

# Saponification values and properties of the most common oils and fats



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OIL/FAT/WAX	SAP (NAOH)	USAGE	MELTING POINT	HARDNESS	LATHER	SHELF LIFE
Apricot kernel oil	0.135	Up to 20%		Soft	Medium	1 year
Argan oil	0.135	Up to 10%		Soft	Creamy	2 years
Avocado butter	0.133	Up to 15%	32C (90F)	Soft	Medium	1-2 years
Avocado oil	0.133	Up to 25%		Soft	Medium	1-2 years
Babassu oil	0.178	Up to 25%	24C (75F)	Brittle	Rich, fluffy	2 years
Baobab oil	0.143	Up to 10%		Soft	Medium	2 years
Beef tallow	0.140	Up to 40%	35C (95F)	Hard	Rich, creamy	1 year*
Beeswax	0.069	Up to 5%	62C (144F)	Hard	Inhibits	Indefinite
Canola oil	0.132	Up to 33%		Soft	Poor	1-2 years
Castor oil	0.128	Up to 8%		Soft, sticky	Boosts lather	5 years
Cocoa butter	0.137	Up to 15%	35C (95F)	Brittle	Rich, creamy	2-3 years
Coconut oil	0.178	Up to 33%	24C (75F)	Hard	Rich, fluffy	3 years
Coconut oil (fractionated)	0.232	Up to 20%		Soft	Rich, fluffy	Indefinite
Evening primrose oil	0.133	Up to 5%		Soft	Poor	1 year
Flax seed oil	0.136	Up to 5%		Soft	Poor	1 year*
Grapeseed oil	0.134	Up to 10%		Soft	Medium	6 months*
Hazelnut oil	0.136	Up to 25%		Soft	Medium	6 months
Hempseed oil	0.135	Up to 20%		Soft	Medium	6 months*
Joboba oil	0.069	Up to 5%		Soft	Inhibits	Indefinite
Kukui nut oil	0.137	Up to 15%		Soft	Stable, creamy	1 year
Lanolin	0.074	Up to 5%	38C (100F)	Hard	Inhibits	1-2 years
Lard	0.138	Up to 40%	33C (92F)	Hard	Stable, creamy	1 year*
Macadamia oil	0.139	Up to 25%		Soft	Poor	2 years
Mango butter	0.135	Up to 5%	35C (95F)	Hard	Rich, creamy	1-2 years
Meadowfoam oil	0.120	Up to 20%		Soft	Medium, creamy	2 years
Neem oil	0.138	Up to 5%		Soft	Stable	2 years
Olive oil	0.134	Up to 100%		Soft to hard	Thin, poor	2 years
Palm kernel oil	0.178	Up to 15%	24C (75F)	Brittle	Rich, fluffy	2 years
Palm oil	0.142	Up to 25%	35C (95F)	Hard	Rich, creamy	2 years
Peanut oil	0.136	Up to 10%		Soft	Poor	1 year
Rice bran oil	0.128	Up to 50%		Soft	Stable, mild	1-2 years
Safflower oil	0.135	Up to 25%		Soft	Medium	1 year
Sesame oil	0.133	Up to 10%		Soft	Poor	1 year
Shea butter	0.128	Up to 10%	40C (104F)	Hard	Creamy, silky	1-2 years
Soybean oil	0.135	Up to 50%		Soft	Medium	1 year
Sunflower oil	0.134	Up to 25%		Soft	Medium	1 year
Sweet almond oil	0.136	Up to 25%		Soft	Medium	1 year
Tallow	0.139	Up to 40%		Hard	Stable, creamy	1 year*
Walnut oil	0.135	Up to 15%		Soft	Poor	6 months
Wheatgerm oil	0.132	Up to 5%		Soft	Poor	1 year

\* - keep refrigerated

**SAP** - saponification value, amount (g) of caustic soda (NaOH) needed to transform 1 gram of oil to soap

**Usage** - suggested usage in soap recipes

**Hardness** - contribution toward hard or soft bar of soap

**Lather** - contribution to lather qualities of soap