

SAFETY DATA SHEET



Product Name: ACCO Clarifier-L

Release Date: 3/18/20

Product Number: 102-36001

1. Identification

| | |
|-----------------------------------|--|
| Product Identifier: | ACCO Clarifier-L |
| Other means of identification: | Not available. |
| CAS Number: | Proprietary |
| Recommended Use: | Water treatment. |
| Recommended Restrictions: | None known. |
| Supplier/Distributor Information: | ACCO Unlimited Corporation 5105 NW Johnston Dr. Johnston, IA 50131 (800) 548-2226 |

EMERGENCY PHONE NUMBER: 800-424-9300 CHEMTREC

2. Hazard(s) Identification

OSHA/HCS status.....This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture.....ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
EYE IRRITATION -Category 28

GHS label elements:
Hazard pictograms



Signal word.....Warning

Hazard statements.....Harmful if swallowed or if inhaled. Causes eye irritation.

Precautionary statements:

Prevention.....Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response.....IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage.....Not applicable.

Disposal..... Dispose of contents and container in accordance with all local, regional and national regulations.

Hazards not otherwise classified: None known.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

Other means of identification: Not available.

| Ingredient name | % | CAS number |
|------------------|-------------|------------|
| Cationic Polymer | Proprietary | - |

While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

Section 4. First aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects:

Eye contact: Causes eye irritation.

Inhalation: Harmful if inhaled.

Skin contact: No known significant effects or critical hazards.

Ingestion: Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following: irritation, watering, redness.

Inhalation: No specific data.

Skin contact: No specific data.

Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary:

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.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

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

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, halogenated compounds.

Special protective actions for fire-fighters: 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.

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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: 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.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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).

Methods and materials for containment and 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.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: 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. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: 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. 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. See Section 10 for incompatible materials before handling or use.

Satisfactory Materials of Construction: Buna-N rubber, Butyl rubber, Polypropylene, Plexiglas, Teflon, PVC- rigid, Viton, EPDM rubber, PVC - flexible, Fiberglass, Neoprene, Polyethylene - low density, Tygon, Tyril 880, Gum rubber, Silicone rubber, Hypalon, Polyethylene - high density, Stainless steels 304 and 316, ABS (Plastic), Morton test liner (108 T 44L V), 6/6 Nylon, FRP lined mild steel.

NOTE: With respect to all other materials not listed above, user should be aware that use of such materials with this product may be hazardous and result in damages to such materials and other property and personal injuries. No data concerning such materials not listed above should be implied by the user.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits: None.

Appropriate engineering controls: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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.

Individual protection measures

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.

Eye/face protection: 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection: 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: 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.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: If respiratory hazards exist (see section 2), and if use conditions warrant with the potential for airborne exposure existing, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state: Liquid

Color: Clear, pale yellow

Odor: Mild

Odor threshold: Not available

pH: 6 to 8

Melting point: $<0^{\circ}\text{C}$ ($<32^{\circ}\text{F}$)

Boiling point: $>100^{\circ}\text{C}$ ($>212^{\circ}\text{F}$)

Flash point: Closed cup: $>100^{\circ}\text{C}$ ($>212^{\circ}\text{F}$) [Tagliabue.]

Evaporation rate: Not available

Flammability (solid, gas): Not applicable

Lower and upper explosive (flammable) limits: Not available

Vapor pressure: Not available

Vapor density: Not available

Relative density: 1.13 to 1.16

Dispersibility properties: Not available

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

Partition coefficient: n-octanol/water: Not available

Auto-ignition temperature: Not available

Decomposition temperature: Not available

Viscosity: Dynamic (room temperature): 125 mPa·s (125 cP)

VOC: 0 % (w/w) [Method 24]

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

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

Conditions to avoid: No specific data.

Incompatible materials: No specific data.

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|---------------------------------|-----------|----------------------|----------|
| Cationic Polymer | LC50 Inhalation Dusts and mists | Rat | 2.9 g/m ³ | 4 hours |
| | LD50 Oral | Rat | 1951 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | 2.9 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat- Male | 1951 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|----------------------|---------|-------|----------|-------------|
| Cationic Polymer | Eyes - Mild irritant | Rabbit | - | - | - |
| | Skin - Mild irritant | Rabbit | - | - | - |

Sensitization

| Product/ingredient name | Route of exposure | Species | Result |
|-------------------------|-------------------|------------|-----------------|
| Cationic Polymer | skin | Guinea pig | Not sensitizing |
| | skin | Human | Not sensitizing |

Mutagenicity

Not available.

Carcinogenicity

This product has not been tested unless noted in summary results.

Conclusion/Summary

A two year rat carcinogenicity study showed a slight increase in c-cell adenomas in female rats. Studies with male rats and male and female mice did not show any evidence of carcinogenic response. This product is not considered a carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|---|---------|------------|----------|
| Cationic Polymer | Negative - Oral | Rat | - | - |
| | Negative - Route of exposure unreported | Rabbit | >125 mg/kg | - |

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal.
Routes of entry not anticipated: Inhalation.

Potential acute health effects

| | |
|---------------------|---|
| Eye contact | Causes eye irritation. |
| Inhalation | Harmful if inhaled. |
| Skin contact | No known significant effects or critical hazards. |
| Ingestion | Harmful if swallowed. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|---------------------|--|
| Eye contact | Adverse symptoms may include the following: irritation watering redness |
| Inhalation | No specific data. |
| Skin contact | No specific data. |
| Ingestion | No specific data. |

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Long term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Potential chronic health effects

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|-----------------------|---------|-------------|----------|
| Cationic Polymer | Sub-chronic NOEL Oral | Rat | 3000 mg/kg | 90 days |
| | Sub-acute NOEL Dermal | Rabbit | >1000 mg/kg | 90 days |

| | |
|------------------------------|---|
| General | No known significant effects or critical hazards. |
| 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. |

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|------------------------------|------------|
| Oral | 1951 mg/kg |
| Dermal | 2500 mg/kg |
| Inhalation (dusts and mists) | 2.9 mg/l |

Section 12. Ecological information

Toxicity



| Product/ingredient name | Result | Species | Exposure |
|-------------------------|-----------------------------------|-------------|----------|
| Cationic Polymer | Acute LC50 13 mg/l Marine water | Crustaceans | 96 hours |
| | Acute LC50 >600 mg/l Marine water | Fish | 96 hours |

Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible.

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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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.

Section 14. Transport information

| | DOT Classification | IMDG | IATA |
|----------------------------|--------------------|---|--|
| UN number | Not regulated. | 3082 | 3082 |
| UN proper shipping name | - | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Poly [oxyethylene(dimethyliminio) ethylene(dimethyliminio) ethylene dichloride]). Marine pollutant (Poly[oxyethylene (dimethyliminio)ethylene (dimethyliminio)ethylene dichloride]) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Poly [oxyethylene(dimethyliminio) ethylene(dimethyliminio) ethylene dichloride]) |
| Transport hazard class(es) | | 9 | 9 |
| | |  < | 6 >  |
| | | 6 | > |
| Packing group | - | III | /// |
| Environmental hazards | No. | Yes. | Yes. |

Lor : 55 kg.

Emergency: schedules (EmSI)

F-A, S-F

Remarks

ERG Guide 171, ERG Code 9L

Remarks

ERG Guide 171, HazMat Code

4960131

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code

Not available.

Section 15. Regulatory information

Potential impurities present in trace quantities are included in the regulatory listings of this section.

U.S. Federal regulations

United States inventory (TSCA Sb): All components are listed or exempted.
Clean Water Act (CWA)307: bis(2-chloroethyl) ether
Clean Water Act (CWA)311: bis(2-chloroethyl) ether

SARA302/304

Composition/information on ingredients

| Name | % | EHS | SARA302 TPQ | | SARA304RQ | |
|---------------------|-------|------|-------------|-----------|-----------|-----------|
| | | | (lbs) | (gallons) | (lbs) | (gallons) |
| Dichloroethyl ether | 0.001 | Yes. | 10000 | 981.5 | 10 | 0.98 |

SARA304RQ 1000000 lbs/ 454000 kg [104745.9 gal/ 396506.6 L]

SARA 311/312

Classification

ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (inhalation) - Category 4
 EYE IRRITATION -Category 2B

Composition/information on ingredients

| Name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|------------------|-------------|-------------|----------------------------|----------|---------------------------------|---------------------------------|
| Cationic Polymer | Proprietary | No. | No. | No. | Yes. | No. |

CERCLA

CERCLA: Hazardous substances.: 1,4-dioxane: 100 lbs. (45.4 kg); bis(2-chloroethyl) ether: 10 lbs. (4.54 kg);

FDA

This product is allowed under the following FDA (21 CFR) sections :176.170, 176.180
 Limitations: For use only to improve dry-strength of paper and paperboard and as a retention and drainage aid employed prior to the sheet-forming operation in the manufacture of paper and paperboard and limited to use at a level not to exceed 0.1 percent by weight of the finished dry paper and paperboard fibers..

NSF

This product is listed by the NSF under NSF/ANSI Standard 60 for use in potable water applications with the following maximum allowable use rates: Concentrations of 2-5 ppm can be used at the initiation of treatment for up to 21 days. Thereafter, the maximum use rate is 0.5 ppm for potable water systems.

FIFRA

This product is not a registered pesticide.

State regulations

California Prop. 65

& WARNING: This product can expose you to chemicals including 1,4-Dioxane and Bis(2-chloroethyl)ether, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

| Ingredient name | Cancer | Reproductive |
|--------------------------|--------|--------------|
| 1,4-dioxane | Yes. | No. |
| bis(2-chloroethyl) ether | Yes. | No. |

Section 16. Other information

NFPA



HMIS

| | |
|---|---|
| H | 1 |
| F | 1 |
| R | 0 |

PPE*

*.Sec. 8

Key to abbreviations

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

Date of Revision: 1/30/2020

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