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EXAMPLE 1

0.21 grams of liquid dimethyl disulfide was added to 100 grams of liquid carbon disulfide. The autogenous ignition temperature of the solution was found to be about 150° C., instead of 100° C. for pure carbon disulfide.

EXAMPLES 2-6

The test of Example 1 was repeated, except the amount of dimethyl disulfide added was varied. The autogenous ignition temperatures are recorded in Table 1 below:

TABLE I

Example:	Grams of dimethyl disulfide added	Autogenous ignition temperature, ° C.
2.....	0.0	100
3.....	0.042	113
4.....	0.11	128
5.....	0.32	171
6.....	0.42	190

EXAMPLES 7-12

Other additives were tested for their effect on the autogenous ignition temperature of carbon disulfide and the results are presented in Table II, below:

TABLE II

Example	Additive	Percent by weight of additive	Autogenous ignition temperature, ° C.
7.....	Dimethyl sulfoxide.....	1.0	> 150
8.....	Diethyl disulfide.....	0.5	> 150
9.....	Ethyl sulfide.....	1.0	> 150
10.....	Methyl sulfide.....	0.50	> 150
11.....	Di-tert. butyl disulfide.....	0.50	> 150
12.....	Tert. butyl sulfide.....	1.00	> 150

The terms and expressions which have been employed are used as terms of description and not of limitation, and there is no intention in the use of such terms and expressions of excluding any equivalents of the features shown and described or portions thereof, but it is recognized that various modifications are possible within the scope of the invention claimed.

What is claimed is:

1. A composition having an autogenous ignition temperature greater than that of pure carbon disulfide consisting essentially of carbon disulfide containing from about 0.1% up to about 10% by weight of an additive selected from the class consisting of organic sulfides and disulfides of the formula RSR' and $RSSR'$, respectively, wherein R and R' are radicals selected from the class

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consisting of alkyl and alkenyl each containing up to about 5 carbon atoms, inclusive.

2. A composition according to claim 1 wherein the additive is dimethyl disulfide.

3. A composition according to claim 1 wherein the additive is diethyl disulfide.

4. A composition according to claim 1 wherein the additive is ethyl sulfide.

5. A composition according to claim 1 wherein the additive is methyl sulfide.

6. A composition according to claim 1 wherein the additive is di-tert. butyl disulfide.

7. A composition according to claim 1 wherein the additive is tert. butyl sulfide.

8. A composition according to claim 1 wherein the additive is present in an amount of between about 0.2% and 5% by weight.

9. A method of elevating the autogenous ignition temperature of carbon disulfide which comprises adding to the carbon disulfide from about 0.1% up to about 10% by weight of an additive selected from the class consisting of dimethyl sulfoxide and organic sulfides and disulfides of the formulae RSR' and $RSSR'$, respectively, wherein R and R' are radicals selected from the class consisting of alkyl and alkenyl each containing up to about 5 carbon atoms, inclusive.

10. A method according to claim 9 wherein the additive is dimethyl sulfoxide.

11. A method according to claim 9 wherein the additive is dimethyl disulfide.

12. A method according to claim 9 wherein the additive is diethyl disulfide.

13. A method according to claim 9 wherein the additive is ethyl sulfide.

14. A method according to claim 9 wherein the additive is methyl sulfide.

15. A method according to claim 9 wherein the additive is di-tert. butyl disulfide.

16. A method according to claim 9 wherein the additive is tert. butyl sulfide.

17. A method according to claim 9 wherein the additive is added in an amount of between about 0.2% and 5% by weight.

References Cited

UNITED STATES PATENTS

3,402,770 9/1968 Messenger 166-40

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U.S. Cl. X.R.

23-206; 166-304; 252-8.55