Claims

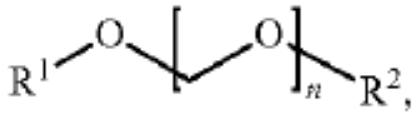
1. A device comprising:

(i) a vulcanizate comprising one or more polymers including a halogenated copolymer and

(ii) a medium comprising an oxymethylene ether,

wherein the vulcanizate (i) is in contact with the medium (ii);

wherein an amount of the oxymethylene ether of the medium is 18 to 100 weight percent, based on a total weight of the medium; wherein the oxymethylene ether is a compound of the formula (I):



(I)

wherein

n is 1 to 5,

R^1 is linear or branched chain C_1-C_{20}-alkyl, and

R^2 is linear or branched chain C_1-C_{20}-alkyl.

2. The device according to claim 1, characterized in that the vulcanizate (i) is in a form of a belt, a hose, an o-ring, a wire/cable, an innerliner, a shock absorber, a machinery mounting, a storage tank lining, a storage tank, an electrical insulation, a bearing, a container closure or lid; a seal or sealant, a diaphragm, a curing bladder, a fuel line, a fuel filter, a membranes for fuel filtration or a tank sealing, a vehicle, a gasoline tank, a gasoline pump or a gas station.

3. The device according to claim 1, characterized in that an amount of the halogenated copolymer is from 1 to 100 phr based on the total weight of the one or more polymers.

4. The device according to claim 1, characterized in that the halogenated copolymer is bromobutyl rubber (BIIR) or chlorobutyl rubber (CIIR).

5. The device according to claim 1, characterized in that the oxymethylene ether of medium (ii) is oxymethylene ether according to general formula (I), wherein n is 1 and R^1 and R^2 are each methyl (OME1).

6. The device according to claim 2, wherein an amount of the halogenated copolymer in the vulcanizate is from 25 to 100 phr, based on a total weight of the one or more polymers of the vulcanizate.

7. A device comprising:

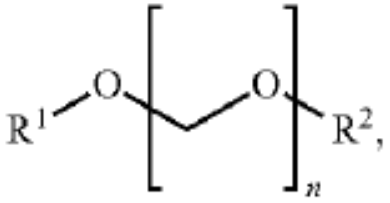
(i) a vulcanizate comprising one or more polymers including a halogenated copolymer and

(ii) a medium comprising oxymethylene ether,

wherein the vulcanizate (i) is in contact with the medium (ii);

characterized in that the oxymethylene ether is a compound of the general formula (I)

(I)



wherein

n is 2 to 5,

R^1 is linear or branched chain C_1-C_{20}-alkyl, and

R^2 is linear or branched chain C_1-C_{20}-alkyl.

8. The device according to claim 7, characterized in that amount of oxymethylene ether according to general formula (I) is 0.01 to 100 wt.-%, based on the total weight of the medium (ii).

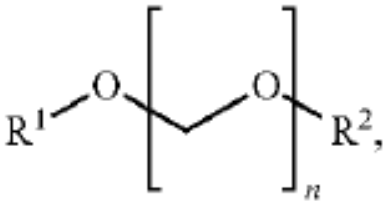
9. The device of claim 7, wherein an amount of oxymethylene ether according to general formula (I) is 5 to 75 wt.-%, based on a total weight of the medium (ii).

10. A method comprising a step of:

contacting a vulcanizate comprising a halogenated copolymer with a medium comprising 18 to 100 weight percent of an oxymethylene ether, based on a total weight of the medium;

wherein the oxymethylene ether is a compound of the formula (I):

(I)



wherein

n is 1 to 5,

R^1 is linear or branched chain C_1-C_{20}-alkyl, and

R^2 is linear or branched chain C_1-C_{20}-alkyl, wherein the oxymethylene ether.

11. The method of claim 10, wherein the vulcanizates is in a form of a belt, a hose, an o-ring, a wire/cable, an innerliner, a shock absorber, a machinery mounting, a storage tank lining, a storage tank, an electrical insulation, a bearing, a container closure or lid; a seal or sealant, a diaphragm, a curing bladder, a fuel line, a fuel filter, a membrane for fuel filtration or a tank sealing.

12. A device comprising:

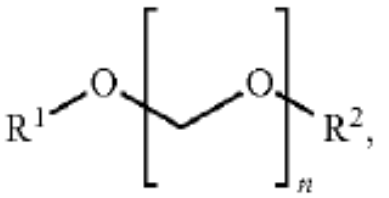
(i) a vulcanizate comprising one or more polymers including a halogenated copolymer and

(ii) a medium comprising at least 10 weight percent an oxymethylene ether,

wherein the vulcanizate (i) is in contact with the medium (ii);

characterized in that the oxymethylene ether is a compound of the general formula (I)

(I)



wherein

n is 2 to 5;

R^1 is linear or branched chain C_1-C_{20}-alkyl, and

R^2 is linear or branched chain C_1-C_{20}-alkyl.

13. The device of claim 12, wherein the halogenated copolymer is bromobutyl rubber (BIIR) or chlorobutyl rubber (CIIR).

14. The device of claim 13, wherein
n is 1 to 5,
R^1 is C_1-C_4-alkyl, and
R^2 is C_1-C_4-alkyl.

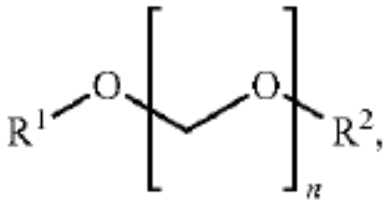
15. The device of claim 13, wherein
n is 1 to 5,
R^1 is methyl, ethyl or propyl, and
R^2 is methyl, ethyl or propyl.

16. The device of claim 13, wherein R^1 is methyl, and R^2 is methyl.

17. A device comprising:
(i) a vulcanizate comprising one or more polymers including a halogenated copolymer and
(ii) a medium comprising an oxymethylene ether,
wherein the vulcanizate (i) is in contact with the medium (ii);
wherein the medium includes hydrocarbons.

18. A device comprising:
(i) a vulcanizate comprising one or more polymers including a halogenated copolymer, the vulcanizate in contact with
(ii) a medium comprising an oxymethylene ether of the general formula (I):

(I)



wherein
n is 0 to 5,
R^1 is linear or branched chain C_1-C_{20}-alkyl, and
R^2 is linear or branched chain C_1-C_{20}-alkyl;
wherein the medium includes a liquid hydrocarbon-containing component selected from the group consisting of a gasoline for aviation, a marine fuel, a jet fuel, a heavy petrol, a kerosene, a lamp oil, a coal oil, a diesel fuel, a fuel oil, an engine oil, an aircraft oil, a turbine

oil, a hydraulic oil, a grease, a bitumen, a petroleum wax, a petroleum coke, and a motor fuel.

19. A device comprising:

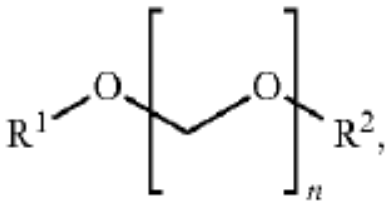
(i) a vulcanizate comprising one or more polymers including a halogenated copolymer and

(ii) a medium comprising an oxymethylene ether,

wherein the vulcanizate (i) is in contact with the medium (ii);

the oxymethylene ether is a compound of the general formula (I):

(I)



wherein

n is 0 to 5,

R^1 is ethyl or propyl, and

R^2 is ethyl or propyl.