

Using the Rapra Classification Code to Find the Most Relevant Information in RAPRA Polymer Library (Dialog File 323)

Search Aid : Using the Rapra Classification Code

Searching a database is basically a process of matching your query terms against the words in a document. However, if the amount of information retrieved is overwhelming or more than can be easily or rapidly scanned, you need to be able to narrow down the search. You also want the abstracts you do actually look at to be the most relevant ones to your needs. One effective way to do this in RAPRA Polymer Library ([File 323 on Dialog](#)) is to make use of the Rapra Classification Code.

The original version of the code for the systematic classification of scientific, technological and commercial information on rubber was devised by the late T.R. Dawson for the use of the Information Centre of the Research Association of British Rubber Manufacturers known today as Smithers Rapra Technology Ltd. In the early 1960's Rapra widened the scope of its information service to incorporate all plastics. This necessitated a revision of the classification and in 1964, Rapra, in collaboration with the British Plastics Federation and other industrial organizations developed a new code. In the intervening years since 1964, many amendments and improvements have been developed, and the latest version of the code was published in 1994.

The code employs a mixed notation of numbers and letters for the identification of classes and is arranged in a decimal order, with numbers taking precedence over letters. The main classes are as follows:

- 0 General
- 1 Industrial Organization and Administration; Economics
- 2 Machinery, Plant, Test Equipment and Instruments
- 3 Raw Materials, including Monomers
- 4 Polymers and Resins
- 5 Compounding Ingredients (Additives) and Solvents; Processing Aids
- 6 Applications of Polymers
- 7 Designs; Standards and Specifications; Sources and Production; Polymerization
- 8 Processing and Treatment
- 9 Properties and Testing

Each of these codes is then further subdivided and can in fact become quite complicated or detailed. For example:

4	POLYMERS AND RESINS
...	
41	NATURAL POLYMERIC MATERIALS
...	
42	ADDITION POLYMERS
...	
43	ELIMINATION (CONDENSATION) POLYMERS
...	
44	ELIMINATION (CONDENSATION) RESINS
44C	PHENOLIC RESINS
44C1	Monohydric phenol aldehyde resins; Novolaks, resols
44C11	Phenol formaldehyde
44C12	Phenol furfural
44C13	Cresol formaldehyde; cresylic resins

44C14 Xylenol formaldehyde
 44C15 Cashew nut shell resins
 44C2 Polyhydric phenol aldehyde resins
 44C21 Resorcinol formaldehyde

In the following example you can see how the classification code can be used in combination with keywords (thesaurus terms) for improved precision. For example, to find articles on polyurethane (PU) foam a search in the descriptor field would use the following terms:

S (PU OR POLYURETHANE)/DE AND FOAM/DE (for Dialog)
 ..S (PU OR POLYURETHANE).DE. AND FOAM.DE. (for DataStar)

This search will undoubtedly retrieve articles describing PU foams, but would also discover articles discussing polystyrene foam and polyurethane adhesives because the two concepts of PU and FOAM are both included. Alternatively a retrieved article may be discussing foams in general with only a peripheral mention of PU. Equally well it may be an article about PU with only a cursory mention of the foam applications of PU.

```
?SELECT (PU OR POLYURETHANE)/DE AND FOAM/DE
      46705 PU/DE
      52089 POLYURETHANE/DE
      36501 FOAM/DE
S1 16666 (PU OR POLYURETHANE)/DE AND FOAM/DE

?TYPE S1/TI/1-5

1/TI/1
DIALOG(R)File 323: RAPRA Polymer Library
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Title: HEAT RELEASE TESTING OF CONSUMER PRODUCTS

1/TI/2
DIALOG(R)File 323: RAPRA Polymer Library
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Title: SOFT-TOUCH EXACTLY WHERE IT IS NEEDED

1/TI/3
DIALOG(R)File 323: RAPRA Polymer Library
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Title: SPRAYING HIGHLY FILLED PU FORMULATIONS, INNOVATIVE TECHNOLOGY FOR AUTOMOTIVE DASH INSULATORS

1/TI/4
DIALOG(R)File 323: RAPRA Polymer Library
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Title: CHEMICAL RECYCLING OF POLYURETHANES. II
```

1/TI/5

DIALOG(R)File 323: RAPRA Polymer Library
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Title: STRICTLY LIGHTWEIGHT - ARTEGA GT

?TYPE S1/7/1-2

1/7/1

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01045525

Title: HEAT RELEASE TESTING OF CONSUMER PRODUCTS

Author: Hirschler M M

Corporate Source: GBH International

Source: Journal of ASTM International ; 6, No.6, June 2009, Paper ID: JAI102258, pp.25

Journal Announcement: 200909 **RAPRA Update:** 200917

Document Type: Journal Article

Language: English

Subfile: (R) RAPRA

Abstract: The best way to ensure that a consumer product exhibits fire performance associated with appropriately low fire hazard is to conduct full-scale heat release tests, where all the interactions between the various components can be brought out. The most critical property to be measured is the heat release in those tests. In this paper, the results of several series of full-scale heat release tests are presented. These tests were conducted on mattresses, upholstered furniture, wall coverings, plastic refuse bins, Christmas trees, and a children's playground structure. Some small-scale heat release tests are also described. All the full-scale heat release fire tests on mattresses, upholstered furniture, wall coverings, and playground structure were conducted indoors, usually in standard rooms (such as the ASTM room), and heat release (by oxygen consumption calorimetry) as well as smoke release was measured, while also making various other measurements and visual observations. The refuse bin test was conducted in the same standard room, but only heat release was measured. The small-scale tests were conducted using standard fire test equipment such as the cone calorimeter. Tests conducted by NIST on mattresses, a passenger minivan and a refuse bin were conducted indoors under a hood. The other full-scale tests on passenger road vehicles were conducted outdoors. The results indicate that regulations permit the use of some consumer products in present use even though they are unsafe and that improved fire safety alternatives exist. Recommendations are presented and reference is made to predictive work. Polymeric materials studied include PU foam, saturated polyester, polychloroprene, phenolic foam, polyimide foam, PVC and PE. 69 refs.

1/7/2

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01045523

Title: SOFT-TOUCH EXACTLY WHERE IT IS NEEDED

Source: PU Magazine ; 6, No.3, May-June 2009, p.173

Journal Announcement: 200909 **RAPRA Update:** 200917

Document Type: Journal Article

Language: English

Subfile: (R) RAPRA

Abstract: The new Varysoft slide-table mould, developed by Georg Kaufmann Formenbau AG of Switzerland, is shown to enable the production of comfortable passenger compartment parts. The possibility of varying the thickness of the layer of soft-touch PU and thermoplastic elastomer foam via the mould geometry is demonstrated. The layer of foam is produced exactly where it is required in the part and also in the desired thickness. To this end, the slide-table mould is equipped with two cavities, one for the conventional injection moulding of the supporting structure (usually PP) and one for the preforming of the decorative material (film, fabric or imitation leather) and, later, the moulding of the Varysoft layer of foam.

Using the classification helps to retrieve articles with a greater probability of relevance. It also reduces the number of records retrieved. Searching on the following ensures a more precise retrieval of relevant documents:

S CL=(43C6? AND 6124)

(for Dialog)

..S 43C6\$.CC. AND 6124.CC.

(for DataStar)

(43C6? or 43C6\$ is the truncated classification for PU and 6124 is the classification code for foams.)

?SELECT CL=(43C6? AND 6124)

35671 CL=43C6?

23851 CL=6124

S2 9901 CL=(43C6? AND 6124)

?TYPE S2/TI/1-5

2/TI/1

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Title: SOFT-TOUCH EXACTLY WHERE IT IS NEEDED

2/TI/2

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Title: CHEMICAL RECYCLING OF POLYURETHANES. II

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Title: STRICTLY LIGHTWEIGHT - ARTEGA GT

2/TI/5
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Title: COMBINING ECOLOGY AND ECONOMY - PET TURNS INTO POLYOL

This excludes articles that only have one or neither of these classifications. If this reduces the number of records too much, you can increase the retrieval by including the following phrases 'PU FOAM' or 'PU FOAMS' OR 'POLYURETHANE FOAM' or 'POLYURETHANE FOAMS' as search terms in the title or abstract fields.

S (PU OR POLYURETHANE)(W)(FOAM OR FOAMS)/TI,AB (for Dialog)
 ..S (PU OR POLYURETHANE) ADJ (FOAM OR FOAMS).TI,AB. (for DataStar)

The use of the classification codes can also retrieve articles on similar topics where different terminology has been used. For example, using the classification code 8(13) and its subdivisions using

S CL=8(13)? (for Dialog)
 ..S 8-13-\$.CC. (for DataStar)

retrieves articles that might have terms such as RECYCLING or RECLAIMING or RECLAMATION contained in the title, abstract or used as descriptor terms. Note that on DataStar hyphens are substituted for parentheses in classification codes.

?S CL=8(13)?

S3 15855 CL=8(13)?

?T S3/5/1

3/5/1
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01045520
Title: CHEMICAL RECYCLING OF POLYURETHANES. II

Author: Behrendt G; Naber B W
Corporate Source: Wildau, University of Applied Science
Source: PU Magazine ; 6, No.3, May-June 2009, p.156-161
Journal Announcement: 200909 **RAPRA Update:** 200917

Document Type: Journal Article
Language: English
Subfile: (R) RAPRA
Abstract: The application of chemical recycling of PUs is discussed with reference to rigid foams, polyisocyanurate foams, flexible foams, integral foams, shoe soles, mixed polymers, and reaction products. Strategies for using recycled products are then examined, covering foam-to-foam recycling, internal loops, external loops, new products based on recycled products, coatings, sealants, and binders and composites. 20 refs. (Pt.I, *ibid*, 6, 2008)
Geographic Location: EUROPEAN COMMUNITY; EUROPEAN UNION; GERMANY; WESTERN EUROPE
Descriptors: APPLICATION; BINDER; CELLULAR MATERIAL; CHEMICAL RECYCLING; COATING; COMPOSITE; DATA; ELASTOMER; FLEXIBILITY; FLEXIBLE; FOAM; FOOTWEAR; INSTITUTION; INTEGRAL FOAM; ISOCYANURATE POLYMER; MECHANICAL PROPERTIES; PLASTIC; POLYISOCYANURATE; POLYURETHANE; PROCESS; PROCESSING; PROPERTIES; PU; RECLAIMING; RECOVERY; RECYCLING; REINFORCED PLASTIC; REINFORCED PLASTICS; RIGID; RUBBER; SEALANT; SHOE SOLE; SOLE; SOLES; TECHNICAL; THERMOSET
RAPRA Classification Code: 43C6; 6124; 8(13)6
Category Codes: KT; OC; SN

Alternatively the classification code can also be used to find broad subject areas. For example, using

95? (for Dialog)
 95\$ (for DataStar)

retrieves references to articles discussing all the various types of mechanical properties - such as stress or strain, impact resistance, abrasion resistance, creep, etc.

?S CL=95?

S4 89239 CL=95?

?T S4/TI/1-5

4/TI/1

DIALOG(R)File 323: RAPRA Polymer Library
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Title: USING RHEOLOGY TEST METHODS TO ASSESS DURABILITY OF CURED ELASTOMERS UNDERGOING CYCLIC DEFORMATION

4/TI/2

DIALOG(R)File 323: RAPRA Polymer Library
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Title: DURABILITY BY DESIGN: NEW RESULTS ON LOAD-CARRYING SILICONE BONDING

4/TI/3

DIALOG(R)File 323: RAPRA Polymer Library
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Title: EVALUATION OF SILICONE SEALANTS AT HIGH MOVEMENT RATES RELEVANT TO BOMB MITIGATING WINDOW AND CURTAINWALL DESIGN

4/TI/4

DIALOG(R)File 323: RAPRA Polymer Library
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Title: ADVANCES IN POLYMER CLAY NANOCOMPOSITES

4/TI/5

DIALOG(R)File 323: RAPRA Polymer Library
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Title: IN SITU NANO-SCALE DEFORMATION PROCESSES IN MODIFIED POLYMER SYSTEMS

Thus the classification code can save you time and energy in thinking of and typing all the possible terms that may have been used and can also ensure that these concepts are an important part of the article.

The Rapra Classification Code is available online at the Polymer Library Website at <http://www.polymerlibrary.com/ClassificationCode.pdf>. The code is supplemented by a general index containing nearly 4,000 terms and a polymer index of around 900 polymers (including popular abbreviations and full names) allowing easy retrieval of the relevant codes.

Additional search aids available at the Polymer Library Website include the [Polymer Library Thesaurus](#).

For further help in searching the database please contact polymerlibrary@ismithers.net or the Dialog Knowledge Center (details below).

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