



# SAFETY DATA SHEET

## FIREMASTER® 550

Version: 1.0

Revision Date: 03/31/2015

Print Date: 04/22/2015

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: FIREMASTER® 550

Product Use Description: Flame retardants

Company: Chemtura Corporation  
199 Benson Road  
Middlebury, CT  
06749  
United States of America  
  
Telephone: (US) +1 866-430-2775

Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300  
:  
Chemtura Corporation Emergency Response: CHEMTURA : 800-292-5898  
  
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by Product Safety Department  
(US) +1 866-430-2775  
  
MSDSRequest@chemtura.com

Recommended use of the chemical and restrictions on use

Recommended use : Flame retardants

### SECTION 2. HAZARDS IDENTIFICATION

|        |           |
|--------|-----------|
| Form   | liquid    |
| Colour | amber     |
| Odour  | odourless |

#### GHS Classification

Skin sensitisation : Category 1  
Reproductive toxicity : Category 2  
Specific target organ toxicity - repeated exposure : Category 2  
Acute aquatic toxicity : Category 2  
Chronic aquatic toxicity : Category 2

#### GHS Label element

Signal word : **Warning**



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Hazard pictograms

:



Hazard statements

: H317 May cause an allergic skin reaction.  
H361 Suspected of damaging fertility or the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

Other hazards

: None

Precautionary statements

: **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves.  
P281 Use personal protective equipment as required.  
**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P363 Wash contaminated clothing before reuse.  
P391 Collect spillage.  
**Storage:**  
P405 Store locked up.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

**Carcinogenicity:**

**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Environmental Effects**

Environmental Effects

: Dangerous for the environment



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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Hazardous components

| Chemical Name   | CAS-No.     | Concentration (%) |
|---|-------------|-------------------|
| Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]                     | 68937-41-7  | >= 50 - < 70 %    |
| 1,3-Isobenzofurandione, 4,5,6,7-tetrabromo-, reaction products with 2-ethyl-1-hexanol | 219632-53-8 | >= 50 - < 70 %    |

### SECTION 4. FIRST AID MEASURES

- If inhaled : Remove to fresh air.  
Get medical attention.
- In case of skin contact : If on clothes, remove clothes.  
Wash off with warm water and soap.  
If skin irritation occurs, seek medical advice/attention.  
Wash contaminated clothing before re-use.  
Destroy contaminated shoes.
- In case of eye contact : Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.
- If swallowed : Do NOT induce vomiting.  
Get medical attention immediately.  
Never give anything by mouth to an unconscious person.  
If a person vomits when lying on his back, place him in the recovery position.

### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Specific hazards during firefighting : Burning produces irritant fumes.  
Exposure to decomposition products may be a hazard to health.
- Specific extinguishing methods : In the event of fire, wear self-contained breathing apparatus.  
Wear personal protective equipment.
- Special protective equipment : In the event of fire, wear self-contained breathing apparatus.



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for firefighters

Use personal protective equipment.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Avoid contact with skin and eyes.  
Wear suitable protective clothing, gloves and eye/face protection.
- Environmental precautions : Avoid release to the environment.  
Do not contaminate surface water.  
Do not contaminate ponds, waterways or ditches with chemical or used container.
- Methods and materials for containment and cleaning up : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

### SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Use personal protective equipment as required.  
Avoid contact with skin, eyes and clothing.  
Do not breathe vapours or spray mist.  
Avoid repeated exposure.
- Conditions for safe storage : Keep in a dry, cool and well-ventilated place.  
Protect from contamination.
- Materials to avoid : Strong oxidizing agents, Strong acids, Alkalies
- Storage temperature : < 82.2 °C

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

| Components | CAS-No. | Form of exposure | Permissible concentration | Basis |
|------------|---------|------------------|---------------------------|-------|
|------------|---------|------------------|---------------------------|-------|

- Engineering measures** : Use with local exhaust ventilation.  
Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

- Respiratory protection : In the case of vapour formation use a respirator with an



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approved filter.

Hand protection

Remarks

: Impervious gloves

Eye protection

: Safety glasses with side-shields  
or  
Safety goggles

Skin and body protection

: impervious clothing

Hygiene measures

: Avoid contact with skin, eyes and clothing.

Contaminated work clothing should not be allowed out of the workplace.

Wash contaminated clothing before reuse.

Keep working clothes separately.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

: liquid

Color

: amber

Odor

: odourless

Odour Threshold

: No data available

pH

: Not applicable

Melting point/range

:  
Not applicable

Boiling point/boiling range

: No data available

Evaporation rate

: No data available

Flash point

: > 200 °C  
Method: ASTM D 56

Upper explosion limit

: No data available

Lower explosion limit

: No data available

Vapour pressure

: No data available

Relative vapour density

: No data available

Relative density

: 1.41 (25 °C)

Solubility(ies)



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|  |                     |
|--|---------------------|
| Water solubility                       | : insoluble         |
| Solubility in other solvents           | : No data available |
| Partition coefficient: n-octanol/water | : No data available |
| Auto-ignition temperature              | : No data available |
| Thermal decomposition                  | : No data available |
| Viscosity                              |                     |
| Viscosity, dynamic                     | : 314 mPa.s         |
| Viscosity, kinematic                   | : No data available |

### SECTION 10. STABILITY AND REACTIVITY

|                                    |   |
|------------------------------------|---|
| Reactivity                         | : No dangerous reaction known under conditions of normal use.   |
| Chemical stability                 | : No decomposition if stored and applied as directed.   |
| Possibility of hazardous reactions | : Hazardous polymerisation does not occur.  |
| Incompatible materials             | : Strong oxidizing agents<br>Strong acids<br>Alkalis  |
| Hazardous decomposition products   | : Hydrogen bromide<br>Bromine<br>Oxides of phosphorus<br>Carbon dioxide (CO <sub>2</sub> )<br>Carbon monoxide |

### SECTION 11. TOXICOLOGICAL INFORMATION

|   |  |
|---|--|
| Acute oral toxicity   |  |
| Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]<br>(Component)                  | : LD50: > 5,000 mg/kg<br>Species: Rat                                    |
| 1,3-Isobenzofurandione, 4,5,6,7-tetrabromo-, reaction products with 2-ethyl-1-hexanol (Component) | : LD50: > 5,000 mg/kg<br>Species: Rat<br>Method: OECD Test Guideline 401 |
| Acute inhalation toxicity   |  |
| Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]<br>(Component)                  | : LC50: > 200 mg/l<br>Species: Rat                                       |



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phosphate > 5%]  
(Component)

Acute dermal toxicity

Phenol, isopropylated,  
phosphate (3:1) [Triphenyl  
phosphate > 5%]  
(Component)

: LD50: > 10,000 mg/kg  
Species: Rabbit

1,3-Isobenzofurandione,  
4,5,6,7-tetrabromo-, reaction  
products with 2-ethyl-1-  
hexanol (Component)

: LD50: > 2,000 mg/kg  
Species: Rat  
Method: OECD Test Guideline 402

Skin irritation

1,3-Isobenzofurandione,  
4,5,6,7-tetrabromo-, reaction  
products with 2-ethyl-1-  
hexanol (Component)

: Species: Rabbit  
Result: No skin irritation  
Method: OECD Test Guideline 404  
Exposure time: 4 h

Eye irritation

1,3-Isobenzofurandione,  
4,5,6,7-tetrabromo-, reaction  
products with 2-ethyl-1-  
hexanol (Component)

: Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405

Sensitisation

1,3-Isobenzofurandione,  
4,5,6,7-tetrabromo-, reaction  
products with 2-ethyl-1-  
hexanol (Component)

: Maximisation Test (GPMT)  
Species: Guinea pig  
Classification: May cause sensitisation by skin contact.  
Result: Causes sensitisation.  
Method: OECD Test Guideline 406

Aspiration toxicity (Product) : No aspiration toxicity classification

CMR effects

1,3-Isobenzofurandione,  
4,5,6,7-tetrabromo-, reaction  
products with 2-ethyl-1-  
hexanol (Component)

: Mutagenicity: In vitro tests did not show mutagenic effects  
Reproductive toxicity: Suspected human reproductive toxicant

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity effects

Toxicity to fish

Phenol, isopropylated,  
phosphate (3:1) [Triphenyl  
phosphate > 5%]

: LC50: 1.6 mg/l  
Exposure time: 96 h



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|  |  |
|--|--|
| (Component)  | Species: Oncorhynchus mykiss (rainbow trout)   |
|  | LC50: 10.8 mg/l<br>Exposure time: 96 h   |
|  | Species: Pimephales promelas (fathead minnow)  |
| 1,3-Isobenzofurandione,<br>4,5,6,7-tetrabromo-, reaction<br>products with 2-ethyl-1-<br>hexanol (Component)                      | : LC50: > 12 mg/l<br>Exposure time: 96 h<br><br>Species: Oncorhynchus mykiss (rainbow trout)<br>semi-static test Method: Directive 67/548/EEC, Annex V, C.1. |
| Toxicity to daphnia and other<br>aquatic invertebrates<br>(Product)  | : Remarks:<br>No data available  |
| Toxicity to algae<br>1,3-Isobenzofurandione,<br>4,5,6,7-tetrabromo-, reaction<br>products with 2-ethyl-1-<br>hexanol (Component) | : EC50: > 5.1 mg/l<br>Exposure time: 4 h<br>Species: Scenedesmus capricornutum (fresh water algae)<br>Method: Directive 67/548/EEC, Annex V, C.3.            |

### Elimination information (persistence and degradability)

|   |   |
|---|---|
| Bioaccumulation (Product)   | : Remarks:<br>No data available   |
| Mobility (Product)  | : Remarks:<br>No data available   |
| Biodegradability<br>Phenol, isopropylated,<br>phosphate (3:1) [Triphenyl<br>phosphate > 5%]<br>(Component)  | : Result: According to the results of tests of biodegradability this<br>product is not readily biodegradable.<br>17.9 %   |
| 1,3-Isobenzofurandione,<br>4,5,6,7-tetrabromo-, reaction<br>products with 2-ethyl-1-<br>hexanol (Component) | : anaerobic<br>Result: According to the results of tests of biodegradability this<br>product is not readily biodegradable.<br>6 %<br>Testing period: 28 d<br>Method: Closed Bottle test |

### Further information on ecology

#### Ecotoxicology Assessment

Results of PBT assessment (Product)

This mixture contains substances considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological  
information (Product) : Toxic to aquatic life with long lasting effects.  
Avoid release to the environment.





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### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues : In accordance with local and national regulations.  
Do not contaminate ponds, waterways or ditches with chemical or used container.

### SECTION 14. TRANSPORT INFORMATION

#### DOT

UN number : 3082  
Description of the goods : Environmentally hazardous substances, liquid, n.o.s.  
(Phenol, isopropylated phosphate (3:1) [Triphenyl phosphate > 5%], Halogenated aryl ester)  
Class : 9  
Packing group : III  
Environmentally hazardous : yes  
Phenol, isopropylated phosphate (3:1) [Triphenyl phosphate > 5%]Halogenated aryl ester

#### IATA

UN number : 3082  
Description of the goods : Environmentally hazardous substance, liquid, n.o.s.  
(Phenol, isopropylated phosphate (3:1) [Triphenyl phosphate > 5%], Halogenated aryl ester)  
Class : 9  
Packing group : III  
Environmentally hazardous : no

#### IMDG

UN number : 3082  
Description of the goods : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Phenol, isopropylated phosphate (3:1) [Triphenyl phosphate > 5%], Halogenated aryl ester)  
Class : 9  
Packing group : III  
EmS Number 1 : F-A  
EmS Number 2 : S-F  
Marine pollutant : yes  
Phenol, isopropylated phosphate (3:1) [Triphenyl phosphate > 5%]Halogenated aryl ester



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Additional advice: Not regulated by DOT and TDG if shipped or transported in packaging less than 450 liters by road and/or rail.

### SECTION 15. REGULATORY INFORMATION

The manufacture and use of this material is regulated by a Significant New Use Rule (SNUR) under TSCA which can be located at 40CFR 721.2925. These requirements apply to the use of this substance or formulations containing this substance.

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

| Components | CAS-No.  | Component RQ (lbs) | Calculated product RQ (lbs) |
|------------|----------|--------------------|-----------------------------|
| phenol     | 108-95-2 | 1000               | *                           |

\*: Calculated RQ exceeds reasonably attainable upper limit.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

| Components | CAS-No.  | Component RQ (lbs) | Calculated product RQ (lbs) |
|------------|----------|--------------------|-----------------------------|
| phenol     | 108-95-2 | 1000               | *                           |

\*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California Prop 65** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### The components of this product are reported in the following inventories:

**US.TSCA**

On TSCA Inventory

**DSL**

This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL.

**AICS**

On the inventory, or in compliance with the inventory

**NZIoC**

On the inventory, or in compliance with the inventory

**ENCS**

Not in compliance with the inventory



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KECI  
PICCS  
IECSC

On the inventory, or in compliance with the inventory  
On the inventory, or in compliance with the inventory  
On the inventory, or in compliance with the inventory

### SECTION 16. OTHER INFORMATION

#### Further information

#### Other Emergency Phone Number

|                       |                     |                      |
|-----------------------|---------------------|----------------------|
| <u>Latin America:</u> | Brazil              | +55 113 711 9144     |
|                       | All other countries | +44 (0) 1235 239 670 |
| <u>Mexico:</u>        |                     | +52 555 004 8763     |

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.