; Ren,
     Jie; Cheng, Jianjun
CS   Department of Materials Science and Engineering, University of Illinois at
     Urbana-Champaign, Urbana, IL, 61801, USA
SO   Biomacromolecules (2012), 13(11), 3456-3462
     CODEN: BOMAF6; ISSN: 1525-7797
PB   American Chemical Society
DT   Journal; (online computer file)
LA   English
OS   CASREACT 157:693218
IT   1404457-29-9DP, click chemical reactions with mercaptoethanolamine,
     rhodamine-labeled
     RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);
     BIOL (Biological study); PREP (Preparation); USES (Uses)
        (facile functionalization of polyesters through thiol-yne chemical for
        design of degradable, cell-penetrating and gene delivery
        dual-functional agents)
RN   1404457-29-9  CAPLUS
CN   INDEX NAME NOT YET ASSIGNED
```



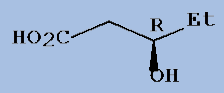
```
      RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
      (Reactant or reagent)
         (facile functionalization of polyesters through thiol-yne chem. for
         design of degradable, cell-penetrating and gene delivery
         dual-functional agents
OSC.G   1     THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
RE.CNT  78    THERE ARE 78 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

Searching for patents on a polymer

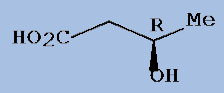
When searching for patents on a specific polymer, you can take advantage of in-depth indexing of specific compounds with CAS Registry Numbers in CAS databases. Additionally, the TRANSFER command lets you easily extend the search to find related patents in other patent databases. With TRANSFER you can extract patent and application numbers from the CAplus answer set and automatically search them in other databases. Patent documents with the same patent numbers can then be removed as duplicates.

Find patents on the preparation of a biodegradable polymer known as Biopol

```
=> FILE REGISTRY

=> S BIOPOL/CN
L1           1 BIOPOL/CN

=> D SCAN

L1   1 ANSWERS   REGISTRY  COPYRIGHT 2013 ACS on STN
IN   Pentanoic acid, 3-hydroxy-, (3R)-, polymer with (3R)-3-hydroxybutanoic
     acid, isotactic
MF   (C5 H10 O3 . C4 H8 O3)x
CI   PMS, COM

     CM   1

Absolute stereochemistry.
```




```
     CM   2

Absolute stereochemistry.  Rotation (-).
```




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


ALL ANSWERS HAVE BEEN SCANNED


=> FILE CAPLUS; S L1/PREP AND PATENT/DT
L2          56 L1/PREP AND PATENT/DT
```

```
=> FILE WPINDEX USPATFULL

=> TRANSFER
ENTER L# (L2) OR ?:L2
ENTER ANSWER NUMBERS, RANGES (1-), OR ?:1-
ENTER DISPLAY FIELDS (TI) OR ?:PN, APPS
L3          TRANSFER L2 1- PN, APPS :     465 TERMS
L4          73 FILE WPINDEX
L5          49 FILE USPATFULL

TOTAL FOR ALL FILES
L6         122 L3

=> SET DUPORDER FILE
SET COMMAND COMPLETED

=> DUP REM L2 L6
L7          119 DUP REM L2 L6 (59 DUPLICATES REMOVED)
                ANSWERS '1-56' FROM FILE CAPLUS
                ANSWERS '57-84' FROM FILE WPINDEX
                ANSWERS '85-119' FROM FILE USPATFULL

=> D 58

L7   ANSWER 58 OF 119  WPINDEX COPYRIGHT 2013       THOMSON REUTERS on STN
     DUPLICATE 23
AN   2007-880999 [200781]   WPINDEX  Full-text
CR   2006-075474; 2007-353447
DNC  C2007-300513 [200781]
TI   Polyhydroxyalkanoate production as alternative petrochemical based
     plastics, involves using volatile organic compounds, and contacting
     oxidized compound with polyhydroxyalkanoate -synthesizing microorganisms
DC   A23; D16
IN   HERREMA M; KIMMEL K; HERREMA M D
PA   (NEWL-N) NEWLIGHT TECHNOLOGIES LLC; (HERR-N) HERREMA-KIMMEL LLC
CYC  117
PI   US 20070202581  A1 20070830 (200781)* EN  13[1]
     WO 2008103134   A2 20080828 (200857)  EN
     WO 2008103134   A3 20081204 (200903)  EN
     US 7579176      B2 20090825 (200956)  EN
     AU 2007347448   A1 20080828 (200965)  EN
     EP 2121947      A2 20091125 (200977)  EN
     CA 2678787      A1 20080928 (200982)  EN
     KR 2009129430   A  20091216 (201001)  KO
     CN 101646778    A  20100210 (201015)  ZH
     MX 2009008849   A1 20100228 (201032)  ES
     IN 2009DN05984  A  20100618 (201053)  EN
     MX 283116       B  20110119 (201127)  ES
     AU 2007347448   B2 20120927 (201270)  EN
ADT  US 20070202581 A1 CIP of US 2003-687272 20031015; US 20070202581 A1
     Provisional US 2004-603857P 20040824; US 20070202581 A1 CIP of US
     2005-208808 20050822; US 20070202581 A1 Provisional US 2005-721938P
     20050929; US 20070202581 A1 CIP of WO 2005-US47415 20051229; US
     20070202581 A1 US 2007-676928 20070220; US 7579176 B2 CIP of US
     2003-687272 20031015; US 7579176 B2 Provisional US 2004-603857P
     20040824; US 7579176 B2 CIP of US 2005-208808 20050822; US 7579176 B2
```

Provisional **US 2005-721938P 20050929**; US 7579176 B2 CIP of **WO 2005-US47415 20051229**; US 7579176 B2 US 2007-676928 20070220; AU 2007347448 A1 AU 2007-347448 20070221; CA 2678787 A1 CA 2007-2678787 20070221; CN 101646778 A CN 2007-80052515 20070221; EP 2121947 A2 EP 2007-751256 20070221; WO 2008103134 A2 WO 2007-US4484 20070221; WO 2008103134 A3 WO 2007-US4484 20070221; EP 2121947 A2 PCT Application WO 2007-US4484 20070221; CA 2678787 A1 PCT Application WO 2007-US4484 20070221; KR 2009129430 A PCT Application WO 2007-US4484 20070221; CN 101646778 A PCT Application WO 2007-US4484 20070221; MX 2009008849 A1 PCT Application WO 2007-US4484 20070221; IN 2009DN05984 A PCT Application WO 2007-US4484 20070221; MX 283116 B PCT Application WO 2007-US4484 20070221; CA 2678787 A1 PCT Nat. Entry CA 2007-2678787 20090819; KR 2009129430 A KR 2009-719406 20070221; MX 2009008849 A1 MX 2009-8849 20090819; MX 283116 B MX 2009-8849 20090819; IN 2009DN05984 A IN 2009-DN5984 20090917; KR 2009129430 A PCT Nat. Entry KR 2009-719406 20090917; AU 2007347448 B2 AU 2007-347448 20070221; AU 2007347448 B2 PCT Application WO 2007-US4484 20070221

FDT US 20070202581 A1 CIP of US 6982161 B; US 7579176 B2 CIP of US 6982161 B; AU 2007347448 A1 Based on WO 2008103134 A; EP 2121947 A2 Based on WO 2008103134 A; CA 2678787 A1 Based on WO 2008103134 A; KR 2009129430 A Based on WO 2008103134 A; CN 101646778 A Based on WO 2008103134 A; MX 2009008849 A1 Based on WO 2008103134 A; MX 283116 B Based on WO 2008103134 A; AU 2007347448 B2 Based on WO 2008103134 A

PRAI US 2007-676928 20070220
WO 2005-US47415 20051229
US 2005-721938P 20050929
US 2005-208808 20050822
US 2004-603857P 20040824
US 2003-687272 20031015

IC ICM C12P007-02

IPCI A62D0003-00 [I,C]; A62D0003-02 [I,A]; C12N0001-20 [I,A]; C12N0001-20 [I,A]; C12N0001-20 [N,A]; C12N0001-20 [I,C]; C12N0001-20 [I,C]; C12N0001-20 [N,C]; C12N0001-26 [N,A]; C12N0001-26 [N,C]; C12N0001-32 [I,A]; C12N0001-32 [I,A]; C12N0001-32 [I,C]; C12N0001-32 [I,C]; C12N0001-32 [I,C]; C12N0009-02 [I,A]; C12N0009-02 [I,C]; C12P0007-02 [I,A]; C12P0007-02 [I,A]; C12P0007-02 [I,C]; C12P0007-02 [I,C]; C12P0007-02 [I,C]; C12P0007-40 [I,C]; C12P0007-42 [I,A]; C12P0007-44 [I,A]; C12P0007-62 [I,A]; C12P0007-62 [I,A]; C12P0007-62 [I,A]; C12P0007-62 [I,C]; C12P0007-62 [I,C]

Searching for patents on a class of polymers

When searching for patents on classes of polymers, you can use database-specific indexing terms. For example, CAS Registry Numbers, as well as subject indexing terms for classes of polymers, are available in CAS databases. In some patent databases (e.g., WPIDS) access to special indexing is available only to subscribers.

You can also conduct searches on classes of polymers by using terms in the Basic Index of each database.

What companies have the greatest number of patents issued since 2010 on photographic or optical applications of polyimides?

```
=> FILE CAPLUS WPINDEX

=> S (POLYIMIDE? OR POLY (A) IMIDE? OR IMIDE? POLYMER?) (S) (OPTIC? OR PHOTO?)
   AND P/DT AND PY.B>2010
L1          907 FILE CAPLUS
L2          819 FILE WPINDEX

TOTAL FOR ALL FILES
L3         1726 (POLYIMIDE? OR POLY (A) IMIDE? OR IMIDE? POLYMER?) (S) (OPTIC?
                OR PHOTO?) AND P/DT AND PY.B>2010

=> SET DUPORDER FILE
SET COMMAND COMPLETED

=> DUP REM L3
PROCESSING COMPLETED FOR L3
L4          1439 DUP REM L3 (287 DUPLICATES REMOVED)
                 ANSWERS '1-907' FROM FILE CAPLUS
                 ANSWERS '908-1439' FROM FILE WPINDEX

=> ANALYZE L4
ENTER ANSWER NUMBER OR RANGE (1-):1-
ENTER DISPLAY CODE (FILEDEFAULT) OR ?:PA
L5           ANALYZE L4 1- PA :     940 TERMS
```

```
=> D TOP20
L5          ANALYZE L4 1- PA :     940 TERMS

TERM #   # OCC  # DOC  % DOC PA
------ ------- ------ ------ ---------------
     1      30     30   2.08 KANEKA CORP JAPAN
     2      25     25   1.74 TORAY INDUSTRIES INC JAPAN
     3      24     24   1.67 DAI NIPPON PRINTING CO LTD JAPAN
     4      22     22   1.53 ASAHI KASEI E MATERIALS CORP JAPAN
     5      21     21   1.46 HITACHI CHEMICAL CO LTD JAPAN
     6      16     16   1.11 CHEIL INDUSTRIES INC S KOREA
     7      16     16   1.11 LG CHEM LTD S KOREA
     8      16     16   1.11 NISSAN CHEMICAL INDUSTRIES LTD JAPAN
     9      15     15   1.04 SUMITOMO ELECTRIC INDUSTRIES LTD JAPAN
    10      14     14   0.97 E I DU PONT DE NEMOURS AND COMPANY USA
    11      14     14   0.97 INT BUSINESS MACHINES CORP
    12      14     14   0.97 JSR CORP
    13      14     14   0.97 KOLON INDUSTRIES INC S KOREA
    14      13     13   0.90 LG DISPLAY CO LTD
    15      12     12   0.83 FUJIFILM CORPORATION JAPAN
    16      11     11   0.76 JSR CORP JAPAN
    17      11     11   0.76 KANEKA CORP
    18      10     10   0.69 FUJIFILM CORP JAPAN
    19      10     10   0.69 LG DISPLAY CO LTD S KOREA
    20      10     10   0.69 LG INNOTEK CO LTD S KOREA
    21      10     10   0.69 NIPPON SHOKUBAI CO LTD JAPAN
    22      10     10   0.69 UBE INDUSTRIES LTD JAPAN
    23      10     10   0.69 XEROX CORP
```

Searching for business news on a polymer

When searching for business news on specific polymers, use trade names and other names, as well as CAS Registry Numbers, when available.

Find information on commercial applications of Biopol

```
=> FILE CBNB CIN

=> S 80181-31-3 OR BIOPOL
L1         194 FILE CBNB
L2          48 FILE CIN

TOTAL FOR ALL FILES
L3         242 80181-31-3 OR BIOPOL

=> D KWIC 17

L3  ANSWER 17 OF 242  CBNB  COPYRIGHT 2013 EI on STN
AB  .  .  .  1,3-propanediol (PDO) being produced by DuPont for polymerisation
    with purified terephthalic acid. Metabolix now owns the technology for
    production of Biopol, the commercially available PHA polymer.Initially,
    Cargill Dow is aiming to produce materials for the packaging and fibres
    sectors. The.  .  .
RN  26100-51-6; 504-63-2; 80181-31-3
```

Searching for business news on a class of polymers

Searches for business news on a class of polymers can be done in the Basic Index of the business databases on STN. Use the proximity operators for precision. Use a cluster of databases with the INDEX command to find which databases contain information on your topic, before searching in the databases.

Provide an overview of recent business news on the flexible plastics produced with metallocene catalyst technology

```
=> SET CLUSTER
ENTER CLUSTER NAME OR (?):.POLYNEWS
ENTER LIST OF FILE NAMES OR (?):CBNB CIN PQSCITECH
MORE FILES, (NONE) OR ?:NONE
CLUSTER '.POLYNEWS' DEFINED AS 'CBNB, CIN PQSCITECH'
SET COMMAND COMPLETED

=> INDEX .POLYNEWS

=> S METALLOCENE# (S) (POLYMER# OR PLASTIC#) AND PY>2002
        256   FILE CBNB
         19   FILE CIN
        310   FILE PQSCITECH

   3 FILES HAVE ONE OR MORE ANSWERS,    3 FILES SEARCHED IN STNINDEX

L1   QUE METALLOCENE# (S)(POLYMER# OR PLASTIC#)AND PY>2002

=> FILE HITS

=> S L1
L2         310 FILE PQSCITECH
L3         256 FILE CBNB
L4          19 FILE CIN

TOTAL FOR ALL FILES
L5         585 L1

=> D L2 HIT 2-3
```

```
L2   ANSWER 2 OF 310 PQSCITECH COPYRIGHT 2013 ProQuest LCC on STN.
PD   11 Dec 2012
TI   Nano-linked metallocene catalyst compositions and their polymer products

L2   ANSWER 3 OF 310 PQSCITECH COPYRIGHT 2013 ProQuest LCC on STN.
AB   Copolymerizations of ethylene and -olefins (1-hexene and 1-octene) using a
     supported catalyst derived from the activation of a zirconocene aluminohydride
     complex with PMAO and MMAO are reported. The supported (nBu-
     Cp2ZrH3AlH2)/SiO2/MAO system was evaluated by high-throughput techniques, in
     order to find approaches to the optimal copolymerization conditions. The
     polymerization reactions were carried out in a parallel polymerization
     reactors system (PPR) by Symyx Technologies, Inc.  The screening of the
     activity of the supported system and the molecular weight (MW) of the polymers
     and copolymers obtained in the PPR, allowed us to optimize copolymerization
     conditions, like hydrogen (H2) addition to control MW and molecular weight
                                        •
                                        •
                                        •
     and MW, and low comonomer incorporation (from 0.3 to 1.3 mol-%, determined by
     13C NMR). However, the crystallinity (Xc), thermal properties (Tc and Tm) and
     densities of the polyethylenes obtained with the supported (nBu-
     Cp2ZrH3AlH2)/SiO2/MAO system, were significantly modified, approaching those
     of metallocene linear low-density polyethylenes (mLLDPE).
PD   Oct 2009

=> D L3 HIT 1
L3   ANSWER 1 OF 256  CBNB  COPYRIGHT 2013 EI on STN
PD   20121126
AB   US-based Tribute Energy Inc has been named as the first non-exclusive
     distributor of LG Chem Ltd's Lucene brand polyolefin elastomer in North
     America. The Lucene elastomer is produced using the Korean company's
     proprietary metallocene catalyst in solution process. Advantages of the rubber
     include excellent impact and elastic properties, and lower heat-sealing
     temperature compared with similar polyolefin elastomers. The Lucene polyolefin
     elastomer will be offers in various grades and types, with key applications in
     the automotive, film and footwear sectors. Original Source: Rubber and
     Plastics News, http://www.rubbernews.com/, Copyright Crain Communications Inc
     2012.

=> D L4 HIT 1
L4   ANSWER 1 OF 19  CIN  COPYRIGHT 2013 ACS on STN
TI   Mitsui Chem's prime polymer expanding Singapore metallocene LLDPE business
SO   PetroChem. News, 19-26 Nov. 2012 (20121126), 50(47-48), p. 3.  ISSN: 0031-
     6342; CODEN: PNEEAI.
AB   Mitsui Chemical's wholly-owned Prime Polymer Co. subsidiary is expanding its
     metallocene business operations with the creation of a sales company and
     expanded production facilities for its Evolue metallocene linear low-density
     polyethylene (LLDPE) in Singapore. The new company, with a capital of $115
     million, will build a 300,000-t/y LLDPE plant on Jurong Island, Singapore.
```

Searching for regulatory information

CHEMLIST® (Regulated Chemicals Listing) contains information about chemical substances listed on national and international chemical inventories and regulatory lists. Chemical and trade names are searched in the Chemical Name (/CN) field.

I have a trade name Alathon 704 for a polymer. What is its chemical composition? Is it listed on any inventory?

```
=> FILE CHEMLIST

=> S ALATHON 704/CN
L1           1 ALATHON 704/CN

=> D

L1    ANSWER 1 of 1  CHEMLIST  COPYRIGHT 2013 ACS on STN
AN    15411  CHEMLIST
RN    9010-86-0
CN    2-Propenoic acid, ethyl ester, polymer with ethene (TSCA, DSL, REACH,
      ENCS, AICS, PICCS, ASIA-PAC, NZIoC)
                                        .
                                        .
                                        .
      Acrylic acid ethyl ester, polymer with ethylene
      Alathon 704
      Amplify EA 100
                                        .
                                        .
                                        .
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
      DISPLAY
FS    ASIA-PACIFIC: ASIA-PAC;  AUSTRALIA: AICS;  CANADA: DSL;  EU: REACH;
      JAPAN: ENCS;  KOREA: ECL;  NEW ZEALAND: NZIoC;  PHILIPPINES: PICCS;  USA:
      FDA, TSCA
CBI   Public
CFR   21 CFR Part 177
SC    21 CFR 177.1320
RLN   EC No.:      618-458-0
      ENCS No.:      6-19X
      ECL Serial No.:      KE-29512
INV   On TSCA Inventory
        January 2013 TSCA Inventory.
          EPA Flags:
            XU  Exempt from Update Rule
                                        .
                                        .
                                        .
FA    RN      CAS Registry Number
      RLN     Regulatory List Number
      INV     Inventory Status
      FDA     FDA Regulations
```

For more information

To find information on:	Refer to:
STN database content and search and display options	STN Database Summary Sheets at: http://www.cas.org/products/stn/dbss or enter HELP DIRECTORY at an arrow prompt in the database for a list of online help messages.
STN commands, such as ANALYZE, TRANSFER	STN quick reference cards and guides provide step-by-step procedures and examples for features and commands: http://www.cas.org/training/stn/commands-qrc
CAS REGISTRY: Finding CAS Registry Numbers	Searching for CAS Registry Number information can be found in the CAS REGISTRY section: http://www.cas.org/training/stn/database-specific
CAS roles	CAS Roles in CA/CAplus Quick Reference Card can be found on: http://www.cas.org/training/stn/commands-qrc
Patent searching on STN	For more information on patent-specific topics view the quick reference cards on: http://www.cas.org/training/stn/commands-qrc
Polymer searching on STN, including POLYLINK	For additional information on polymer searching, view the searching for polymers section of Substance and Sequence Searching on STN Training at: http://www.cas.org/training/stn/substance

STN Contact Information

CAS Customer Center:
Phone: 1-800-753-4227 (North America)
+1-614-447-3700 (outside North America)
Fax: +1-614-447-3751
Email: help@cas.org
Internet: www.cas.org

In Europe for STN:
Contact FIZ Karlsruhe

Phone: +49-7247-808-555
Fax: +49-7247-808-259
Email: helpdesk@fiz-karlsruhe.de
Internet: www.stn-international.com

In Japan for STN:
Contact JAICI (Japan Association for International Chemical Information)

Phone: +81-3-5978-3601
(Technical Service)
+81-3-5978-3621
(Customer Service)
Fax: +81-3-5978-4090
Email form: www.jaici.or.jp/inquiry.html
(Customer and Technical Service)
Internet: www.jaici.or.jp