

| .1       Product Code:       28679         Product Name:       Short-chain Fatty Acid Mixture 1         .2       Relevant identified uses of the substance or mixture and uses advised against:         Relevant identified uses:       For research use only, not for human or veterinary use.         .3       Details of the Supplier of the Safety Data Sheet:         Company Name:       Cayman Chemical Company         1180 E: Ellswork Rd.       Ann Arbor, MI 48108         Web site address:       www.caymanchem.com         Information:       Cayman Chemical Company         *110 E: Ellswork Rd.       Ann Arbor, MI 48108         Web site address:       www.caymanchem.com         Information:       Cayman Chemical Company         *14       (734)971-3335         Emergency telephone number:       Emergency Contact:         Emergency Contact:       CHEMTREC Within USA and Canada:       +1 (703)527-3887         Section 2.       Hazards Identification         Classification of the Substance or Mixture:       Skin Corrosion/Irritation, Category 3         2.2       Label Elements:       Hazard Phrases:         H316: Causes mild skin irritation.       GHS Precautionary Phrases:         No phrases apply.       GHS Response Phrases:         P322-913: If skin irinitation occurs, get medica   |  | Section 1   | Identification of the Substar   | nce/Mixture and o  | f the Company/U  | ndertaking   |
|--|--|---|---|--|--|--|
| Product Name:       Short-chain Fatty Acid Mixture 1         2. Relevant identified uses of the substance or mixture and uses advised against:         Relevant identified uses:       For research use only, not for human or veterinary use.         3. Details of the Supplier of the Satty Data Sheet:         Company Name:       Cayman Chemical Company<br>11/80 E. Elissonth Rd.<br>Ann Atdor, MI 43108         Web site address:       www.caymanchem.com<br>information:       Cayman Chemical Company         +11 (734)971-3335       Emergency telephone number:         Emergency Contact:       CHEMTREC Within USA and Canada:       +1 (800)424-9300<br>CHEMTREC Outside USA and Canada:         -11 Classification of the Substance or Mixture:       Skin Corrosion/Irritation, Category 3         -2. Label Elements:       Section 2. Hazard's Identification         -3. Classification of the Substance or Mixture:       Skin Corrosion/Irritation.         GHS Signal Word:       Warning         GHS Response Phrases:       No phrases         No phrases apply.       GHS Response Phrases:         No phrases apply.       GHS Response Phrases:         P32:4313. If skin Initiation.       GHS Storage and Disposal Phrases:         P32:4313. If skin Initiation cours, get medical advice/attention.       GHS Storage and Disposal Phrases:         PAdverse Human Health       Causes mind skin ininitation. <t< th=""><th>1</th><th></th><th></th><th></th><th></th><th></th></t<>  | 1  |   |   |  |  |  |
| 2. Relevant identified uses of the substance or mixture and uses advised against:         Relevant identified uses:       For research use only, not for human or veterinary use.         3. Dotalis of the Supplier of the Safety Data Sheet:       Company Name:         Cayman Chemical Company<br>1180 E. Ellsworth Rd.<br>Ann Artor, Mil 48108         Web site address:       www.caymanchem.com<br>Information:         Cayman Chemical Company       +1 (734)971-3335         4. Emergency telephone number:       Emergency Contact:         Emergency Contact:       CHEMTREC Within USA and Canada:       +1 (800)424-9300<br>CHEMTREC Outside USA and Canada:         14. Classification of the Substance or Mixture:       Skin Corrosion/irritation, Category 3         2.1 Label Elements:       Warning         CHS Signal Word:       Warning         CHS Response Phrases:       No phrases apply.         Plasse refer to Section 7 for Storage and Section 13 for Disposal information.         CHS Response Phrases:       Please refer to Section 7 for Storage and Section 13 for Disposal information.         23. Adverse Human Health       Causes mild skin irritation.         Effects and Symptom:       Wargause eye or respiratory system irritation.         May cause eye or inspiratory system irritation.       May cause eye or inspiratory nor kin absorption.         34 Averse Human Health       Causes mild skin irritation.  | ••   |   |   | lixture 1  |  |  |
| Relevant identified uses:       For research use only, not for human or veterinary use.         3. Details of the Supplier of the Safety Data Sheet:       Company Name:       Casyman Chemical Company         1180 E. Ellsworth Rd.       Ann Arbor, MI 48108       Ann Arbor, MI 48108         Web site address:       www.caymanchem.com       Information:       Casyman Chemical Company       +1 (73/971-3335         4. Emergency telephone number:       Emergency Contact:       C1/EMTREC Outside USA and Canada:       +1 (800)424-9300         CHEMTREC Outside USA and Canada:       +1 (703)527-3887         Section 2. Hazards Identification         1 Classification of the Substance or Mixture:         Skin Corrosion/Irritation, Category 3       .       1. Jabel Elements:         Of Marine Section 2. Hazards Identification         GHS Signal Word:       Warning         Of MS Pracese:         Hais:         No phrases apply.         GHS Response Phrases:         Plase refer to Section 7 for Storage and Section 13 for Disposal information.         GHS Storage and Disposal Phrases:         Plases refer to Section 7 for Storage and Section 13 for Disposal information.         Adverse Human Healt       Causes mild skin irritation.   | 2  | Relevant identified uses  | ,   |  | anainst <sup>.</sup>   |  |
| 3. Details of the Supplier of the Safety Data Sheet:         Company Name:       Cayman Chemical Company<br>1180 E. Elisworth Rd.<br>Ann Ator, MI 48108         Web site address:       www.caymanchem.com<br>Information:       Cayman Chemical Company         *11 (734)971-3335       Emergency telephone number:<br>Emergency telephone number:       *11 (734)971-3335         Emergency telephone number:       Section 2. Hazards Identification         .       Section 2. Hazards Identification         .1       Classification of the Substance or Mixture:<br>Skin Corrosion/Irritation, Category 3         .2       Label Elements:         GHS Signal Word:       Warning<br>GHS Hazard Phrases:<br>H316: Causes mild skin initiation.<br>GHS Procautionary Phrases:<br>No phrases apply.         OHS Response Phrases:       Passer apply:<br>Pass-131: fisk initiation occurs: get medical advice/attention.<br>GHS Storage and Disposal Phrases:<br>Please refer to Section 7 for Storage and Section 13 for Disposal information.         .3       Adverse Human Health<br>May cause set on respiratory system irritation.<br>May cause eye or respiratory system irritation.<br>To the best of our knowledge, the toxicological properties have not been thoroughly investigater<br>Section 3. Composition/Information on Ingredients         ZAS #/<br>HE2CH Registration No.       0.1 %       200-580-7       Film. Liq. 3: H226<br>Skin Corr. 14: H314<br>(279-308-00-0         GHS signal Word:       0.1 %       201-176-3       Skin Corr. 18: H314<br>(279-114849071-24       0.1 %       201-176-3       S   | .2   |   |   |  |  |  |
| Company Name:       Cayman Chemical Company<br>1180 E. Elsworth Rd.<br>Ann Abro, MI 48108         Web site address:       www.caymanchem.com<br>Information:       Cayman Chemical Company       +1 (734)971-3335         Image: State S | 2  |   | ,,,,,   |  |  |  |
| Information:       Cayman Chemical Company       +1 (734)971-3335         1.4       Emergency telephone number:       Emergency Contact:       CHEMTREC Within USA and Canada:       +1 (800)424-9300<br>CHEMTREC Outside USA and Canada:       +1 (703)527-3887         Section 2. Hazards Identification         Section 2. Hazards Identification         1 Classification of the Substance or Mixture:<br>Skin Corrosion/Irritation, Category 3         Sketcion 2. Hazards Identification         CHEMTREC Warning<br>GHS Hazard Phrases:<br>H316: Causes mild skin irritation.         GHS Precautionary Phrases:<br>No phrases apply.         Please refer to Section 7 for Storage and Section 13 for Disposal information.         Composition/Information         GHS Storage and Disposal Phrases:<br>Please refer to Section 7 for Storage and Section 13 for Disposal information.         Effects and Symptoms: Material may be infitting to the mucous membranes and upper respiratory tract.<br>May cause eye or respiratory system irritation.<br>May cause eye or respiratory system irritation.<br>To the best of our knowledge, the toxicological properties have not been thoroughly investigated         Section 3. Composition/Information on Ingreetients         Section 3. Composition/Information on Ingreetients         Section 3. Composition/Information on Son Onsenoration for Stassing 200-580-7<br>Sin Corr. 18: H314         6HS # REACH Reg   | 1.5  |   | Cayman Chemical Comp<br>1180 E. Ellsworth Rd.   | bany   |  |  |
| 1.4 Emergency telephone number:<br>Emergency Contact:       CHEMTREC Within USA and Canada:       +1 (800)424-9300<br>+1 (703)527-3887         Section 2. Hazards Identification         Section 2. Hazards Identification         Classification of the Substance or Mixture:<br>Skin Corrosion/Inritation, Category 3         CHEMTREC Within USA and Canada:       +1 (703)527-3887         Section 2. Hazards Identification         Category 3         2.1 Classification of the Substance or Mixture:<br>Skin Corrosion/Inritation, Category 3         2.2 Label Elements:         Warning<br>GHS Hazard Phrases:<br>H316: Causes mild skin irritation.         GHS Response Phrases:<br>Pa324-313: ft skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:<br>Please refer to Section 7 for Storage and Section 13 for Disposal information.         Other Storage and Section 13 for Disposal information.         Causes mild skin irritation.         Effects and Symptoms: Material may be irritating to the mucous membranes and upper respiratory tract.<br>May cause eye or respiratory system irritation.         CAS #/ Mazardous Components (Chemical Name)/<br>Patters #         Concentration on Ingredients         Section 3. Composition/Information on Ingredients         Section 3. Composition/Information on Ing   |  | Web site address:   | -   |  |  |  |
| Emergency Contact:       CHEMTREC Within USA and Canada:       +1 (800)424-9300         CHEMTREC Outside USA and Canada:       +1 (703)527-3887         Section 2. Hazards Identification         Cleasification of the Substance or Mixture:         Skin Corrosion/Irritation, Category 3         2.2 Label Elements:         GHS Signal Word:       Warning         GHS Hazard Phrases:         H316: Causes mild skin irritation.         GHS Precautionary Phrases:         P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:         P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:         Please refer to Section 7 for Storage and Section 13 for Disposal information.         23 Adverse Human Health       Causes mild skin irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.<br>May be harmful by inhalation, ingestion, or skin absorption.<br>May cause eye or respiratory system irritation.         CAS #//       Reach Registration No.         CAS #/       Reach Registration No.         GHS Storage and Disposal formation on Ingredients         Cause eye or respiratory system irritation.         Cate and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.<br>May ca  |  | Information:  | Cayman Chemical Comp  | bany   | +1 (73   | 4)971-3335   |
| CHEMTREC Outside USA and Canada: +1 (703)527-3887         Section 2. Hazards Identification         Section 2. Hazards Identification         Catassification of the Substance or Mixture:<br>Skin Corrosion/Irritation, Category 3         Skin Corrosion/Irritation, Category 3         Catassification of the Substance or Mixture:<br>Skin Corrosion/Irritation, Category 3         Catassification of the Substance or Mixture:<br>Skin Corrosion/Irritation, Category 3         Catassification of the Substance or Mixture:<br>Skin Corrosion/Irritation, Category 3         Catassification of the Substance or Mixture:<br>Skin Corrosion/Irritation, Category 3         Catassification Phrases:<br>Pa32+313: If skin irritation.<br>GHS Response Phrases:<br>Please refer to Section 7 for Storage and Section 13 for Disposal information.         CHEMENT Causes mild skin irritation.<br>Effects and Symptoms: Material may be irritating to the mucous membranes and upper respiratory tract.<br>May be harmful by inhalation, ingestion, or skin absorption.<br>May cause eye or respiratory system irritation.<br>To the best of our knowledge, the toxicological properties have not been thoroughly investigated<br>Section 3. Composition/Information on Ingredients         CAS # / Hazardous Components (Chemical Name)/<br>Concentration       EC No./<br>EC No./<br>EC No./<br>GHS Classification<br>REACH Registration No.         64-19-7<br>Acetic acid<br>0-1.1%       201-107-3<br>01-21194408971-24         0.1.1%         0.1.1% <td>1.4</td> <td></td> <td></td> <td></td> <td></td> <td></td>   | 1.4  |   |   |  |  |  |
| Section 2. Hazards Identification         Section 2. Hazards Identification         Skin Corrosion/Irritation, Category 3         Label Elements:         GHS Signal Word: Warning         GHS Nignal Word: Warning         GHS Hazard Phrases:         H316: Causes mild skin irritation.         GHS Precautionary Phrases:         No phrases apply.       GHS Response Phrases:         P332-313: If skin irritation occurs, get medical advice/attention.       GHS Storage and Disposal Phrases:         Please refer to Section 7 for Storage and Section 13 for Disposal information.       Edites and Symptoms: Material may be irritating to the mucous membranes and upper respiratory tract.<br>May cause eye or respiratory system irritation.         Effects and Symptoms: Material may be irritating to the mucous membranes and upper respiratory tract.<br>May cause eye or respiratory system irritation.<br>To the best of our knowledge, the toxicological properties have not been thoroughly investigated         Section 3. Composition/Information on Ingredients         CAS # /         Hazardous Components (Chemical Name)/       Concentration       EC No./       EC Index No.       GHS Classification         E Section 3. Composition/Information on Ingredients         Material may be irritating to 1%       Concentration  |  | Emergency Contact:  |   |  | -  |  |
| 1.1       Classification of the Substance or Mixture:<br>Skin Corrosion/Irritation, Category 3         2.2       Label Elements:         3.2       Label Elements:         3.3       Mathematical Elements:         3.3       Label Elements:         3.3       Label Elements:         3.3       Label Elements:         3.3       Label Elements:         3.4       Catege and Disposal Phrases:         Please refer to Section 7 for Storage and Section 13 for Disposal information.         2.3       Adverse Human Health       Cause mild skin irritation.         Effects and Symptoms:       Material may be irrintating to the mucous membranes and upper respiratory t   |  |   |   |  | -  | 13/321-3881  |
| Skin Corrosion/Irritation, Category 3         I.2 Label Elements:         Signal Word: Warning<br>GHS Hazard Phrases:<br>H316: Causes mild skin irritation.         GHS Negrons Phrases:<br>H316: Causes mild skin irritation.         OHS Response Phrases:<br>P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:<br>P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:<br>Please refer to Section 7 for Storage and Section 13 for Disposal information.         Starage and Disposal Phrases:<br>Please refer to Section 7 for Storage and Section 13 for Disposal information.         Adverse Human Health<br>Causes mild skin irritation, ingestion, or skin absorption.<br>May be harmful by inhalation, ingestion, or skin absorption.<br>May cause eye or respiratory system irritation.<br>To the best of our knowledge, the toxicological properties have not been thoroughly investigated         Section 3. Composition/Information or Ingredients         CAS # /<br>REACH Registration No.         Concentration       E Concentration         Adverse 30000       On 0.1 %       Concentration         Concentration       Case fee acid<br>01-21194763228-30-0000       On 200-0<br>Skin Corr. 1A: H314         Page-4       Propionic acid<br>01-2119468071-24       On 0.1 %  |  |   |   | zards Identif  | ication  |  |
| 2.2 Label Elements:         GHS Signal Word:       Warning         GHS Hazard Phrases:         H316: Causes mild skin irritation.         GHS Precautionary Phrases:         No phrases apply.         GHS Response Phrases:         P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:         Please refer to Section 7 for Storage and Section 13 for Disposal information.         23.3 Adverse Human Health       Causes mild skin irritation our causes mild skin irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.<br>May be harmful by inhalation, ingestion, or skin absorption.<br>May cause eye or respiratory system irritation.<br>To the best of our knowledge, the toxicological properties have not been thoroughly investigated         CAS # /       Hazardous Components (Chemical Name)/<br>01-2119475328-30-0000       Concentration       EC No./<br>EC Index No.       GHS Classification         64-19-7<br>Actic acid<br>01-2119476328-30-0000       0.1 %       201-176-3<br>Skin Corr. 18: H314       Skin Corr. 18: H314         79-09-4<br>79-09-4       0.1 %       201-176-3<br>Skin Corr. 18: H314       Skin Corr. 18: H314         79-93-1-2       iso-Butyric acid       0.1 %       201-195-7       Acute Tox.(O) 4: H302  | 2.1  |   |   |  |  |  |
| GHS Signal Word:       Warning         GHS Hazard Phrases:       H316: Causes mild skin irritation.         GHS Precautionary Phrases:       No phrases apply.         GHS Response Phrases:       P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:       P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:       Please refer to Section 7 for Storage and Section 13 for Disposal information.         23       Adverse Human Health       Causes mild skin irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.<br>May be harmful by inhalation, ingestion, or skin absorption.<br>May cause eye or respiratory system irritation.         To the best of our knowledge, the toxicological properties have not been thoroughly investigated         CAS # /       Hazardous Components (Chemical Name)/       Concentration on Ingredients         CAS # /       REACH Registration No.       EC Index No.       GHS Classification         64-19-7       Acetic acid       0.1 %       200-580-7       Filam. Liq. 3: H226         79-09-4       Propionic acid       0.1 %       201-178-3       Skin Corr. 1A: H314         79-93-2       iso-Butyric acid       0.1 %       201-119-7       Acute Tox.(O) 4: H302   |  |   | n, Category 3   |  |  |  |
| GHS Hazard Phrases:         H316: Causes mild skin irritation.         GHS Precautionary Phrases:         No phrases apply.         GHS Response Phrases:         P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:         Please refer to Section 7 for Storage and Section 13 for Disposal information.         2.3       Adverse Human Health         Causes mild skin irritation         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.         May be harmful by inhalation, ingestion, or skin absorption.         May cause eye or respiratory system irritation.         To the best of our knowledge, the toxicological properties have not been thoroughly investigated         CAS # /       Hazardous Components (Chemical Name)/         RTECS #       Hazardous Components (Chemical Name)/         RTECS #       Hazardous Components (Chemical Name)/         RTECS #       Hazardous Components (Chemical Name)/         R4-19-7       Acetic acid         01-9       200-580-7       Flam. Liq. 3: H226         607-002-00-6       Skin Corr. 1A: H314         79-09-4       Propionic acid       0.1 %       201-176-3       Skin Corr. 1B: H314         79-09-4       Iropionic acid       0.1 %  | :.2  | Label Elements:   |   |  |  |  |
| GHS Response Phrases:         P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:         Please refer to Section 7 for Storage and Section 13 for Disposal information.         2.3 Adverse Human Health       Causes mild skin irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.         May be harmful by inhalation, ingestion, or skin absorption.       May cause eye or respiratory system irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.         May be harmful by inhalation, ingestion, or skin absorption.       May cause eye or respiratory system irritation.         To the best of our knowledge, the toxicological properties have not been thoroughly investigated         CAS # /       Hazardous Components (Chemical Name)/<br>REECS #       Concentration       EC No./<br>EC Index No.       GHS Classification         64-19-7<br>AF1225000       Acetic acid<br>01-2119475328-30-0000       0.1 %       200-580-7<br>607-002-00-6       Fiam. Liq. 3: H226<br>Skin Corr. 1A: H314         79-09-4<br>UE5950000       Propionic acid<br>01-2119486971-24       0.1 %       201-176-3<br>607-008-00-0       Skin Corr. 1B: H314<br>607-089-00-0         79-31-2       iso-Butyric acid       0.1 %       201-195-7       Acute Tox.(O) 4: H302  |  | GHS Hazard Phrases:   |   |  |  |  |
| No phrases apply.         GHS Response Phrases:         P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:         Please refer to Section 7 for Storage and Section 13 for Disposal information.         2.3       Adverse Human Health       Causes mild skin irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.         May be harmful by inhalation, ingestion, or skin absorption.         May cause eye or respiratory system irritation.         To the best of our knowledge, the toxicological properties have not been thoroughly investigated         CAS # /       REACH Registration No.         64:19-7       Acetic acid       0.1 %       200-580-7       Filam. Liq. 3: H226         64:19-7       Acetic acid       0.1 %       201-176-3       Skin Corr. 18: H314         79-09-4       Propionic acid       0.1 %       201-176-3       Skin Corr. 1B: H314         79-09-4       Propionic acid       0.1 %       201-195-7       Acute Tox.(O) 4: H302   |  | GHS Hazard Phrases:   |   |  |  |  |
| GHS Response Phrases:         P332+313: If skin irritation occurs, get medical advice/attention.         GHS Storage and Disposal Phrases:         Please refer to Section 7 for Storage and Section 13 for Disposal information.         2.3 Adverse Human Health       Causes mild skin irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.         May be harmful by inhalation, ingestion, or skin absorption.       May cause eye or respiratory system irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.         May be harmful by inhalation, ingestion, or skin absorption.       May cause eye or respiratory system irritation.         To the best of our knowledge, the toxicological properties have not been thoroughly investigated         CAS # /       Hazardous Components (Chemical Name)/<br>REECS #       Concentration       EC No./<br>EC Index No.       GHS Classification         64-19-7<br>AF1225000       Acetic acid<br>01-2119475328-30-0000       0.1 %       200-580-7<br>607-002-00-6       Fiam. Liq. 3: H226<br>Skin Corr. 1A: H314         79-09-4<br>UE5950000       Propionic acid<br>01-2119486971-24       0.1 %       201-176-3<br>607-008-00-0       Skin Corr. 1B: H314<br>607-089-00-0         79-31-2       iso-Butyric acid       0.1 %       201-195-7       Acute Tox.(O) 4: H302  |  | GHS Hazard Phrases:<br>H316: Causes mild skin   | irritation.   |  |  |  |
| GHS Storage and Disposal Phrases:<br>Please refer to Section 7 for Storage and Section 13 for Disposal information.         Adverse Human Health<br>Effects and Symptoms:       Causes mild skin irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.<br>May be harmful by inhalation, ingestion, or skin absorption.<br>May cause eye or respiratory system irritation.<br>To the best of our knowledge, the toxicological properties have not been thoroughly investigated         Section 3. Composition/Information on Ingredients         CAS # /<br>REACH Registration No.         64-19-7<br>AF1225000       Acetic acid<br>01-2119475328-30-0000       O.1 %       200-580-7<br>607-002-00-6       Flam. Liq. 3: H226<br>Skin Corr. 1A: H314         79-09-4<br>VESp50000       Propionic acid<br>01-2119486971-24       O.1 %       201-176-3<br>607-089-00-0       Skin Corr. 1B: H314<br>607-089-00-0         79-31-2       iso-Butyric acid       O.1 %       201-195-7       Acute Tox.(O) 4: H302   |  | GHS Hazard Phrases:<br>H316: Causes mild skin<br>GHS Precautionary Ph   | irritation.   |  |  |  |
| Please refer to Section 7 for Storage and Section 13 for Disposal information.         Adverse Human Health       Causes mild skin irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.<br>May be harmful by inhalation, ingestion, or skin absorption.<br>May cause eye or respiratory system irritation.<br>To the best of our knowledge, the toxicological properties have not been thoroughly investigated         Section 3. Composition/Information on Ingredients         CAS # /<br>REACH Registration No.       Concentration       EC No./<br>EC Index No.       GHS Classification         64-19-7<br>AF1225000       Acetic acid<br>01-2119475328-30-0000       0.1 %       200-580-7<br>EC Index No.       Flam. Liq. 3: H226<br>Skin Corr. 1A: H314         79-09-4       Propionic acid<br>01-2119486971-24       0.1 %       201-176-3<br>607-089-00-0       Skin Corr. 1B: H314         79-31-2       iso-Butyric acid       0.1 %       201-195-7       Acute Tox.(O) 4: H302       3.1 %   |  | GHS Hazard Phrases:<br>H316: Causes mild skin<br>GHS Precautionary Phr<br>No phrases apply.   | irritation.<br>rases:   |  |  |  |
| 2.3       Adverse Human Health       Causes mild skin irritation.         Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.<br>May be harmful by inhalation, ingestion, or skin absorption.<br>May cause eye or respiratory system irritation.<br>To the best of our knowledge, the toxicological properties have not been thoroughly investigated         Section 3. Composition/Information on Ingredients         CAS # /<br>REACH Registration No.         64-19-7       Acetic acid<br>01-2119475328-30-0000       0.1 %       200-580-7<br>607-002-00-6       Flam. Liq. 3: H226<br>Skin Corr. 1A: H314         79-09-4       Propionic acid<br>01-2119486971-24       0.1 %       201-176-3<br>607-089-00-0       Skin Corr. 1B: H314<br>607-089-00-0         79-31-2       iso-Butyric acid       0.1 %       201-195-7       Acute Tox.(O) 4: H302  |  | GHS Hazard Phrases:<br>H316: Causes mild skin<br>GHS Precautionary Phi<br>No phrases apply.<br>GHS Response Phrase  | irritation.<br>rases:<br>s:   | ttention.  |  |  |
| Effects and Symptoms:       Material may be irritating to the mucous membranes and upper respiratory tract.         May be harmful by inhalation, ingestion, or skin absorption.         May cause eye or respiratory system irritation.       To the best of our knowledge, the toxicological properties have not been thoroughly investigated         Section 3. Composition/Information on Ingredients         CAS # /       Hazardous Components (Chemical Name)/<br>REACH Registration No.       Concentration       EC No./<br>EC Index No.       GHS Classification         64-19-7       Acetic acid       0.1 %       200-580-7       Flam. Liq. 3: H226         64-19-7       Acetic acid       0.1 %       201-176-3       Skin Corr. 1A: H314         79-09-4       Propionic acid       0.1 %       201-176-3       Skin Corr. 1B: H314         79-09-4       Displayed propionic acid       0.1 %       201-195-7       Acute Tox.(O) 4: H302  |  | <ul> <li>GHS Hazard Phrases:</li> <li>H316: Causes mild skin</li> <li>GHS Precautionary Phrases</li> <li>No phrases apply.</li> <li>GHS Response Phrase</li> <li>P332+313: If skin irritation</li> </ul>  | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a  | ttention.  |  |  |
| May be harmful by inhalation, ingestion, or skin absorption.         May cause eye or respiratory system irritation.         To the best of our knowledge, the toxicological properties have not been thoroughly investigated         Section 3. Composition/Information on Ingredients         CAS # /<br>REACH Registration No.       Concentration       EC No./<br>EC Index No.       GHS Classification         64-19-7       Acetic acid       0.1 %       200-580-7       Flam. Liq. 3: H226         67-002-00-6       Skin Corr. 1A: H314         79-09-4       Propionic acid       0.1 %       201-176-3       Skin Corr. 1B: H314         79-09-4       Propionic acid       0.1 %       201-176-3       Skin Corr. 1B: H314         79-03-2       iso-Butyric acid       0.1 %       201-195-7       Acute Tox.(O) 4: H302   |  | <ul> <li>GHS Hazard Phrases:</li> <li>H316: Causes mild skin</li> <li>GHS Precautionary Phrases</li> <li>No phrases apply.</li> <li>GHS Response Phrase</li> <li>P332+313: If skin irritation</li> <li>GHS Storage and Disponse</li> </ul>  | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:   |  | on.  |  |
| May cause eye or respiratory system irritation.         To the best of our knowledge, the toxicological properties have not been thoroughly investigated         Section 3. Composition/Information on Ingredients         CAS # /<br>REACH Registration No.       EC No./<br>EC No./<br>EC Index No.       GHS Classification<br>EC Index No.         64-19-7<br>AF1225000       Acetic acid<br>01-2119475328-30-0000       0.1 %       200-580-7<br>607-002-00-6       Flam. Liq. 3: H226<br>Skin Corr. 1A: H314         79-09-4<br>UE5950000       Propionic acid<br>01-2119486971-24       0.1 %       201-176-3<br>607-089-00-0       Skin Corr. 1B: H314<br>607-089-00-0         79-31-2       iso-Butyric acid       0.1 %       201-195-7       Acute Tox.(O) 4: H302  | 2.3  | GHS Hazard Phrases:<br>H316: Causes mild skin<br>GHS Precautionary Phi<br>No phrases apply.<br>GHS Response Phrase<br>P332+313: If skin irritatio<br>GHS Storage and Dispo<br>Please refer to Section 7<br>Adverse Human Health   | irritation.<br>rases:<br>on occurs, get medical advice/a<br>osal Phrases:<br>7 for Storage and Section 13 for<br>Causes mild skin irritation.   | r Disposal informati   |  |  |
| To the best of our knowledge, the toxicological properties have not been thoroughly investigatedSection 3. Composition/Information on IngredientsCAS # /<br>RTECS #Hazardous Components (Chemical Name)/<br>REACH Registration No.Concentration<br>EC No./<br>EC Index No.GHS Classification<br>BC Index No.64-19-7<br>Acetic acid<br>01-2119475328-30-0000Acetic acid<br>0.1 %0.1 %200-580-7<br>607-002-00-6Flam. Liq. 3: H226<br>Skin Corr. 1A: H31479-09-4<br>UE5950000Propionic acid<br>01-2119486971-240.1 %201-176-3<br>607-089-00-0Skin Corr. 1B: H314<br>607-089-00-079-31-2iso-Butyric acid0.1 %201-195-7Acute Tox.(O) 4: H302  | 2.3  | GHS Hazard Phrases:<br>H316: Causes mild skin<br>GHS Precautionary Phi<br>No phrases apply.<br>GHS Response Phrase<br>P332+313: If skin irritatio<br>GHS Storage and Dispo<br>Please refer to Section 7<br>Adverse Human Health   | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:<br>' for Storage and Section 13 for<br>Causes mild skin irritation.<br>Material may be irritating to t  | r Disposal informati<br>he mucous membr  | anes and upper res   | spiratory tract.   |
| Section 3. Composition/Information on Ingredients           CAS # /<br>RTECS #         Hazardous Components (Chemical Name)/<br>REACH Registration No.         Concentration         EC No./<br>EC Index No.         GHS Classification           64-19-7<br>AF1225000         Acetic acid<br>01-2119475328-30-0000         0.1 %         200-580-7<br>607-002-00-6         Flam. Liq. 3: H226<br>Skin Corr. 1A: H314           79-09-4<br>UE5950000         Propionic acid<br>01-2119486971-24         0.1 %         201-176-3<br>607-089-00-0         Skin Corr. 1B: H314           79-31-2         iso-Butyric acid         0.1 %         201-195-7         Acute Tox.(O) 4: H302   | 2.3  | GHS Hazard Phrases:<br>H316: Causes mild skin<br>GHS Precautionary Phi<br>No phrases apply.<br>GHS Response Phrase<br>P332+313: If skin irritatio<br>GHS Storage and Dispo<br>Please refer to Section 7<br>Adverse Human Health   | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:<br>7 for Storage and Section 13 for<br>Causes mild skin irritation.<br>Material may be irritating to t<br>May be harmful by inhalatior  | r Disposal informati<br>the mucous membr<br>n, ingestion, or skin  | anes and upper res   | spiratory tract.   |
| CAS # /<br>RTECS #         Hazardous Components (Chemical Name)/<br>REACH Registration No.         Concentration         EC No./<br>EC Index No.         GHS Classification           64-19-7<br>AF1225000         Acetic acid<br>01-2119475328-30-0000         0.1 %         200-580-7<br>607-002-00-6         Flam. Liq. 3: H226<br>Skin Corr. 1A: H314           79-09-4<br>UE5950000         Propionic acid<br>01-2119486971-24         0.1 %         201-176-3<br>607-089-00-0         Skin Corr. 1B: H314<br>607-089-00-0           79-31-2         iso-Butyric acid         0.1 %         201-195-7         Acute Tox.(O) 4: H302   | 2.3  | GHS Hazard Phrases:<br>H316: Causes mild skin<br>GHS Precautionary Phi<br>No phrases apply.<br>GHS Response Phrase<br>P332+313: If skin irritatio<br>GHS Storage and Dispo<br>Please refer to Section 7<br>Adverse Human Health   | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:<br>7 for Storage and Section 13 for<br>Causes mild skin irritation.<br>Material may be irritating to t<br>May be harmful by inhalation<br>May cause eye or respiratory  | r Disposal informati<br>he mucous membr<br>n, ingestion, or skin<br>y system irritation.   | anes and upper res<br>absorption.  |  |
| RTECS #         REACH Registration No.         EC Index No.           64-19-7         Acetic acid         0.1 %         200-580-7         Flam. Liq. 3: H226           AF1225000         01-2119475328-30-0000         0.1 %         201-7002-00-6         Skin Corr. 1A: H314           79-09-4         Propionic acid         0.1 %         201-176-3         Skin Corr. 1B: H314           79-31-2         iso-Butyric acid         0.1 %         0.1 %         201-195-7         Acute Tox.(O) 4: H302   | 2.3  | GHS Hazard Phrases:<br>H316: Causes mild skin<br>GHS Precautionary Phr<br>No phrases apply.<br>GHS Response Phrase<br>P332+313: If skin irritatio<br>GHS Storage and Dispo<br>Please refer to Section 7<br>Adverse Human Health<br>Effects and Symptoms:  | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:<br>7 for Storage and Section 13 for<br>Causes mild skin irritation.<br>Material may be irritating to t<br>May be harmful by inhalation<br>May cause eye or respiratory<br>To the best of our knowledge  | r Disposal informati<br>the mucous membr<br>n, ingestion, or skin<br>y system irritation.<br>e, the toxicological  | anes and upper res<br>absorption.<br>properties have not   | t been thoroughly investigated   |
| AF1225000     01-2119475328-30-0000     01.10     100 000 1       79-09-4     Propionic acid     0.1 %     201-176-3       01-2119486971-24     0.1 %     201-176-3       79-31-2     iso-Butyric acid     0.1 %     201-195-7   |  | GHS Hazard Phrases:<br>H316: Causes mild skin<br>GHS Precautionary Phi<br>No phrases apply.<br>GHS Response Phrase<br>P332+313: If skin irritatio<br>GHS Storage and Dispo<br>Please refer to Section 7<br>Adverse Human Health<br>Effects and Symptoms:<br>Sec   | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:<br>' for Storage and Section 13 for<br>Causes mild skin irritation.<br>Material may be irritating to t<br>May be harmful by inhalation<br>May cause eye or respiratory<br>To the best of our knowledge<br>stion 3. Composition  | r Disposal informati<br>the mucous membr<br>n, ingestion, or skin<br>y system irritation.<br>e, the toxicological<br>n/Information                           | anes and upper res<br>absorption.<br>properties have not<br>on Ingredie  | t been thoroughly investigated   |
| AF1225000         01-2119475328-30-0000         607-002-00-6         Skin Corr. 1A: H314           79-09-4         Propionic acid         0.1 %         201-176-3         Skin Corr. 1B: H314           125950000         01-2119486971-24         0.1 %         201-195-7         Acute Tox.(O) 4: H302   | CAS  | GHS Hazard Phrases:<br>H316: Causes mild skin<br>GHS Precautionary Phr<br>No phrases apply.<br>GHS Response Phrase<br>P332+313: If skin irritatio<br>GHS Storage and Dispo<br>Please refer to Section 7<br>Adverse Human Health<br>Effects and Symptoms:<br>Sec<br># / Hazardous Com  | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:<br>7 for Storage and Section 13 for<br>Causes mild skin irritation.<br>Material may be irritating to t<br>May be harmful by inhalation<br>May cause eye or respiratory<br>To the best of our knowledge<br>tion 3. Composition<br>ponents (Chemical Name)/               | r Disposal informati<br>the mucous membr<br>n, ingestion, or skin<br>y system irritation.<br>e, the toxicological<br>n/Information                           | anes and upper res<br>absorption.<br>properties have not<br>On Ingredie<br>EC No./   | t been thoroughly investigated   |
| UE5950000         01-2119486971-24         01.1 %         201-195-7         Acute Tox.(O) 4: H302           79-31-2         iso-Butyric acid         0.1 %         201-195-7         Acute Tox.(O) 4: H302   | CAS  | GHS Hazard Phrases:         H316: Causes mild skin         GHS Precautionary Phrases         No phrases apply.         GHS Response Phrase         P332+313: If skin irritation         GHS Storage and Disport         Please refer to Section 7         Adverse Human Health         Effects and Symptoms:         Sect         # /         CS #  | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:<br>7 for Storage and Section 13 for<br>Causes mild skin irritation.<br>Material may be irritating to t<br>May be harmful by inhalation<br>May cause eye or respiratory<br>To the best of our knowledge<br>tion 3. Composition<br>ponents (Chemical Name)/               | r Disposal informati<br>the mucous membr<br>n, ingestion, or skin<br>y system irritation.<br>e, the toxicological<br>n/Information<br>Concentration          | anes and upper res<br>absorption.<br>properties have not<br>On Ingredie<br>EC No./<br>EC Index No.   | t been thoroughly investigated   |
|  | CAS<br>RTE                                   | GHS Hazard Phrases:         H316: Causes mild skin         GHS Precautionary Phrases         No phrases apply.         GHS Response Phrase         P332+313: If skin irritation         GHS Storage and Dispon         Please refer to Section 7         Adverse Human Health         Effects and Symptoms:         Sect         # /         Hazardous Com         CS #         Hazardous Code  | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:<br>' for Storage and Section 13 for<br>Causes mild skin irritation.<br>Material may be irritating to t<br>May be harmful by inhalation<br>May cause eye or respiratory<br>To the best of our knowledge<br>stion 3. Composition<br>ponents (Chemical Name)/<br>ation No. | r Disposal informati<br>the mucous membr<br>n, ingestion, or skin<br>y system irritation.<br>e, the toxicological<br>n/Information<br>Concentration          | anes and upper res<br>absorption.<br>properties have not<br>On Ingredie<br>EC No./<br>EC Index No.<br>200-580-7  | t been thoroughly investigated <b>nts GHS Classification</b> Flam. Liq. 3: H226  |
| NQ4375000 01-2119488973-18 607-063-00-9 Acute Tox.(D) 4: H312  | CAS<br>RTE<br>64<br>AF12<br>79               | GHS Hazard Phrases:         H316: Causes mild skin         GHS Precautionary Phrases         No phrases apply.         GHS Response Phrase         P332+313: If skin irritation         GHS Storage and Disper         Please refer to Section 7         Adverse Human Health         Effects and Symptoms:         Sect         # /         CS #         Hazardous Com         CS #         Hazardous Com         25000         O1-2119475328-30         -09-4   | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:<br>' for Storage and Section 13 for<br>Causes mild skin irritation.<br>Material may be irritating to t<br>May be harmful by inhalation<br>May cause eye or respiratory<br>To the best of our knowledge<br>tion 3. Composition<br>ponents (Chemical Name)/<br>ation No.  | r Disposal informati<br>the mucous membr<br>n, ingestion, or skin<br>y system irritation.<br>e, the toxicological<br>n/Information<br>Concentration<br>0.1 % | anes and upper res<br>absorption.<br>properties have not<br>On Ingredie<br>EC No./<br>EC Index No.<br>200-580-7<br>607-002-00-6<br>201-176-3   | t been thoroughly investigated<br><b>nts</b><br><b>GHS Classification</b><br>Flam. Liq. 3: H226<br>Skin Corr. 1A: H314                                   |
|  | CAS<br>RTE<br>64<br>AF12<br>79<br>UE59<br>79 | GHS Hazard Phrases:         H316: Causes mild skin         GHS Precautionary Phrases         No phrases apply.         GHS Response Phrase         P332+313: If skin irritation         GHS Storage and Disper         Please refer to Section 7         Adverse Human Health         Effects and Symptoms:         # /         CS #         Hazardous Com         REACH Registration         -19-7       Acetic acid         25000       01-2119475328-30         -09-4       Propionic acid         01-2119486971-24         -31-2       iso-Butyric acid | irritation.<br>rases:<br>s:<br>on occurs, get medical advice/a<br>osal Phrases:<br>' for Storage and Section 13 for<br>Causes mild skin irritation.<br>Material may be irritating to t<br>May be harmful by inhalation<br>May cause eye or respiratory<br>To the best of our knowledge<br>tion 3. Composition<br>ponents (Chemical Name)/<br>ation No.  | r Disposal informati<br>the mucous membr<br>n, ingestion, or skin<br>y system irritation.<br>e, the toxicological<br><b>/Information</b><br>0.1 %<br>0.1 %   | anes and upper res<br>absorption.<br>properties have not<br><b>ON Ingredie</b><br><b>EC No./</b><br><b>EC Index No.</b><br>200-580-7<br>607-002-00-6<br>201-176-3<br>607-089-00-0<br>201-195-7 | t been thoroughly investigated<br>nts<br>GHS Classification<br>Flam. Liq. 3: H226<br>Skin Corr. 1A: H314<br>Skin Corr. 1B: H314<br>Acute Tox.(O) 4: H302 |



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Multi-region format

|           | CHEMICAL         |                                    |  |                         |                             |  |  |  |
|-----------|------------------|------------------------------------|--|-------------------------|-----------------------------|--|--|--|
|           |                  | Butyric acid<br>01-2119488986-11   |  | 0.1 %                   | 203-532-3<br>607-135-00-X   | Skin Corr. 1B: H314                        |  |  |
|           | 3-74-2<br>100000 | Isopentanoic acid                  |  | 0.1 %                   | 207-975-3<br>NA             | Skin Corr. 1C: H314<br>Eye Damage 1: H318  |  |  |
|           |                  | Pentanoic acid<br>01-2119448010-56 |  | 0.1 %                   | 203-677-2<br>607-143-00-3   | Skin Corr. 1B: H314<br>Aquatic (C) 3: H412 |  |  |
|           |                  | Water<br>na                        |  | 99.4 %                  | 231-791-2<br>NA             | No GHS classifications apply               |  |  |
|           |                  | -                                  | Section 4  | . First Aid Me          |                             |  |  |  |
| l.1       | Descript         | ion of First Aid                   |  |                         | asures                      |  |  |  |
|           | Measure          |                                    |  |                         |                             |  |  |  |
|           |                  | of Inhalation:                     | Remove to fresh air. If                            | not breathing, give ar  | tificial respiration or giv | ve oxygen by trained personne              |  |  |
|           | III Case         |                                    | Get immediate medical                              |                         |                             | ve oxygen by trained personne              |  |  |
|           | In Case          | of Skin Contact:                   | Immediately wash skin                              | with soap and plenty    | of water for at least 15    | 5 minutes. Remove contaminat               |  |  |
|           |                  |                                    | clothing. Get medical a                            | ttention if symptoms    | occur. Wash clothing b      | efore reuse.                               |  |  |
|           | In Case          | of Eye Contact:                    | Hold eyelids apart and                             | flush eyes with plenty  | of water for at least 1     | 5 minutes. Have eyes examine               |  |  |
|           |                  |                                    | and tested by medical                              | personnel.              |                             |  |  |  |
|           | In Case          | of Ingestion:                      | Wash out mouth with w                              | ater provided person    | is conscious. Never gi      | ive anything by mouth to an                |  |  |
|           |                  |                                    | -  | et medical attention.   | Do NOT induce vomiti        | ng unless directed to do so by             |  |  |
|           |                  |                                    | medical personnel.                                 |                         |                             |  |  |  |
|           |                  |                                    | Section 5.   | Fire Fighting I         | Measures                    |  |  |  |
| .1        | Suitable         | Extinguishing                      | Use alcohol-resistant for                          | oam, carbon dioxide,    | water, or dry chemical      | spray.                                     |  |  |
|           | Media:           |                                    | Use water spray to cool fire-exposed containers.   |                         |                             |  |  |  |
|           | Unsuital         | ole Extinguishing                  | A solid water stream m                             | ay be inefficient.      |                             |  |  |  |
|           | Media:           |                                    |  |                         |                             |  |  |  |
| .2        |                  | -                                  | <b>d</b> No data available.                        |                         |                             |  |  |  |
|           | Hazards          | :                                  |  |                         |                             |  |  |  |
|           |                  |                                    | No data available.                                 |                         |                             |  |  |  |
|           | Flash Pt         |                                    | No data.   |                         |                             |  |  |  |
|           | Explosiv         | ve Limits:                         | LEL: No data.                                      | UEL: I                  | No data.                    |  |  |  |
|           | Autoign          | ition Pt:                          | No data.   |                         |                             |  |  |  |
| 5.3       | Fire Figh        | nting Instructions                 | As in any fire, wear sel equivalent), and full pro |                         |                             | emand (NIOSH approved or deves.            |  |  |
|           |                  |                                    | Section 6. Acc                                     | idental Releas          | se Measures                 |  |  |  |
| 6.1       | Protectiv        | ve Precautions,                    | Avoid raising and brea                             | athing dust, and provi  | de adequate ventilatior     | ۱.   |  |  |
|           | Protectiv        | ve Equipment an                    | d As conditions warrant,                           | wear a NIOSH appro      | oved self-contained bre     | eathing apparatus, or respirato            |  |  |
|           | Emerger          | ncy Procedures:                    | and appropriate perso                              | nal protection (rubbe   | r boots, safety goggles     | , and heavy rubber gloves).                |  |  |
| <b>.2</b> | Environ          | mental                             | Take steps to avoid re                             | lease into the enviror  | nment, if safe to do so.    |  |  |  |
|           | Precauti         | ons:                               |  |                         |                             |  |  |  |
| .3        | Methods          | and Material Fo                    | r Contain spill and colle                          | ct, as appropriate.     |                             |  |  |  |
|           | Contain          | ment and Cleanir                   | gTransfer to a chemical                            | I waste container for o | disposal in accordance      | with local regulations.                    |  |  |
|           | Up:              |                                    |  |                         |                             |  |  |  |
|           |                  |                                    |  |                         |                             |  |  |  |
|           |                  |                                    |  |                         |                             |  |  |  |
|           |                  |                                    |  |                         |                             |  |  |  |
|           |                  |                                    |  |                         |                             |  |  |  |
|           |                  |                                    |  |                         |                             |  |  |  |



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# Section 7. Handling and Storage

- 7.1
   Precautions To Be Taken
   Avoid breathing dust/fume/gas/mist/vapours/spray.

   in Handling:
   Avoid prolonged or repeated exposure.
- **7.2 Precautions To Be Taken** Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.

# Section 8. Exposure Controls/Personal Protection

### 8.1 Exposure Parameters:

| CAS #   | Chemical Name  | Jurisdiction | Recommended Exposure Limits | Notations |
|---------|----------------|--------------|-----------------------------|-----------|
| 64-19-7 | Acetic acid    | ACGIH TLV    | TLV: 10 ppm                 |           |
|         |                |              | STEL: 15 ppm                |           |
|         |                | Europe       | TWA: 25 mg/m3 (10 ppm)      |           |
|         |                | France VL    | STEL: 25 mg/m3 (10 ppm)     |           |
|         |                | OSHA PELs    | PEL: 10 ppm                 |           |
| 79-09-4 | Propionic acid | ACGIH TLV    | TLV: 10 ppm                 |           |
|         |                | Europe       | TWA: 31 mg/m3 (10 ppm)      |           |
|         |                |              | STEL: 62 mg/m3 (20 ppm)     |           |
|         |                | France VL    | TWA: 31 mg/m3 (10 ppm)      |           |
|         |                |              | STEL: 62 mg/m3 (20 ppm)     |           |
|         |                | Britain EH40 | TWA: 31 mg/m3 (10 ppm)      |           |
|         |                |              | STEL: 46 mg/m3 (15 ppm)     |           |

#### 8.2 Exposure Controls:

 8.2.1 Engineering Controls
 Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne

 (Ventilation etc.):
 levels below recommended exposure limits.

#### 8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing:Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

 ce Practices:
 Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.

 Wash thoroughly after handling.

No data available.



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| Phy<br>App<br>pH:<br>Melf<br>Boil<br>Flas<br>Eva<br>Flar<br>Exp<br>Vap<br>Hg):<br>Vap<br>Spe<br>Solu<br>Octa<br>Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe | lting Point:<br>iling Point:<br>sh Pt:<br>aporation Rate:<br>mmability (solid, gas):<br>plosive Limits:<br>por Pressure (vs. Air or  | [ ] Gas<br>Solution<br>No data<br>No data<br>No data<br>No data<br>No data<br>LEL: No<br>termm No data<br>No data<br>No data<br>No data<br>No data<br>No data           | [X] Liquid            | [ ] Solid<br>UEL     | ∴ No data.               |   |
|--|--|---|-----------------------|----------------------|--------------------------|---|
| App<br>pH:<br>Melf<br>Boil<br>Flas<br>Eva<br>Flar<br>Exp<br>Vap<br>Hg):<br>Vap<br>Spe<br>Solu<br>Octa<br>Coe<br>Auto<br>Dec<br>Visc                    | pearance and Odor:<br>Iting Point:<br>Iling Point:<br>sh Pt:<br>aporation Rate:<br>mmability (solid, gas):<br>plosive Limits:<br>por Pressure (vs. Air or<br>):<br>por Density (vs. Air = 1)<br>ecific Gravity (Water = 1)<br>lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu<br>scosity: | Solution<br>No data.<br>No data.<br>No data.<br>No data.<br>No data.<br>No data.<br>LEL: No<br>rmm No data.<br>No data.<br>No data.<br>No data.<br>No data.<br>No data. | available.<br>o data. |                      | : No data.               |   |
| pH:<br>Melf<br>Boil<br>Flas<br>Eva<br>Flar<br>Exp<br>Vap<br>Hg):<br>Vap<br>Spe<br>Solu<br>Octa<br>Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe<br>Pero       | :<br>Iting Point:<br>iling Point:<br>ish Pt:<br>aporation Rate:<br>immability (solid, gas):<br>plosive Limits:<br>por Pressure (vs. Air or<br>):<br>por Density (vs. Air = 1)<br>ecific Gravity (Water = 1<br>lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu                             | No data.<br>No data.<br>No data.<br>No data.<br>No data.<br>No data.<br>LEL: No<br>termm No data.<br>No data.<br>No data.<br>No data.<br>No data.<br>No data.           | available.<br>o data. | UEL                  | .: No data.              |   |
| Meli<br>Boil<br>Flas<br>Eva<br>Flar<br>Exp<br>Vap<br>Hg):<br>Vap<br>Spe<br>Solu<br>Octa<br>Coe<br>Aute<br>Dec<br>Visc<br>0.2 Othe<br>Pere              | Iting Point:<br>iling Point:<br>ish Pt:<br>aporation Rate:<br>mmability (solid, gas):<br>plosive Limits:<br>por Pressure (vs. Air or<br>):<br>por Density (vs. Air = 1)<br>ecific Gravity (Water = 1)<br>Iubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu<br>scosity:                      | No data.<br>No data.<br>No data.<br>No data.<br>No data.<br>LEL: No<br>rmm No data.<br>): No data.<br>No data.<br>No data.<br>No data.                                  | available.            | UEL                  | : No data.               |   |
| Boil<br>Flas<br>Eva<br>Flar<br>Exp<br>Vap<br>Hg):<br>Vap<br>Spe<br>Solu<br>Octa<br>Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe<br>Pero                      | iling Point:<br>Ish Pt:<br>aporation Rate:<br>Immability (solid, gas):<br>plosive Limits:<br>por Pressure (vs. Air or<br>):<br>por Density (vs. Air = 1)<br>ecific Gravity (Water = 1)<br>lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu<br>scosity:                                     | No data.<br>No data.<br>No data.<br>No data<br>LEL: No<br>termm No data.<br>No data.<br>No data.<br>No data.<br>No data.<br>No data.                                    | available.<br>o data. | UEL                  | .: No data.              |   |
| Flas<br>Eva<br>Flar<br>Exp<br>Vap<br>Hg):<br>Vap<br>Spe<br>Solu<br>Oct:<br>Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe<br>Pero                              | Ish Pt:<br>aporation Rate:<br>Immability (solid, gas):<br>plosive Limits:<br>por Pressure (vs. Air or<br>):<br>por Density (vs. Air = 1)<br>ecific Gravity (Water = 1<br>lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu<br>scosity:  | No data.<br>No data.<br>No data<br>LEL: No<br>rmm No data.<br>): No data.<br>No data.<br>No data.<br>No data.   | available.<br>o data. | UEL                  | .: No data.              |   |
| Eva<br>Flar<br>Exp<br>Vap<br>Hg):<br>Vap<br>Spe<br>Solu<br>Octa<br>Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe<br>Pero                                      | aporation Rate:<br>Immability (solid, gas):<br>plosive Limits:<br>por Pressure (vs. Air or<br>):<br>por Density (vs. Air = 1)<br>ecific Gravity (Water = 1<br>lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu   | No data<br>No data<br>LEL: No<br>rmm No data<br>No data<br>No data<br>No data<br>No data  | available.<br>o data. | UEL                  | .: No data.              |   |
| Flar<br>Exp<br>Vap<br>Hg):<br>Vap<br>Spe<br>Solu<br>Oct:<br>Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe<br>Pero   | Immability (solid, gas):<br>plosive Limits:<br>por Pressure (vs. Air or<br>):<br>por Density (vs. Air = 1)<br>ecific Gravity (Water = 1<br>lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu  | No data<br>LEL: No<br>rmm No data.<br>): No data.<br>1): No data.<br>No data.<br>No data.<br>No data.   | available.<br>o data. | UEL                  | . No data.               |   |
| Exp<br>Vap<br>Hg):<br>Vap<br>Spe<br>Solu<br>Octa<br>Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe<br>Pere   | plosive Limits:<br>por Pressure (vs. Air or<br>):<br>por Density (vs. Air = 1)<br>ecific Gravity (Water = 1<br>lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu  | LEL: No<br>rmm No data<br>): No data<br>1): No data<br>No data<br>No data<br>No data  | o data.               | UEL                  | .: No data.              |   |
| Vap<br>Hg):<br>Vap<br>Spe<br>Solu<br>Octa<br>Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe<br>Pero  | por Pressure (vs. Air or<br>):<br>por Density (vs. Air = 1)<br>ecific Gravity (Water = 1<br>lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu   | r mm No data.<br>): No data.<br>1): No data.<br>No data.<br>No data.<br>No data.  |                       | UEL                  | ∴ No data.               |   |
| Hg):<br>Vap<br>Spe<br>Solu<br>Octa<br>Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe<br>Pere   | ):<br>por Density (vs. Air = 1)<br>ecific Gravity (Water = 1<br>lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu   | ): No data.<br>1): No data.<br>No data.<br>No data.<br>No data.<br>No data.   |                       |                      |                          |   |
| Spe<br>Solu<br>Octa<br>Coe<br>Auto<br>Dec<br>Visc<br>9.2 Othe<br>Pere  | ecific Gravity (Water = 1<br>lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu<br>scosity:  | 1): No data<br>No data<br>No data<br>No data<br>No data   |                       |                      |                          |   |
| Solu<br>Octa<br>Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe<br>Perc   | lubility in Water:<br>tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu   | No data<br>No data<br>No data<br>ure: No data   |                       |                      |                          |   |
| Octa<br>Coe<br>Auto<br>Dec<br>Visc<br>9.2 Othe<br>Pere   | tanol/Water Partition<br>efficient:<br>toignition Pt:<br>composition Temperatu<br>cosity:  | No data.<br>No data.<br>ure: No data.   |                       |                      |                          |   |
| Coe<br>Auto<br>Dec<br>Visc<br>0.2 Othe<br>Perc   | efficient:<br>toignition Pt:<br>composition Temperatu<br>cosity:   | No data.<br>ure: No data.   |                       |                      |                          |   |
| Auto<br>Dec<br>Visc<br>9.2 Othe<br>Perc  | toignition Pt:<br>composition Temperatu<br>cosity:   | ure: No data  |                       |                      |                          |   |
| Dec<br>Visc<br>0.2 Othe<br>Perc  | composition Temperatu<br>cosity:   | ure: No data  |                       |                      |                          |   |
| Visc<br>0.2 Othe<br>Pere   | cosity:  |   |                       |                      |                          |   |
| 9.2 Othe<br>Perc   | -  |   |                       |                      |                          |   |
| Pero   | er Information   | No data.  |                       |                      |                          |   |
|  |  |   |                       |                      |                          |   |
| 0.1 Rea  | rcent Volatile:  | No data.  |                       |                      |                          |   |
| 0.1 Rea  |  | Section   | 10 Stabi              | lity and Rea         | octivity                 |   |
| IV.I Rea   | activity:  | No data availab   |                       |                      | lotivity                 |   |
|  | ,  | Unstable [ ]  | Stable [ X ]          |                      |                          |   |
|  | -  |   |                       | with information lis | ted on the product inser | + |
|  | • • • •  | Will occur [ ]  | Will not occu         |                      |                          |   |
| -  | -  | No data availab   |                       |                      |                          |   |
|  |  |   |                       |                      |                          |   |
|  | ompatibility - Materials<br>Avoid:   | ino dala avaliad  | IE.                   |                      |                          |   |
|  |  | No data availab   |                       |                      |                          |   |
|  | composition or   | NO UALA AVAIIAD   | IE.                   |                      |                          |   |
|  |  |   |                       |                      |                          |   |
| вур  | products:  |   |                       |                      |                          |   |



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|   | Toxicol   | ogical Effects:  | The toxicological effects of this pro   |                                       |           |       |      |
|---|---|--|---|---------------------------------------|-----------|-------|------|
| CAS #   | ŧ   | Hazardous Com  | ponents (Chemical Name)                 | NTP                                   | IARC      | ACGIH | OSHA |
| 64-   | 19-7  | Acetic acid  |   | n.a.                                  | n.a.      | n.a.  | n.a. |
| 79-   | 09-4  | Propionic acid   |   | n.a.                                  | n.a.      | n.a.  | n.a. |
| 79-   | 31-2  | iso-Butyric acid   |   | n.a.                                  | n.a.      | n.a.  | n.a. |
| 107   | -92-6   | Butyric acid   |   | n.a.                                  | n.a.      | n.a.  | n.a. |
| 503   | -74-2   | Isopentanoic acio  |   | n.a.                                  | n.a.      | n.a.  | n.a. |
| 109   | -52-4   | Pentanoic acid   |   | n.a.                                  | n.a.      | n.a.  | n.a. |
| 7732  | 2-18-5  | Water  |   | n.a.                                  | n.a.      | n.a.  | n.a. |
|   |   | 4  | Section 12. Ecologi                     | ical Informat                         | ion       | ł     | -    |
| 12.1  | Toxicity  | <i>.</i>   | Avoid release into the environment      |                                       |           |       |      |
|   | TOXICITY  |  | Runoff from fire control or dilution v  |                                       | ollution. |       |      |
| 12.2  | Persist   | ence and   | No data available.                      | , , , , , , , , , , , , , , , , , , , |           |       |      |
|   | Degrad  | ability:   |   |                                       |           |       |      |
| 12.3  | Bioaccu   | umulative  | No data available.                      |                                       |           |       |      |
|   | Potentia  | al:  |   |                                       |           |       |      |
| 12.4  | Mobility  | / in Soil:   | No data available.                      |                                       |           |       |      |
| 12.5  | Results   | of PBT and vPvB  | No data available.                      |                                       |           |       |      |
|   | assessi   | ment:  |   |                                       |           |       |      |
| 12.6  | Other a   | dverse effects:  | No data available.                      |                                       |           |       |      |
|   |   |  | Section 13. Disposal                    | l Considerat                          | ions      |       |      |
| 13.1  | Waste [   | Disposal Method:   | Dispose in accordance with local, s     |                                       |           |       |      |
|   |   |  | Section 14. Transp                      | ort Informat                          | ion       |       |      |
| 444   | LAND 1  | RANSPORT (US I   | •                                       |                                       |           |       |      |
| 14.1  | )T Prone  | er Shipping Name:  | Not dangerous goods.                    |                                       |           |       |      |
|   |   |  |   |                                       |           |       |      |
| DC  | -   | d Class:   |   |                                       |           |       |      |
| DC<br>DC  | -   |  |   |                                       |           |       |      |
| DC<br>DC<br>UN  | )T Hazar<br>I/NA Nur  |  | pean ADR/RID):                          |                                       |           |       |      |
| DC<br>DC<br>UN<br>14.1  | DT Hazar<br>I/NA Nur<br>LAND 1  | nber:  | opean ADR/RID):<br>Not dangerous goods. |                                       |           |       |      |
| DC<br>DC<br>UN<br>14.1<br>AD  | DT Hazar<br>I/NA Nur<br>LAND 1  | nber:<br>RANSPORT (Euro<br>hipping Name:   |   |                                       |           |       |      |
| DC<br>DC<br>UN<br>14.1<br>AD<br>UN                                  | OT Hazar<br>I/NA Nur<br>LAND 1<br>DR/RID S  | nber:<br>'RANSPORT (Euro<br>hipping Name:<br>r:  |   |                                       |           |       |      |
| DC<br>DC<br>UN<br>14.1<br>AD<br>UN<br>Ha                            | DT Hazar<br>I/NA Nur<br>LAND 1<br>DR/RID S<br>I Numbe<br>zard Cla                                 | nber:<br>'RANSPORT (Euro<br>hipping Name:<br>r:  | Not dangerous goods.                    |                                       |           |       |      |
| DC<br>DC<br>UN<br>14.1<br>AD<br>UN<br>Ha<br>14.3                    | DT Hazar<br>I/NA Nur<br>LAND 1<br>DR/RID S<br>I Numbe<br>zard Cla<br>AIR TR                       | nber:<br>RANSPORT (Euro<br>hipping Name:<br>r:<br>iss:   | Not dangerous goods.                    |                                       |           |       |      |
| DC<br>DC<br>UN<br>14.1<br>AD<br>UN<br>Ha<br>14.3<br>IC/             | DT Hazar<br>I/NA Nur<br>LAND 1<br>DR/RID S<br>I Numbe<br>zard Cla<br>AIR TR                       | nber:<br>RANSPORT (Euro<br>hipping Name:<br>r:<br>ss:<br>ANSPORT (ICAO/I<br>Shipping Name:       | Not dangerous goods.                    | Packing Grou                          | ıp:       |       |      |
| DC<br>DC<br>UN<br>14.1<br>AD<br>UN<br>Ha<br>14.3<br>IC/<br>UN       | DT Hazar<br>I/NA Nur<br>LAND T<br>DR/RID S<br>I Numbe<br>zard Cla<br>AIR TR<br>AO/IATA            | mber:<br>RANSPORT (Euro<br>hipping Name:<br>r:<br>ss:<br>ANSPORT (ICAO/I<br>Shipping Name:<br>r: | Not dangerous goods.                    | Packing Grou                          | ıp:       |       |      |
| DC<br>DC<br>UN<br>14.1<br>AD<br>UN<br>Ha<br>14.3<br>IC/<br>UN<br>Ha | DT Hazar<br>I/NA Nur<br>LAND T<br>DR/RID S<br>I Numbe<br>zard Cla<br>AIR TR<br>AO/IATA<br>I Numbe | nber:<br>RANSPORT (Euro<br>hipping Name:<br>r:<br>ss:<br>ANSPORT (ICAO/I<br>Shipping Name:<br>r: | Not dangerous goods.                    | -                                     | -         |       |      |

Multi-region format



Multi-region format

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|                                  |                   | Section 15. Regu   | liatory inform   | ation                                       |   |  |  |
|----------------------------------|-------------------|--|--|---|---|--|--|
| EPA SARA (S                      | uperfund Amendm   | ents and Reauthorization Act   | of 1986) Lists   |   |   |  |  |
| CAS #                            | Hazardous Com     | ponents (Chemical Name)  | S. 302 (EHS)   | S. 304 RQ                                   | S. 313 (TRI)  |  |  |
| 64-19-7                          | Acetic acid       |  | No   | Yes 5000 LB                                 | No  |  |  |
| 79-09-4                          | Propionic acid    |  | No   | Yes 5000 LB                                 | No  |  |  |
| 79-31-2                          | iso-Butyric acid  |  | No   | Yes 5000 LB                                 | No  |  |  |
| 107-92-6                         | Butyric acid      |  | No   | Yes 5000 LB                                 | No  |  |  |
| 503-74-2                         | Isopentanoic acio | l  | No   | No  | No  |  |  |
| 109-52-4                         | Pentanoic acid    |  | No   | No  | No  |  |  |
| 7732-18-5                        | Water             |  | No No No   |   |   |  |  |
| CAS #                            | Hazardous Com     | ponents (Chemical Name)  | Other US EPA o   | r State Lists                               | •   |  |  |
| 64-19-7                          | Acetic acid       |  | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes -<br>Inventory; CA PROP.65: No |   |   |  |  |
| 79-09-4                          | Propionic acid    |  | CAA HAP,ODC:<br>Inventory; CA P  | No; CWA NPDES:  <br>ROP.65: No              | No; TSCA: Yes -   |  |  |
| 79-31-2                          | iso-Butyric acid  |  | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes -<br>Inventory; CA PROP.65: No |   |   |  |  |
| 107-92-6                         | Butyric acid      |  | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes -<br>Inventory; CA PROP.65: No |   |   |  |  |
| 503-74-2                         | Isopentanoic acio | I  | CAA HAP,ODC:<br>Inventory; CA P  | No; CWA NPDES:  <br>ROP.65: No              | No; TSCA: Yes -   |  |  |
| 109-52-4                         | Pentanoic acid    |  | CAA HAP,ODC:<br>Inventory; CA P  | No; CWA NPDES:  <br>ROP.65: No              | No; TSCA: Yes -   |  |  |
| 7732-18-5                        | Water             |  | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes -<br>Inventory; CA PROP.65: No |   |   |  |  |
| Regulatory Inf                   | ormation          | This SDS was prepared in acc   | ordance with 29 CFF  | R 1910.1200 and Re                          | gulation (EC)   |  |  |
| Statement:                       |                   | No.1272/2008.  |  |   |   |  |  |
|                                  |                   | Section 16. Ot   | her Information  | on  |   |  |  |
| Revision Date                    | :                 | 12/14/2019   |  |   |   |  |  |
| Additional Info<br>This Product: | ormation About    | No data available.   |  |   |   |  |  |
| Company Poli                     | cy or Disclaimer: | DISCLAIMER: This information<br>currently available to us. Howe<br>express or implied, with respec<br>use. Users should make their<br>their particular purposes. | ver, we make no wa<br>t to such informatior                              | rranty of merchantat<br>n, and we assume no | ility or any other warranty<br>liability resulting from its |  |  |