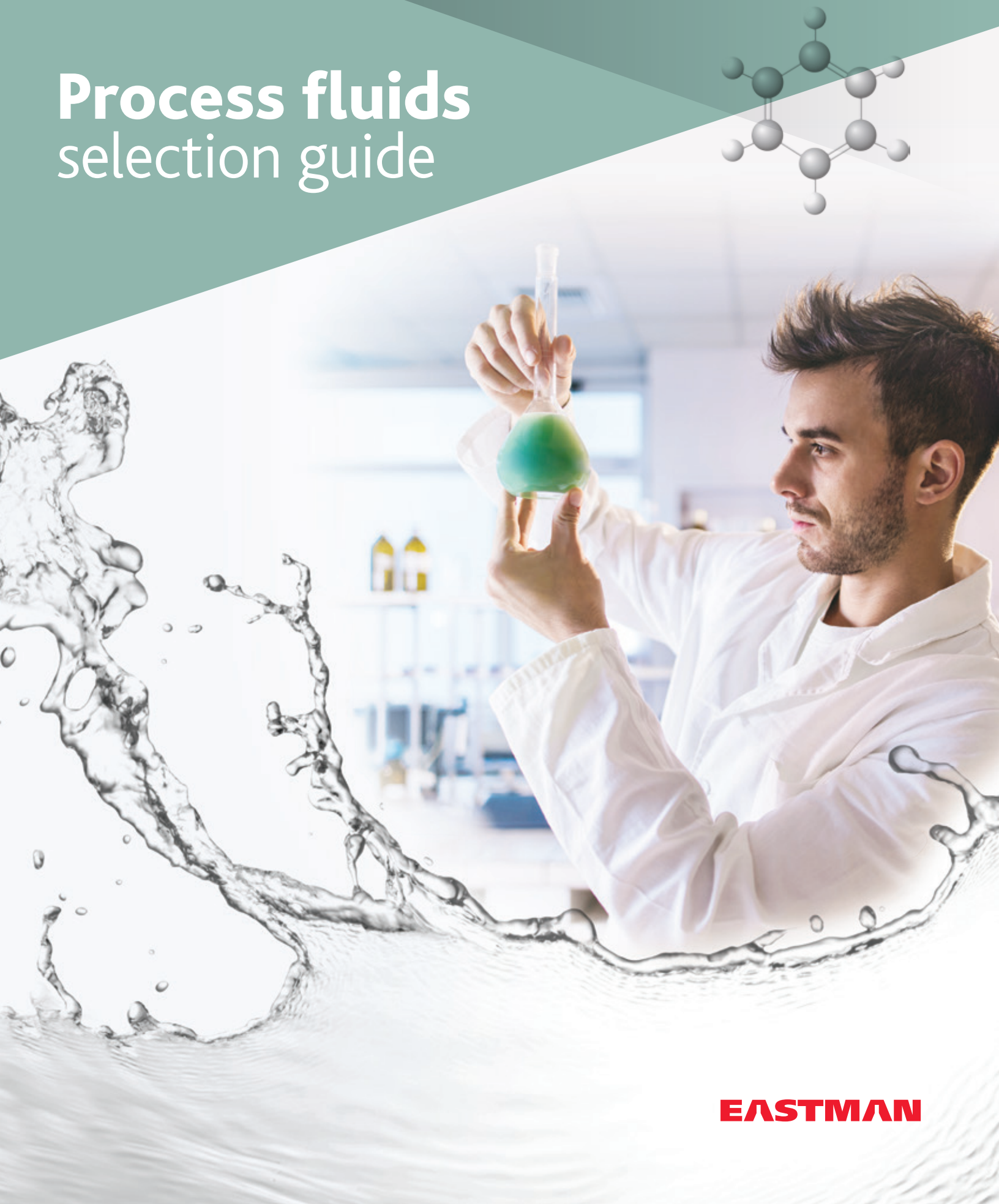
Process fluids
selection guide



EASTMAN

Eastman process fluids

High-performance, high-purity synthetic hydrocarbons designed with various levels of aromatic content

Thermal stability and resistance to oxidation. All Eastman process fluids are essentially free of olefinic-type unsaturation, sulfur, or halogen and exhibit high resistance to oxidation, making them ideal for many high-temperature processing applications.

High purity. With high purity and low vapor pressure, some of these process fluids may also be well suited for a variety of electronic applications, such as wax removal and circuit board cleaning.

Low emissions. The low vapor pressure (LVP) of Eastman process fluids results in low emissions for many applications and may simplify compliance with volatile organic compound (VOC) requirements.

*To determine the process fluid that is best suited to your application, consult the product comparison guide.**

Product comparison guide

Process fluid	Appearance	Composition	Average molecular weight	Density at 25°C (77°F)	Kinematic viscosity	Vapor pressure at 93°C (200°F)	Kauri-butanol value (ASTM D1133)	Aniline point (ASTM D611)
MCS™ 2780	Colorless liquid above 4°C (39°F)	Bicyclohexyl	166	0.878 g/mL (7.31 lb/gal)	2.94 cSt at 40°C (104°F)	1.434 kPa (0.208 psia)	39.3	48°C (118°F)
MCS 2805	Clear, colorless liquid	Phenyl cyclohexane/ bicyclohexyl mixture	161	0.934 g/mL (7.78 lb/gal)	2.04 cSt at 38°C (100°F)	0.404 kPa (0.0585 psia)	91.2	19.5°C (67°F)
MCS 2806	Clear, colorless liquid	Synthetic hydrocarbon mixture	162	0.756 g/mL (6.31 lb/gal)	1.28 cSt at 38°C (100°F)	4.358 kPa (0.632 psia)	28.8	79°C (174°F)
MCS 2808	Amorphous yellowish-white solid	Polyphenyl mixture	230	—	—	Negligible	—	—
MCS 2809	Yellowish clear liquid	Mixture of C14-30 alkylated benzene	320	0.868 g/mL (7.25 lb/gal)	23.55 cSt at 38°C (100°F)	0.0228 kPa (0.0033 psia)	29.4	46°C (115°F)
MCS 2810	Yellowish clear liquid	Alkyl-substituted aromatic	206	0.971 g/mL (8.10 lb/gal)	4.75 cSt at 38°C (100°F)	0.248 kPa (0.036 psia)	55	19.6°C (67°F)
MCS 2811	Yellowish clear liquid	Hydrogenated terphenyl mixture	242	1.01 g/mL (8.39 lb/gal)	4.37 cSt at 93°C (200°F)	0.0352 kPa (0.0051 psia)	34.9	23°C (73°F)
MCS 2812	Clear, colorless liquid	Diphenyl ether/ biphenyl eutectic blend	166	1.06 g/mL (8.82 lb/gal)	2.60 cSt at 38°C (100°F)	0.333 kPa (0.0483 psia)	50.9	25°C (77°F)
MCS 2864	Clear, colorless liquid	Mixture of propylated biphenyl	252	0.951 g/mL (7.94 lb/gal)	12.0 cSt at 38°C (100°F)	0.0382 kPa (0.006 psia)	—	—
Biphenyl	Clear, colorless liquid above 69°C (156°F); white solid below 69°C (156°F)	Biphenyl	154	0.993 g/mL (8.27 lb/gal)	—	4.626 kPa (0.671 psia) *(at 166°C [330°F])*	—	—
Diphenyl oxide	Clear, colorless liquid above 26°C (79°F); white solid below 26°C (79°F)	Diphenyl oxide	170	1.02 g/mL (8.46 lb/gal)	2.58 cSt at 38°C (100°F)	0.00614 kPa (0.00089 psia)	—	21.5°C (71°F)
***para*-Terphenyl**	White solid	*para*-Terphenyl	230	—	—	—	—	—

**Does not constitute an express warranty*

Characteristics

- High temperature stability
- Low oxidation
- High purity
- Low polarity
- High solvency
- High boiling point
- Low reactivity

Potential uses

- Reaction medium
- Extracting agent
- Stripping agent
- Catalyst carrier
- Slow release agent
- Dispersant
- Softening agent
- Polymerization medium
- Industrial solvent
- Industrial cosolvent
- Industrial cleaner

Applications

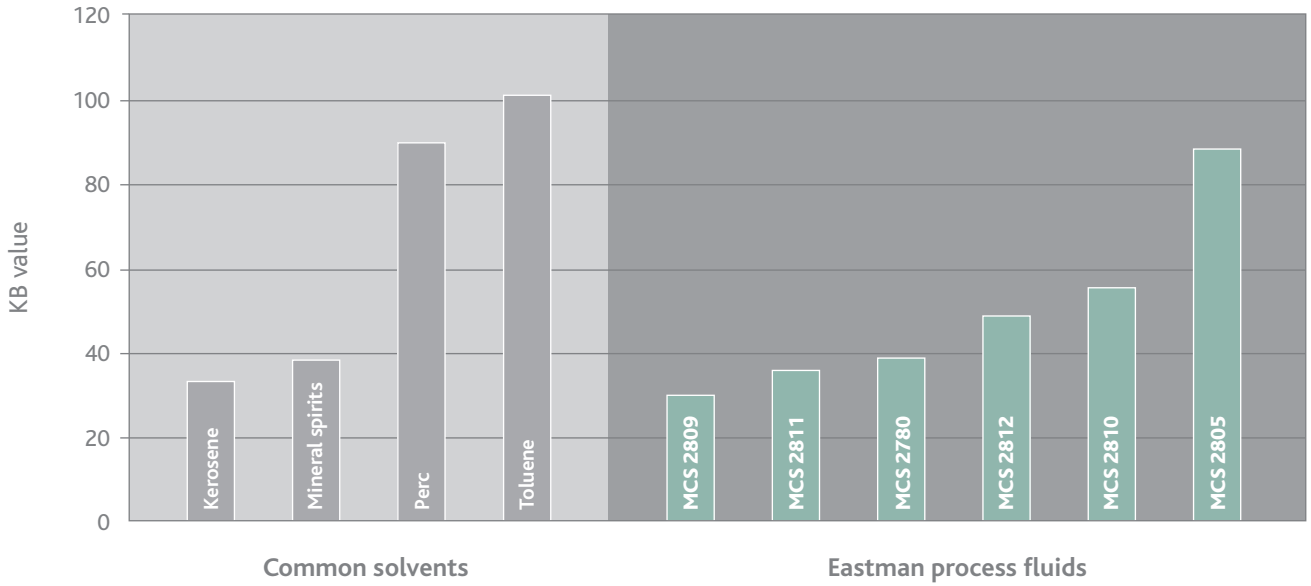
- Petroleum
- Petrochemical
- Refining
- Electronics
- Photography
- Polymer, resin, and plastics production
- Paints and coatings
- Inks and dyes
- Adhesives
- Textiles
- Carboxylic acids production
- Perfumery

Water solubility at 20°C (68°F)	Moisture content	Normal boiling point	Boiling range 10%	Boiling range 90%	Flash point (ASTM D92)	Fire point (ASTM D92)	Autoignition temperature (ASTM E659)	Bromine index (ASTM D2710)	Bromine number (ASTM D1159)	Copper corrosion (ASTM D849)	Process fluid
< 11 mg/L	150 ppm, maximum	243°C (469°F)	243°C (469°F)	243°C (469°F)	101.7°C (215°F)	104.4°C (220°F)	231.1°C (448°F)	< 100	< 0.1	Pass (1b)	**MCS 2780**
Minimal	150 ppm, maximum	243°C (469°F)	—	—	104°C (219°F)	113°C (235°F)	351°C (663°F)	393	—	Pass (1b)	**MCS 2805**
< 0.15 mg/L	80 ppm, maximum	192°C (378°F)	190°C (374°F)	204°C (400°F)	59°C (138°F)	71°C (160°F)	247°C (477°F)	< 100	< 0.1	Pass (1b)	**MCS 2806**
Negligible	150 ppm, maximum	364°C (687°F)	364°C (687°F)	418°C (784°F)	191°C (375°F)	238°C (460°F)	540°C (1004°F)	—	—	—	**MCS 2808**
1 mg/L	150 ppm, maximum	351°C (664°F)	340°C (644°F)	390°C (734°F)	177°C (350°F)	218°C (425°F)	343°C (650°F)	996	0.7	Pass (1b)	**MCS 2809**
0.55 mg/L	130 ppm, maximum	289°C (552°F)	288°C (550°F)	332°C (630°F)	146°C (295°F)	163°C (310°F)	404°C (760°F)	—	1.2	Pass (1b)	**MCS 2810**
0.061 mg/L	150 ppm, maximum	359°C (678°F)	348°C (658°F)	392°C (738°F)	184°C (363°F)	212°C (414°F)	374°C (705°F)	290	0.2	Pass (1a)	**MCS 2811**
25 mg/L	300 ppm, maximum	257°C (495°F)	—	—	124°C (255°F)	127°C (260°F)	621°C (1150°F)	100	< 0.1	Pass (1b)	**MCS 2812**
< 0.15 mg/L	200 ppm, maximum	333°C (631°F)	—	—	171°C (340°F)	196°C (385°F)	407°C (765°F)	—	—	<< 1a (ASTM D130)	**MCS 2864**
Insoluble	150 ppm, maximum	255°C (491°F)	—	—	113°C (235°F)	113°C (235°F)	540°C (1004°F)	—	—	—	**Biphenyl**
14 mg/L *(at 25°C [77°F])*	150 ppm, maximum	258°C (497°F)	—	—	115°C (239°F)	124°C (255°F)	618°C (1144°F)	< 100	—	Pass (1a)	**Diphenyl oxide**
—	Minimal	376°C (709°F)	—	—	210°C (410°F)	238°C (460°F)	—	—	—	—	***para*-Terphenyl**

NOTE: Values quoted are typical values obtained in the laboratory from production samples and are not guaranteed. Production materials may vary. Contact Eastman for current sales specifications.

Process fluids solvency chart

This chart shows the KB values of some of Eastman's process fluids versus some common solvents, such as kerosene, mineral spirits, perchloroethylene, and toluene. The higher the KB value, the higher the solvency of the solvent for medium-polar resin (e.g., Kauri resin).



For more information, visit www.processfluid.com.

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