

# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 23/08/2018

Revision date:

Version: 1.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Product name : Revised 8270 Additions Mix  
Product code : AL0-130416  
Product group : Trade product

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Main use category : Laboratory Use  
Industrial/Professional use spec : Industrial  
For professional use only  
Use of the substance/mixture : Certified reference material for laboratory use only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Phenova  
6390 Joyce Dr. Suite 100  
80403 Golden, CO - United States  
T 1-866-942-2978 - F 1-866-283-0269  
[info@phenova.com](mailto:info@phenova.com) - [www.phenova.com](http://www.phenova.com)

#### 1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924  
ChemTel Assistance (International) +1 813-248-0585

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225  
Acute Tox. 4 (Inhalation) H332  
Carc. 1A H350  
Aquatic Chronic 3 H412

##### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.1; R45  
F; R11  
Xn; R20  
R52/53

Full text of R-phrases: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

GHS08

Signal word (CLP) : Danger

Hazardous ingredients : bis(chloromethyl) ether

# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|                                |   |
|--------------------------------|---|
| Hazard statements (CLP)        | : H225 - Highly flammable liquid and vapor<br>H332 - Harmful if inhaled<br>H350 - May cause cancer<br>H412 - Harmful to aquatic life with long lasting effects  |
| Precautionary statements (CLP) | : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking<br>P233 - Keep container tightly closed<br>P261 - Avoid breathing dust/fume/gas/mist/vapors/spray<br>P271 - Use only outdoors or in a well-ventilated area<br>P273 - Avoid release to the environment<br>P280 - Wear protective gloves/protective clothing/eye protection/face protection<br>P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water<br>P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing<br>P308+P313 - IF exposed or concerned: Get medical advice/attention<br>P370+P378 - In case of fire: Use media other than water to extinguish<br>P403+P235 - Store in a well-ventilated place. Keep cool<br>P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation |

No labeling applicable

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name                                      | Product identifier  | %                             | Classification according to Regulation (EC) No. 1272/2008 [CLP]   |
|---|---|-------------------------------|---|
| Methylene Chloride<br>(Component)         | (CAS No) 75-09-2<br>(EC-No.) 200-838-9<br>(EC index no) 602-004-00-3  | 97.4                          | Carc. 2, H351   |
| bis(chloromethyl) ether<br>(Component)    | (CAS No) 542-88-1<br>(EC-No.) 208-832-8<br>(EC index no) 603-046-00-5 | 0.2                           | Flam. Liq. 2, H225<br>Acute Tox. 3 (Oral), H301<br>Acute Tox. 3 (Dermal), H311<br>Acute Tox. 2 (Inhalation), H330<br>Carc. 1A, H350 |
| 3-chlorophenol<br>(Component)             | (CAS No) 108-43-0<br>(EC-No.) 203-582-6<br>(EC index no) 604-008-00-0 | 0.2                           | Acute Tox. 4 (Inhalation), H332<br>Acute Tox. 4 (Dermal), H312<br>Acute Tox. 4 (Oral), H302<br>Aquatic Chronic 2, H411              |
| 4-chlorophenol<br>(Component)             | (CAS No) 106-48-9<br>(EC-No.) 203-402-6<br>(EC index no) 604-008-00-0 | 0.2                           | Acute Tox. 4 (Oral), H302<br>Acute Tox. 4 (Dermal), H312<br>Acute Tox. 4 (Inhalation), H332<br>Aquatic Chronic 2, H411              |
| 3,4-dichlorophenol<br>(Component)         | (CAS No) 95-77-2<br>(EC-No.) 202-450-5                                | 0.2                           | Acute Tox. 4 (Oral), H302<br>Eye Irrit. 2, H319<br>Skin Irrit. 2, H315<br>Aquatic Chronic 2, H411                                   |
| 1,2,3,4-tetrachlorobenzene<br>(Component) | (CAS No) 634-66-2<br>(EC-No.) 211-214-0                               | 0.2                           | Acute Tox. 4 (Oral), H302<br>Aquatic Acute 1, H400 (M=10)<br>Aquatic Chronic 1, H410 (M=10)   |
| N-nitrosodibutylamine                     | (CAS No) 924-16-3<br>(EC-No.) 213-101-1                               | 0.2                           | Acute Tox. 4 (Oral), H302<br>Carc. 1B, H350   |
| N-Nitrosodiethylamine                     | (CAS No) 55-18-5<br>(EC-No.) 200-226-1                                | 0.2                           | Acute Tox. 3 (Oral), H301<br>Carc. 1B, H350   |
| Name                                      | Product identifier  | Specific concentration limits |   |
| bis(chloromethyl) ether<br>(Component)    | (CAS No) 542-88-1<br>(EC-No.) 208-832-8<br>(EC index no) 603-046-00-5 | (C >= 0.001) Carc. 1A, H350   |   |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |   |
|---------------------------------------|---|
| First-aid measures general            | : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention. |
| First-aid measures after inhalation   | : Allow victim to breathe fresh air. Allow the victim to rest.  |
| First-aid measures after skin contact | : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.                          |
| First-aid measures after eye contact  | : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.       |

# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause cancer by inhalation.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapor.

Explosion hazard : May form flammable/explosive vapor-air mixture.

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up in absorbent material. Collect spillage.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Hygiene measures : Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.

Storage conditions : Keep in fireproof place. Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.

Incompatible materials : Direct sunlight. Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| bis(chloromethyl) ether (542-88-1) |                                  |   |
|------------------------------------|----------------------------------|---|
| Belgium                            | Limit value (mg/m <sup>3</sup> ) | 0.0048 mg/m <sup>3</sup> (Oxyde de bis(chlorométhyle); Belgium; Time-weighted average exposure limit 8 h) |
| Belgium                            | Limit value (ppm)                | 0.001 ppm (Oxyde de bis(chlorométhyle); Belgium; Time-weighted average exposure limit 8 h)                |

# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| <b>bis(chloromethyl) ether (542-88-1)</b> |                                  |  |
|---|----------------------------------|--|
| France                                    | VME (mg/m <sup>3</sup> )         | 0.005 mg/m <sup>3</sup> (Oxyde de bis(chlorométhyle); France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative) |
| France                                    | VME (ppm)                        | 0.001 ppm (Oxyde de bis(chlorométhyle); France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)               |
| Italy - Portugal - USA ACGIH              | ACGIH TWA (ppm)                  | 0.001 ppm (bis(Chloromethyl)ether; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)   |
| United Kingdom                            | WEL TWA (mg/m <sup>3</sup> )     | 0.005 mg/m <sup>3</sup> Bis(chloromethyl)ether; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)   |
| United Kingdom                            | WEL TWA (ppm)                    | 0.001 ppm Bis(chloromethyl)ether; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)                 |
| <b>Methylene Chloride (75-09-2)</b>       |                                  |  |
| Belgium                                   | Limit value (mg/m <sup>3</sup> ) | 177 mg/m <sup>3</sup> (Chlorure de méthylène; Belgium; Time-weighted average exposure limit 8 h)   |
| Belgium                                   | Limit value (ppm)                | 50 ppm (Chlorure de méthylène; Belgium; Time-weighted average exposure limit 8 h)  |
| France                                    | VLE (mg/m <sup>3</sup> )         | 356 mg/m <sup>3</sup> (Dichlorométhane; France; Short time value; VRC: Valeur réglementaire contraignante)                                       |
| France                                    | VLE (ppm)                        | 100 ppm (Dichlorométhane; France; Short time value; VRC: Valeur réglementaire contraignante)   |
| France                                    | VME (mg/m <sup>3</sup> )         | 178 mg/m <sup>3</sup> (Dichlorométhane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)               |
| France                                    | VME (ppm)                        | 50 ppm (Dichlorométhane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)                              |
| Italy - Portugal - USA ACGIH              | ACGIH TWA (ppm)                  | 50 ppm (Dichloromethane (Methylene chloride); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)                                |
| United Kingdom                            | WEL TWA (mg/m <sup>3</sup> )     | 350 mg/m <sup>3</sup> Dichloromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)            |
| United Kingdom                            | WEL TWA (ppm)                    | 100 ppm Dichloromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)                          |
| United Kingdom                            | WEL STEL (mg/m <sup>3</sup> )    | 1060 mg/m <sup>3</sup> Dichloromethane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)                                   |
| United Kingdom                            | WEL STEL (ppm)                   | 300 ppm Dichloromethane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)  |

### 8.2. Exposure controls

Appropriate engineering controls

: Either local exhaust or general room ventilation is usually required.

Personal protective equipment

: Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



Hand protection

: Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration.

Eye protection

: Chemical goggles or safety glasses. Safety glasses.

Skin and body protection

: Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.

Respiratory protection

: Wear appropriate mask.

Other information

: Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state

: Liquid

Color

: Colorless.

# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|                           |                                     |
|---------------------------|-------------------------------------|
| Odor                      | : characteristic.                   |
| pH                        | : No data available                 |
| Melting point             | : No data available                 |
| Freezing point            | : No data available                 |
| Boiling point             | : No data available                 |
| Flash point               | : No data available                 |
| Auto-ignition temperature | : No data available                 |
| Decomposition temperature | : No data available                 |
| Flammability (solid, gas) | : Highly flammable liquid and vapor |
| Relative density          | : No data available                 |
| Solubility                | : No data available                 |
| Explosive properties      | : No data available                 |
| Oxidizing properties      | : No data available                 |
| Explosion limits          | : No data available                 |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Inhalation: Harmful if inhaled.

| Revised 8270 Additions Mix |              |
|----------------------------|--------------|
| ATE CLP (gases)            | 4500 ppmV/4h |
| ATE CLP (vapors)           | 11 mg/l/4h   |
| ATE CLP (dust, mist)       | 1.5 mg/l/4h  |

| bis(chloromethyl) ether (542-88-1) |                                      |
|------------------------------------|--------------------------------------|
| LD50 oral rat                      | 273 mg/kg (Rat; Literature study)    |
| LD50 dermal rabbit                 | 364 mg/kg (Rabbit; Literature study) |
| ATE CLP (oral)                     | 273 mg/kg body weight                |
| ATE CLP (dermal)                   | 364 mg/kg body weight                |
| ATE CLP (gases)                    | 100 ppmV/4h                          |
| ATE CLP (vapors)                   | 0.5 mg/l/4h                          |
| ATE CLP (dust, mist)               | 0.05 mg/l/4h                         |

| 3-chlorophenol (108-43-0) |   |
|---------------------------|---|
| LD50 oral rat             | 570 mg/kg body weight (Rat; Literature study) |

| 4-chlorophenol (106-48-9) |  |
|---------------------------|--|
| LD50 oral rat             | 500 mg/kg body weight (Rat; Literature study; 261 mg/kg bodyweight; Rat; Literature study) |
| LD50 dermal rat           | 1500 mg/kg body weight (Rat; Literature study)   |
| ATE CLP (oral)            | 500 mg/kg body weight  |
| ATE CLP (dermal)          | 1500 mg/kg body weight   |
| ATE CLP (gases)           | 4500 ppmV/4h   |
| ATE CLP (vapors)          | 11 mg/l/4h   |
| ATE CLP (dust, mist)      | 1.5 mg/l/4h  |

# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| <b>1,2,3,4-tetrachlorobenzene (634-66-2)</b> |   |
|--|---|
| LD50 oral rat                                | 1167 mg/kg (Rat)                        |
| ATE CLP (oral)                               | 1167 mg/kg body weight                  |
| <b>Methylene Chloride (75-09-2)</b>          |   |
| LD50 oral rat                                | > 2000 mg/kg (Rat; Literature study)    |
| LD50 dermal rabbit                           | > 2000 mg/kg (Rabbit; Literature study) |
| <b>N-nitrosodibutylamine (924-16-3)</b>      |   |
| LD50 oral rat                                | 1200 mg/kg (Rat)                        |
| ATE CLP (oral)                               | 1200 mg/kg body weight                  |
| <b>N-Nitrosodiethylamine (55-18-5)</b>       |   |
| LD50 oral rat                                | 220 mg/kg (Rat)                         |
| ATE CLP (oral)                               | 220 mg/kg body weight                   |

|   |  |
|---|--|
| Skin corrosion/irritation                           | : Not classified<br>Based on available data, the classification criteria are not met |
| Serious eye damage/irritation                       | : Not classified<br>Based on available data, the classification criteria are not met |
| Respiratory or skin sensitization                   | : Not classified<br>Based on available data, the classification criteria are not met |
| Germ cell mutagenicity                              | : Not classified<br>Based on available data, the classification criteria are not met |
| Carcinogenicity                                     | : May cause cancer.<br>May cause cancer  |
| Reproductive toxicity                               | : Not classified<br>Based on available data, the classification criteria are not met |
| Specific target organ toxicity – single exposure    | : Not classified<br>Based on available data, the classification criteria are not met |
| Specific target organ toxicity – repeated exposure  | : Not classified<br>Based on available data, the classification criteria are not met |
| Aspiration hazard                                   | : Not classified<br>Based on available data, the classification criteria are not met |
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met.                  |

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Harmful to aquatic life with long lasting effects.

| <b>bis(chloromethyl) ether (542-88-1)</b>    |   |
|--|---|
| LC50 fish 1                                  | 1 - 10 mg/l (LC50; 96 h)                        |
| EC50 Daphnia 1                               | 1 - 10 mg/l (EC50; 48 h)                        |
| <b>3-chlorophenol (108-43-0)</b>             |   |
| EC50 Daphnia 1                               | 5.6 mg/l (EC50; 48 h; Daphnia magna)            |
| LC50 fish 2                                  | 7.73 mg/l (LC50; 96 h; Brachydanio rerio)       |
| Threshold limit algae 2                      | 29 mg/l (EC50; 96 h; Selenastrum capricornutum) |
| <b>4-chlorophenol (106-48-9)</b>             |   |
| LC50 fish 2                                  | 1.9 mg/l (LC50; 96 h; Salmo gairdneri)          |
| EC50 Daphnia 2                               | 2.5 - 8.9 mg/l (EC50; 48 h; Daphnia magna)      |
| <b>3,4-dichlorophenol (95-77-2)</b>          |   |
| EC50 other aquatic organisms 1               | 74 mg/l   |
| Threshold limit algae 1                      | 3.2 mg/l (EC50; 96 h)                           |
| <b>1,2,3,4-tetrachlorobenzene (634-66-2)</b> |   |
| LC50 fish 1                                  | 0.365 mg/l (LC50; 96 h)                         |
| EC50 Daphnia 1                               | 0.091 mg/l (EC50)                               |
| EC50 other aquatic organisms 1               | 1.9 mg/l  |
| <b>Methylene Chloride (75-09-2)</b>          |   |
| LC50 fish 1                                  | 193 mg/l (LC50; 96 h; Pimephales promelas)      |
| EC50 Daphnia 1                               | 168.2 mg/l (EC50; 48 h)                         |

# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|  |                       |
|--|-----------------------|
| <b>N-Nitrosodiethylamine (55-18-5)</b> |                       |
| LC50 fish 1                            | 775 mg/l (LC50; 96 h) |

### 12.2. Persistence and degradability

|  |  |
|--|--|
| <b>Revised 8270 Additions Mix</b>            |  |
| Persistence and degradability                | May cause long-term adverse effects in the environment.  |
| <b>bis(chloromethyl) ether (542-88-1)</b>    |  |
| Persistence and degradability                | Not readily biodegradable in water. Hydrolysis in water. Photolysis in water. No (test)data on mobility of the substance available.      |
| <b>3-chlorophenol (108-43-0)</b>             |  |
| Persistence and degradability                | Not readily biodegradable in water. Not readily biodegradable in the soil. No (test)data on mobility of the substance available.         |
| <b>4-chlorophenol (106-48-9)</b>             |  |
| Persistence and degradability                | Not readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.                     |
| <b>3,4-dichlorophenol (95-77-2)</b>          |  |
| Persistence and degradability                | Not easily biodegradable in water in anaerobic conditions. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. |
| <b>1,2,3,4-tetrachlorobenzene (634-66-2)</b> |  |
| Persistence and degradability                | Not readily biodegradable in water. Forming sediments in water. Adsorbs into the soil.   |
| <b>Methylene Chloride (75-09-2)</b>          |  |
| Persistence and degradability                | Not readily biodegradable in water. Biodegradable in the soil.   |
| <b>N-nitrosodibutylamine (924-16-3)</b>      |  |
| Persistence and degradability                | Biodegradability in water: no data available.  |
| <b>N-Nitrosodiethylamine (55-18-5)</b>       |  |
| Persistence and degradability                | Not readily biodegradable in water.  |

### 12.3. Bioaccumulative potential

|  |  |
|--|--|
| <b>Revised 8270 Additions Mix</b>            |  |
| Bioaccumulative potential                    | Not established.                                 |
| <b>bis(chloromethyl) ether (542-88-1)</b>    |  |
| BCF fish 1                                   | 11 (BCF)   |
| Log Pow                                      | 0.38 - 1.06                                      |
| Bioaccumulative potential                    | Low potential for bioaccumulation (BCF < 500).   |
| <b>3-chlorophenol (108-43-0)</b>             |  |
| BCF fish 1                                   | 5.1 - 16 mg/l (BCF; 6 weeks; Cyprinus carpio)    |
| Log Pow                                      | 2.39 - 2.50 (Literature)                         |
| Bioaccumulative potential                    | Low potential for bioaccumulation (BCF < 500).   |
| <b>4-chlorophenol (106-48-9)</b>             |  |
| BCF fish 1                                   | 10 (BCF; Carassius auratus)                      |
| BCF fish 2                                   | 11 - 52 (BCF; Cyprinus carpio)                   |
| Log Pow                                      | 2.39 - 2.44 (Literature)                         |
| Bioaccumulative potential                    | Low potential for bioaccumulation (BCF < 500).   |
| <b>3,4-dichlorophenol (95-77-2)</b>          |  |
| BCF fish 1                                   | 7 - 35 (BCF)                                     |
| Log Pow                                      | 3.13 - 3.34                                      |
| Bioaccumulative potential                    | Low potential for bioaccumulation (BCF < 500).   |
| <b>1,2,3,4-tetrachlorobenzene (634-66-2)</b> |  |
| BCF fish 1                                   | 5200 (BCF)                                       |
| BCF fish 2                                   | 489 - 1710 (BCF)                                 |
| BCF other aquatic organisms 1                | > 5012 (BCF)                                     |
| Log Pow                                      | 4.46 - 5.02                                      |
| Bioaccumulative potential                    | High potential for bioaccumulation (BCF > 5000). |
| <b>Methylene Chloride (75-09-2)</b>          |  |
| BCF fish 1                                   | 2 - 40 (BCF)                                     |
| Log Pow                                      | 1.25 (Experimental value)                        |
| Bioaccumulative potential                    | Low potential for bioaccumulation (BCF < 500).   |

# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| <b>N-nitrosodibutylamine (924-16-3)</b> |                                    |
|---|------------------------------------|
| Bioaccumulative potential               | No bioaccumulation data available. |

| <b>N-Nitrosodiethylamine (55-18-5)</b> |  |
|--|--|
| BCF other aquatic organisms 1          | 1 (BCF)  |
| Log Pow                                | 0.48   |
| Bioaccumulative potential              | Low potential for bioaccumulation (Log Kow < 4). |

### 12.4. Mobility in soil

| <b>Methylene Chloride (75-09-2)</b> |   |
|-------------------------------------|---|
| Surface tension                     | 0.028 N/m (20 °C)   |
| Ecology - soil                      | May be harmful to plant growth, blooming and fruit formation. |

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Additional information : Avoid release to the environment

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Additional information : Handle empty containers with care because residual vapors are flammable.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR) : 2810  
UN-No. (IATA) : 2810  
UN-No. (IMDG) : 2810  
UN-No. (ADN) : 2810

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : TOXIC LIQUID, ORGANIC, N.O.S.  
Proper Shipping Name (IATA) : Toxic liquid, organic, n.o.s.  
Proper Shipping Name (IMDG) : TOXIC LIQUID, ORGANIC, N.O.S.  
Proper Shipping Name (ADN) : TOXIC LIQUID, ORGANIC, N.O.S.  
Transport document description (ADR) : UN 2810 TOXIC LIQUID, ORGANIC, N.O.S., 6.1, III, (E)

### 14.3. Packing group

Class (ADR) : 6.1  
Classification code (ADR) : T1  
Class (IATA) : 6.1  
Class (IMDG) : 6.1  
Class (ADN) : 6.1  
Classification code (ADN) : T1  
Hazard labels (ADR) : 6.1



Division (IATA) : 6.1  
Hazard labels (IATA) : 6.1





# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hazard labels (IMDG) : 6.1



Hazard labels (ADN) : 6.1



### 14.4. Packing group

Packing group (ADR) : III  
Packing group (IATA) : III  
Packing group (IMDG) : III  
Packing group (ADN) : III

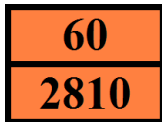
### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

#### 14.6.1. Overland transport

Hazard identification number (Kemler No.) : 60  
Classification code (ADR) : T1  
Orange plates :



Special provision (ADR) : 274, 614  
Transport category (ADR) : 2  
Tunnel restriction code (ADR) : E  
Limited quantities (ADR) : 5l  
Excepted quantities (ADR) : E1  
EAC : 2X  
APP : B

#### 14.6.2. Transport by sea

Special provision (IMDG) : 223, 274  
Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T7  
Tank special provisions (IMDG) : TP1, TP28  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-A  
Stowage category (IMDG) : A  
Properties and observations (IMDG) : Toxic if swallowed, by skin contact or by inhalation.

#### 14.6.3. Air transport

CAO packing instructions (IATA) : 663  
CAO max net quantity (IATA) : 220L  
PCA packing instructions (IATA) : 655  
PCA Limited quantities (IATA) : Y642  
PCA limited quantity max net quantity (IATA) : 2L  
PCA max net quantity (IATA) : 60L  
PCA Excepted quantities (IATA) : E1  
Special provision (IATA) : A3, A4, A137  
ERG code (IATA) : 6L

#### 14.6.4. Inland waterway transport

Special provision (ADN) : 274, 614, 802

# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|                                   |                  |
|-----------------------------------|------------------|
| Limited quantities (ADN)          | : 5 L            |
| Excepted quantities (ADN)         | : E1             |
| Carriage permitted (ADN)          | : T              |
| Equipment required (ADN)          | : PP, EP, TOX, A |
| Ventilation (ADN)                 | : VE02           |
| Number of blue cones/lights (ADN) | : 0              |
| Carriage prohibited (ADN)         | : No             |

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

|  |  |
|--|--|
| 3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008   | Revised 8270 Additions Mix - bis(chloromethyl) ether - dichloromethane - N-nitrosodibutylamine - diethylnitrosoamine |
| 3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F  | Revised 8270 Additions Mix - bis(chloromethyl) ether   |
| 3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10   | Revised 8270 Additions Mix - bis(chloromethyl) ether - dichloromethane - N-nitrosodibutylamine - diethylnitrosoamine |
| 3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1   | Revised 8270 Additions Mix   |
| 28. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Carcinogen category 1A or 1B (Table 3.1) or Carcinogen category 1 or 2 (Table 3.2) and listed as follows: Carcinogen category 1A (Table 3.1)/Carcinogen category 1 (Table 3.2) listed in Appendix 1 Carcinogen category 1B (Table 3.1)/Carcinogen category 2 (Table 3.2) listed in Appendix 2          | bis(chloromethyl) ether  |
| 40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not. | Revised 8270 Additions Mix - bis(chloromethyl) ether   |
| 59. Dichloromethane  | dichloromethane  |

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

#### 15.1.2. National regulations

##### Germany

Water hazard class (WGK) : 3 - strongly hazardous to water

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

|                   |  |
|-------------------|--|
| Data sources      | : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. |
| Other information | : None.  |

PHV SDS EU

# Revised 8270 Additions Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

---

*Copyright 2015 Phenova, Inc. License granted to make paper copies for internal use. The information contained in this Safety Data Sheet is based on our current knowledge. The information contained in this document should be used only as a guide for appropriate safety precautions and should not be considered to be all inclusive. Users should make their own investigation to determine the suitability of the information for their particular purposes. The document does not represent any guarantee of the properties of the product. Phenova, Inc. shall not be held liable for any damage resulting from the handling or use of this product. Visit the Terms and Conditions of Sale link at [www.phenova.com](http://www.phenova.com) for additional terms and conditions of sale.*