# Material Safety Data Sheet

AF79

## 1. Product and company identification

| | | |
|---|---|---|
| **Product name** | : | AF79 |
| **Supplier** | : | Betco Corporation<br>1001 Brown Avenue<br>Toledo, Ohio 43607<br>(800) 333-2156 |
| **Manufacturer** | : | Betco Corporation<br>1001 Brown Avenue<br>Toledo, Ohio 43607 |
| **Code** | : | 079 |
| **MSDS #** | : | 079 |
| **Validation date** | : | 10/7/2013. |
| **Print date** | : | 10/7/2013. |
| **In case of emergency** | : | Chemtrec (800) 424-9300 |
| **Product type** | : | Liquid. |

## 2. Hazards identification

**Emergency overview**

| | | |
|---|---|---|
| **Physical state** | : | Liquid. |
| **Color** | : | Clear. Blue. |
| **Odor** | : | Pleasant. |
| **Signal word** | : | CAUTION! |
| **Hazard statements** | : | MAY CAUSE EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. |
| **Precautionary measures** | : | Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. |
| **OSHA/HCS status** | : | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| **Routes of entry** | : | Dermal contact. Eye contact. |

**Potential acute health effects**

| | | |
|---|---|---|
| **Inhalation** | : | Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. |
| **Ingestion** | : | No known significant effects or critical hazards. |
| **Skin** | : | Moderately irritating to the skin. |
| **Eyes** | : | Moderately irritating to eyes. |

**Potential chronic health effects**

| | | |
|---|---|---|
| **Chronic effects** | : | Contains material that may cause target organ damage, based on animal data. |
| **Carcinogenicity** | : | No known significant effects or critical hazards. |
| **Mutagenicity** | : | No known significant effects or critical hazards. |
| **Teratogenicity** | : | No known significant effects or critical hazards. |
| **Developmental effects** | : | No known significant effects or critical hazards. |
| **Fertility effects** | : | No known significant effects or critical hazards. |
| **Target organs** | : | Contains material which may cause damage to the following organs: upper respiratory tract, central nervous system (CNS), eye, lens or cornea. |
| **Medical conditions aggravated by over-exposure** | : | Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product. |

**See toxicological information (Section 11)**

## 3. Composition/information on ingredients

| Name | CAS number | % |
|---|---|---|
| (2-methoxymethylethoxy)propanol | 34590-94-8 | 1 - 5 |
| tetrasodium ethylene diamine tetraacetate | 64-02-8 | 1 - 5 |

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

## 4. First aid measures

**Eye contact** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately. In case of contact with eyes, rinse immediately with plenty of water.

**Skin contact** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

**Inhalation** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Ingestion** Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Protection of first-aiders** No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

## 5. Fire-fighting measures

**Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Extinguishing media**

**Suitable** : Use an extinguishing agent suitable for the surrounding fire.

**Not suitable** : None known.

**Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. Accidental release measures

**Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

# 6. Accidental release measures

**Methods for cleaning up**

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

# 7. Handling and storage

**Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

# 8. Exposure controls/personal protection

| Ingredient | Exposure limits |
|---|---|
| (2-methoxymethylethoxy)propanol | **ACGIH TLV (United States, 2/2010). Absorbed through skin.**<br>TWA: 100 ppm 8 hour(s).<br>TWA: 606 mg/m³ 8 hour(s).<br>STEL: 150 ppm 15 minute(s).<br>STEL: 909 mg/m³ 15 minute(s).<br>**OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.**<br>TWA: 100 ppm 8 hour(s).<br>TWA: 600 mg/m³ 8 hour(s).<br>STEL: 150 ppm 15 minute(s).<br>STEL: 900 mg/m³ 15 minute(s).<br>**NIOSH REL (United States, 6/2009). Absorbed through skin.**<br>TWA: 100 ppm 10 hour(s).<br>TWA: 600 mg/m³ 10 hour(s).<br>STEL: 150 ppm 15 minute(s).<br>STEL: 900 mg/m³ 15 minute(s).<br>**OSHA PEL (United States, 6/2010). Absorbed through skin.**<br>TWA: 100 ppm 8 hour(s).<br>TWA: 600 mg/m³ 8 hour(s). |

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

# 8. Exposure controls/personal protection

**Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protection**

**Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. <1 hours (breakthrough time): disposable vinyl

**Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: safety glasses

**Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Personal protective equipment (Pictograms)** :

# 9. Physical and chemical properties

**Physical state** : Liquid.

**Flash point** : Closed cup: >150°C (>302°F) [Product does not sustain combustion.]

**Color** : Clear. Blue.

**Odor** : Pleasant.

**pH** : 11.5 to 12.5

**Relative density** : 1.007

**Dispersibility properties** : Easily dispersible in the following materials: cold water and hot water.

**Solubility** : Easily soluble in the following materials: cold water and hot water.

# 10. Stability and reactivity

**Chemical stability** : The product is stable.

**Conditions to avoid** : No specific data.

**Incompatible materials** : Reactive or incompatible with the following materials:
acids

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

# 11. Toxicological information

**Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| tetrasodium ethylene diamine tetraacetate | LD50 Oral | Rat | 10 g/kg | - |

**Conclusion/Summary** : Not available.

**Chronic toxicity**

**Conclusion/Summary** : Not available.

**Irritation/Corrosion**

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| (2-methoxymethylethoxy)propanol | Eyes - Mild irritant | Human | - | 8 milligrams | - |
| | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 500 milligrams | - |
| tetrasodium ethylene diamine tetraacetate | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 milligrams | - |

**Conclusion/Summary** : Not available.

**Sensitizer**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

# 12. Ecological information

**Ecotoxicity** : No known significant effects or critical hazards.

**Aquatic ecotoxicity**

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| tetrasodium ethylene diamine tetraacetate | Acute LC50 486000 ug/L Fresh water | Fish - Lepomis macrochirus | 96 hours |

**Conclusion/Summary** : Not available.

# 12. Ecological information

**Persistence/degradability**

**Conclusion/Summary** : Not available.

# 13. Disposal considerations

**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations.**

**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**

# 14. Transport information

| Regulatory information | UN number | Proper shipping name | Classes | PG* | Label | Additional information |
|---|---|---|---|---|---|---|
| DOT Classification | Not regulated. | - | - | - | | - |
| TDG Classification | Not regulated. | - | - | - | | - |
| Mexico Classification | Not regulated. | - | - | - | | - |
| ADR/RID Class | Not regulated. | - | - | - | | - |
| IMDG Class | Not regulated. | - | - | - | | - |
| IATA-DGR Class | Not regulated. | - | - | - | | - |

PG* : Packing group

# 15. Regulatory information

**HCS Classification** : Irritating material
Target organ effects

**U.S. Federal regulations** : **TSCA 4(a) final test rules**: (2-methoxymethylethoxy)propanol
**TSCA 8(a) PAIR**: (2-methoxymethylethoxy)propanol
**TSCA 8(a) IUR Exempt/Partial exemption**: Not determined
**United States inventory (TSCA 8b)**: Not determined.
**TSCA 12(b) annual export notification**: (2-methoxymethylethoxy)propanol

# 15. Regulatory information

**SARA 302/304/311/312 extremely hazardous substances**: No products were found.
**SARA 302/304 emergency planning and notification**: No products were found.
**SARA 302/304/311/312 hazardous chemicals**: (2-methoxymethylethoxy)propanol; tetrasodium ethylene diamine tetraacetate
**SARA 311/312 MSDS distribution - chemical inventory - hazard identification**: Dipropylene glycol monomethyl ether: Fire hazard; tetrasodium ethylene diamine tetraacetate: Immediate (acute) health hazard

**Clean Water Act (CWA) 311**: Sodium hydroxide

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

**State regulations**

**Massachusetts** : The following components are listed: DIPROPYLENE GLYCOL METHYL ETHER

**New York** : None of the components are listed.

**New Jersey** : The following components are listed: DIPROPYLENE GLYCOL METHYL ETHER; (2-METHOXYMETHYLETHOXY) PROPANOL

**Pennsylvania** : The following components are listed: PROPANOL, (2-METHOXYMETHYLETHOXY)-

**Canada inventory** : Not determined.

**International regulations**

**International lists** : **Australia inventory (AICS)**: Not determined.
**China inventory (IECSC)**: Not determined.
**Japan inventory**: Not determined.
**Korea inventory**: Not determined.
**New Zealand Inventory of Chemicals (NZIoC)**: Not determined.
**Philippines inventory (PICCS)**: Not determined.

**Chemical Weapons Convention List Schedule I Chemicals** : Not listed

**Chemical Weapons Convention List Schedule II Chemicals** : Not listed

**Chemical Weapons Convention List Schedule III Chemicals** : Not listed

# 16. Other information

**Label requirements** : MAY CAUSE EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

**Hazardous Material Information System (U.S.A.)** :

| | | |
|---|---|---|
| Health | * | 2 |
| Flammability | | 1 |
| Physical hazards | | 0 |

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