

Safety Data Sheet 22211X8 according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 10/09/2018 Version: 1.0

| SECTION 1: Identification   |  |
|---|--|
| 1.1. Identification   |  |
| Product form  | : Substance  |
| Substance name  | : Cycloheptanecarboxylic acid  |
| CAS No  | : 1460-16-8  |
| Product code  | : 2221-1-X8  |
| Formula   | : C8H14O2  |
| Other means of identification   | : MFCD00004152   |
| 1.2. Relevant identified uses of the substa   | ance or mixture and uses advised against   |
| Use of the substance/mixture  | : Laboratory chemicals<br>Manufacture of substances<br>Scientific research and development   |
| 1.3. Details of the supplier of the safety da   | ata sheet  |
| SynQuest Laboratories, Inc.<br>P.O. Box 309<br>Alachua, FL 32615 - United States of America<br>T (386) 462-0788 - F (386) 462-7097<br>info@synquestlabs.com |  |
| 1.4. Emergency telephone number   |  |
| Emergency number  | : (844) 523-4086 (3E Company - Account 10069)  |
| SECTION 2: Hazard(s) identification   |  |
| 2.1. Classification of the substance or mix   | kture  |
| Classification (GHS-US)   |  |
| Skin Irrit. 2 H315 - Causes skin irritation   |  |
| Eye Irrit. 2A H319 - Causes serious eye irritation  |  |
| STOT SE 3 H335 - May cause respiratory irrita   | ation  |
| Full text of H-phrases: see section 16  |  |
| 2.2. Label elements   |  |
| GHS-US labeling   |  |
| Hazard pictograms (GHS-US)  | : 🔥  |
|   | GHS07  |
| Signal word (GHS-US)  | : Warning  |
| Hazard statements (GHS-US)  | : H315 - Causes skin irritation<br>H319 - Causes serious eye irritation<br>H335 - May cause respiratory irritation   |
| Precautionary statements (GHS-US)   | <ul> <li>P261 - Avoid breathing fumes, mist, spray, vapors</li> <li>P264 - Wash skin thoroughly after handling</li> <li>P271 - Use only outdoors or in a well-ventilated area</li> <li>P280 - Wear protective gloves/protective clothing/eye protection/face protection</li> <li>P302+P352 - If on skin: Wash with plenty of soap and water</li> <li>P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing</li> <li>P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact</li> <li>lenses, if present and easy to do. Continue rinsing</li> <li>P312 - Call a POISON CENTER or doctor/physician if you feel unwell</li> <li>P321 - Specific treatment (see supplemental first aid instructions on this label)</li> <li>P332+P313 - If skin irritation occurs: Get medical advice/attention</li> <li>P337+P313 - If eye irritation persists: Get medical advice/attention</li> <li>P362+P364 - Take off contaminated clothing and wash it before reuse</li> <li>P403+P233 - Store in a well-ventilated place. Keep container tightly closed</li> <li>P405 - Store locked up</li> <li>P501 - Dispose of contents/container to an approved waste disposal plant</li> </ul> |

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| 3. Other hazards         4. Unknown acute toxicity (GHS US) and applicable         4. Unknown acute toxicity (GHS US) and applicable         5. Substance by the second start         Name       Product identifier         5. Substance by the second start         Name       Product identifier         5. Substance by the second start         Name       Product identifier         5. Substance by the second start         1. Substance by the second start         1. Substance by the second start         5. Control start         1. Obsciption of first ald measures         5. Control start         5. Control start         5. Control start         5. Second start   | cording to Federal Register / Vol. 77, No. 58 / Monda | ay, March 26, 2012 / Rules and Regu | Ilations                         |   |
|--|---|-------------------------------------|----------------------------------|---|
| 4.       Unknown acute toxicity (GHS US)         lot applicable       Substance         2.1.       Substance         Watsance type       : Mono-constituent         Name       Product identifier       %       Classification (GHS-US)         Substance type       : Mono-constituent       Storm 2. PGB       Storm 2. PGB         Name       (DA No) 1460-16-8       en 100       Storm 2. PGB       Storm 2. PGB         2.2.       Mixture       Storm 2. PGB  | .3. Other hazards                                     |                                     |                                  |   |
| etapplicable         ECTION 3: Composition/information on ingredients         1. Subtance         Ubstance bype       : Mono-constituent         Name       Product identifier       % 0       Classification (GHS-US)         Subtance bype       : Mono-constituent       Subtance bype       Subtance bype         Visit stord Hyphrases: see section 16       % 10       Subtance bype       Subtance bype         2. Minutre       Is classification (GHS-US)       Subtance bype       Subtance bype         3. Description of first all measures       In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible), Mow the affected personnel away from the containing up and the containing. See and the containing up and the containing up and the containing up and the containing. See and the containing up and the containing up and the containing up and the containing up and the containing. New prove park and the containing up and the containing up and the containing. See and the containing up and the containing. New prove prive anything by mouth to an unconscious person. Rinse mouth out with water for a least 15 minutes. Renve contact lenses, in present and easy to Continue minipation.         2. Most important symptoms and effects, both scute and delayed       The most important known symptoms and effects are described in the labeling (see section 12. 2) and/or in section 11. 3.         3. Indication of any immediate modeleal attention and special treatment needed the contained by provide for surrounding fre.         2. Special hazards arising   | o additional information available                    |                                     |                                  |   |
| ECTION 3: Composition/information on ingredients         1. Substance         Usatance type       : Mono-constituent         Name       Product identifier       %       Classification (GHS-US)         Split ingregenerativopic and<br>increases       Product identifier       %       Classification (GHS-US)         Split ingregenerativopic and<br>increases       Product identifier       %       Classification (GHS-US)         2. Mixture       at the other type in the 2 HGB<br>strong stress       Strong stress       Strong stress         Control 4: First aid measures       in case of accident or if you feel unwell, seek medical advice immediately (show the label<br>where possible). Now the affected personnel away form the contaminated acce.       If the contaminate stress in the contaminate stress.         rst-aid measures after skin contact       : In case of accident or if you feel unwell, seek medical advice/attention.       The stress through with water for at least 1 S minutes. Remove contact lenses, i<br>present and easy to do. Continue remove preson to fresh air and keep composition. Now the for case of accident advice/attention.         2. Most important symptoms and effects, both acute and delayed       The most important known symptoms and effects are described in the labeling (see section<br>2.2) and/or in section 11.         3. Indication of any immediate medical advice/attention.       The most important known symptoms and effects are described in the labeling (see section<br>2.2) and/or in section 11.         3. Indication of any immediate med  |   |                                     |                                  |   |
| 1. Substance values         Mono-constituent           Name         Product identifier         %         Classification (GHS-US)           Optimize parameter down and diverse of the set   | ot applicable   |                                     |                                  |   |
| ubitance type       :       Mone-constituent         Name       Product identifier       %       Classification (GHS-US)         Cyclobaginanceuborylic and<br>Von normalismini       ICAS two 1460-16-9       sen 100       Skin Intr. 2, H315         Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H314       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H311       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319       Synt Dir. 2, A. H319         Synt Dir. 2, A. H319       Synt Dir. Case Of Andera   | ECTION 3: Composition/informat                        | ion on ingredients                  |                                  |   |
| Name         Product identifier         %         Classification (GHS-US)           Cyclobeptanearboyle and<br>With monithum         ICAS No 1460-16-3         e= 100         Shin Imt. 2, H315<br>Eye Imt. 2, H315           Ut tox of H-phrases: see section 16         Image: Section 200         Shin Imt. 2, H315           2.         Mixture         ot applicable           ECTION 4.F First aid measures         Image: Section 200         Shin Imt. 2, H315           Testial measures general         :         In case of accident or if you feel unwell, seek medical advice immediately (show the label<br>where possible). Move the affected personnel away from the contaminated area.           Instaute         :         Remove person to resh air and Acegor comfordable for therathing. If not breathing, give artificial<br>respiration. Get medical advice/attention.           Instaud measures after skin contact         :         Wash with plenty of do gaan dwater. Get medical advice/attention.           Instaud measures after skin contact         :         Immediately flush were give anything by mouth to an unconscious person. Rinse<br>mouth out with water. Get medical advice/attention.           Instaud         :         Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse<br>mouth out with water. Get medical advice/attention.           2.         Most Important symptoms and effects, both acute and delayed           :         :         The most Important known symptoms and effects are desc   | 1. Substance  |                                     |                                  |   |
| Cyclobageanceaboxyle add         (CAS No) 1460-16-8         e= 100         Skin Imr 2, H315<br>Eve Imr, 2, H315<br>Strot SE 3, H335           List of Hybrases: see section 16   | ubstance type   | : Mono-constituent                  |                                  |   |
| Nation         Epi Int. 2A. H319           Ult exi of H-phrases: see section 16  | Name  | Product identifier                  | %                                | Classification (GHS-US)                 |
| 2. Mixture         of applicable         ECTION 4: First ald measures         1. Description of first ald measures         rist-aid measures general       : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Mow the affected personnel away from the contaminated area.         rist-aid measures after inhabation       : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get medical advice/attention.         rist-aid measures after set ocntact       : Wash with pienty of scap and water. Get medical advice/attention.         rist-aid measures after inhabation       : Do NOT induce voming with water for at heart 15 minutes. Remove contact lenses, i present and easy to do. Continue rinsing. Get medical advice/attention.         rist-aid measures after injection       : Do NOT induce voming injection advice/attention.         2. Most important symptoms and effects. both acute and delayed       : The most important known symptoms and effects are described in the labelling (see section 12.2) and/or in section 11.         3. Indication of any immediate medical attention and special treatment needed reat symptomatically.       : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding free.         2. Special hazards arising from the substance or mixture       : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.         3. Advice for firelighting       : In case of fire: Evacuate area   |   | (CAS No) 1460-16-8                  | <= 100                           | Eye Irrit. 2A, H319                     |
| bit applicable         ECTION 4: First aid measures         rst-aid measures general       : In case of accident or if you feal unwell, seek medical advice immediately (show the label<br>where possible). Move the affected personnel away from the contaminated area.         rst-aid measures after inhalation       : Remove parson to fresh air and keep comfortable for breathing. If not breathing, give artificial<br>respiration. Get medical advice/attention.         rst-aid measures after skin contact       : Wash with pleny of soap and water. Get medical advice/attention.         rst-aid measures after skin contact       : Wash with pleny of soap and water. Get medical advice/attention.         rst-aid measures after ingestion       : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses,<br>present and easy to do. Continue rinsing. Get medical advice/attention.         2. Most important symptoms and effects, both acute and delayed  | Ill text of H-phrases: see section 16                 |                                     |                                  | · · ·                                   |
| ECTION 4: First aid measures         1.       Description of first aid measures         rist-aid measures general       : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area.         rist-aid measures after inhalation       :: Renove person to fresh air and keep confloctable for breathing. If not breathing, give artificial respiration. Get medical advice/attention.         rist-aid measures after skin contact       :: Wash with plenty of soap and water. Get medical advice/attention.         rist-aid measures after eye contact       :: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, i present and easy to do. Continue rinsing. Get medical advice/attention.         rist-aid measures after ingestion       :: Do NOT induce vomiting. Hever give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.         2.       Most important symptoms and effects, both acute and delayed         ymptoms/injuries       :: The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.         3.       Indication of any Immediate medical attention and special treatment needed         eatis symptomatically.       :: Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.         2.       Special hazards arising from the substance or mixture         re hazard       :: In  | 2. Mixture  |                                     |                                  |   |
| 1.         Description of first aid measures           rst-aid measures general         : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area.           rst-aid measures after inhalation         : Remove person to fresh air and keep confortable for breathing. If not breathing, give artificial respiration. Cell medical advice/attention.           rst-aid measures after eye contact         : Ummediately flush eyes thoroughly with water for a tleast 15 minutes. Remove contact lenses, i present and ads to do advice/attention.           rst-aid measures after ingestion         : Do NOT induce voniting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.           2.         Most important symptoms and effects, both acute and delayed           3.         Indication of any immediate medical attention and special treatment needed           reat symptomatically.         : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.           2.         Special hazards arising from the subtance or mixture           re hazard         : In case of the: Evacuate area. Fight fire remotely due to the risk of explosion.           contaction during firefighting         : Evacuate area. Fight fire remotely due to the risk of explosion.           contaction during firefighting         : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.  |   |                                     |                                  |   |
| rst-aid measures general       : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area.         rst-aid measures after inhalation       : Remove person to fresh air and keep comfortable for breathing. If no breathing, if no b  | ECTION 4: First aid measures                          |                                     |                                  |   |
| where possible). Move the affected personnel away from the contaminated area.           rst-aid measures after inhalation         : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get medical advice/attention.           rst-aid measures after skin contact         : Wash with plenty of scap and water. Get medical advice/attention.           rst-aid measures after eye contact         : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, i present and easy to do. Continue rinsing. Get medical advice/attention.           rst-aid measures after ingestion         : Do NOT induce vomiling. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.           2.         Most important symptoms and effects, both acute and delayed           ymptoms/injuries         : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.           3.         Indication of any immediate medical attention and special treatment needed           reatyputomatically.         :           etas symptomatically         :           appropriate for surrounding file.         :           2.         Special hazards arising from the substance or mixture           re hazard         : Thermail decomposition generates: Carbon oxides.           splosion hazard         : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.  |   |                                     |                                  |   |
| respiration. Get medical advice/attention. rsst-aid measures after skin contact rsst-aid measures after eye contact Wash with plenty of soap and water. Get medical advice/attention. rst-aid measures after eye contact Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, i present and easy to do. Continue rinsing. Get medical advice/attention. rst-aid measures after ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention. 2. Most important symptoms and effects, both acute and delayed mptoms/injuries Important symptoms and effects, both acute and delayed To and/or in section 11. Important inportant known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11. Important symptomatical attention and special treatment needed eat symptomatically. ECTION 5: Firefighting measures I Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding file. 2. Special hazards arising from the substance or mixture relighting instructions I In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Cetton 6: Accidental release measures I In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Cetton 6: Accidental release measures I Vear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection". CETION 6: Accidental release measures I Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray. L1. For non-emergency presonnel references Conton without suitable protective equipment may intervene. L2. For emergency responders Containers Conton temps personnel equipped with suitable protective equipment may intervene. Control on the subce action without suitable protective equipment may intervene. Conton | Ū.  | where possible). Move the           | e affected personnel away from   | n the contaminated area.                |
| rst-aid measures after eye contact       : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, i present and easy to do. Continue rinsing. Get medical advice/attention.         rst-aid measures after ingestion       : Do NOT induce vorniting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.         2. Most important symptoms and effects, both acute and delayed       : The most important hown symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.         3. Indication of any immediate medical attention and special treatment needed       : attention is extiron 11.         3. Indication of any immediate medical attention and special treatment needed       : attention is extiron 11.         3. Indication of any immediate medical attention and special treatment needed       : attention is extiron 11.         3. Indication of any immediate medical attention and special treatment needed       : attention is extiron 11.         3. Indication of any immediate medical attention and special treatment needed       : attention is extiron 11.         3. Advice for firefighting media       : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.         4. Extinguishing media       : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray or fog for cooling exposed containers.         5. Advice for firefighters       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.  |   | respiration. Get medical a          | dvice/attention.                 |   |
| present and easy to do. Continue insing. Get medical advice/attention.         rst-aid measures after ingestion       : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.         2. Most important symptoms and effects, both acute and delayed       : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.         3. Indication of any immediate medical attention and special treatment needed       : ECTION 5: Firefighting measures         1. Extinguishing media       : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.         2. Special hazards arising from the substance or mixture       : Thermal decomposition generates: Carbon oxides.         relighting instructions       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         sylosion hazard       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         stortection during firefighting       : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".         ECTION 6: Accidental release measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1. Personal procedures       : Only qualified personnel equipped with suitable protective equipment may intervene.         1. Personal p  |   |                                     |                                  |   |
| mouth out with water. Get medical advice/attention.         2. Most important symptoms and effects, both acute and delayed         mptoms/injuries       The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.         3. Indication of any immediate medical attention and special treatment needed         eat symptomalically.         ECTION 5: Firefighting media         itable extinguishing media         attable extinguishing media         itable extinguishing media         : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.         2. Special hazards arising from the substance or mixture         re hazard       : Thermal decomposition generates: Carbon oxides.         ejolsion hazard       : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.         3. Advice for firefighters       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         retection during firefighting       : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".         ECTION 6: Accidental release measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1. For non-emergency personnel       : Do not attempt to take action wit   |   | present and easy to do. C           | continue rinsing. Get medical ac | dvice/attention.                        |
| Imptoms/injuries       : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.         3.       Indication of any immediate medical attention and special treatment needed         eat symptomatically.         ECTION 5: Firefighting measures         1.       Extinguishing media         aitable extinguishing media       : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.         2.       Special hazards arising from the substance or mixture         re hazard       : Thermal decomposition generates: Carbon oxides.         cplosion hazard       : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.         3.       Advice for firefighters         refighting instructions       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         votection during firefighting       : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".         ECTION 6: Accidental release measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1.       For non-emergency personnel       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1. <td< td=""><td>rst-aid measures after ingestion</td><td></td><td></td><td>to an unconscious person. Rinse</td></td<>   | rst-aid measures after ingestion                      |                                     |                                  | to an unconscious person. Rinse         |
| 2.2) and/or in section 11.  3. Indication of any immediate medical attention and special treatment needed eat symptomatically.  ECTION 5: Firefighting media itable extinguishing media itable extinguishing media itable extinguishing media  2. Special hazards arising from the substance or mixture re hazard  |   |                                     |                                  |   |
| 3. Indication of any immediate medical attention and special treatment needed         teat symptomatically.         ECTION 5: Firefighting measures         1. Extinguishing media       : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.         2. Special hazards arising from the substance or mixture       .         re hazard       : Thermal decomposition generates: Carbon oxides.         xplosion hazard       : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.         3. Advice for firefighters       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         retetion during firefighting       : Wear gas tight chemically protective clothing in combination with self contained breathing appraratus. For further information refer to section 8: "Exposure controls/personal protection".         ECTION 6: Accidental release measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1. For non-emergency personnel       : Only qualified personnel equipped with suitable protective equipment may intervene.         1.2. For emergency responders       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         1.2. For emergency responders       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8  | ymptoms/injuries                                      |                                     | symptoms and effects are de      | scribed in the labelling (see section   |
| 1. Extinguishing media       : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.         2. Special hazards arising from the substance or mixture       : Thermal decomposition generates: Carbon oxides.         rice hazard       : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.         3. Advice for firefighters       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         rotection during firefighting       : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".         EECTION 6: Accidental release measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1. For non-emergency personnel       mergency procedures         ieneral measures       : Only qualified personnel equipped with suitable protective equipment. For further information refer to section %: "Exposure controls/personal protection".         1.2. For emergency responders       : Do not attempt to take action without suitable protective equipment. For further information refer to section %: "Exposure controls/personal protection".         1.2. For emergency responders       : Only qualified personnel equipped with suitable protective equipment. For further information refer to section %: "Exposure controls/personal protection".         1.2. For emergency responders       : Do not attempt to take actio   | reat symptomatically.                                 |                                     | nent needed                      |   |
| uitable extinguishing media       : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.         2.       Special hazards arising from the substance or mixture         ire hazard       : Thermal decomposition generates: Carbon oxides.         xplosion hazard       : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.         3.       Advice for firefighters         irefighting instructions       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         :       Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".         ECTION 6: Accidental release measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1.       For non-emergency personnel       : Only qualified personnel equipped with suitable protective equipment may intervene.         1.2.       For emergency responders       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         .       Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         .       Do not attempt to take action without suitable protective equipment. For further information refer to se  |   |                                     |                                  |   |
| ire hazard       : Thermal decomposition generates: Carbon oxides.         xplosion hazard       : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.         .3. Advice for firefighters       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         rotection during firefighting       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".         : ECTION 6: Accidental release measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         .1.1. For non-emergency personnel       : Only qualified personnel equipped with suitable protective equipment may intervene.         .1.2. For emergency responders       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         mergency procedures       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         mergency procedures       : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below groun level.  | <b>U U</b>  |                                     |                                  | ter spray. Use extinguishing media      |
| xplosion hazard       : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.         3. Advice for firefighters       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         rotection during firefighting       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         ECTION 6: Accidental release measures       : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".         ECTION 6: Accidental release measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1. For non-emergency personnel mergency procedures       : Only qualified personnel equipped with suitable protective equipment may intervene.         1.2. For emergency responders       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         mergency procedures       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         energency procedures       : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below groun level.   | 2. Special hazards arising from the s                 | substance or mixture                |                                  |   |
| 3. Advice for firefighters         refighting instructions       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         rotection during firefighting       : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".         ECTION 6: Accidental release measures       .         1. Personal precautions, protective equipment and emergency procedures       .         eneral measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1. For non-emergency personnel       .         mergency procedures       : Only qualified personnel equipped with suitable protective equipment may intervene.         1.2. For emergency responders       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         mergency procedures       : Only qualified personnel equipped with suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         1.2. For emergency responders       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         mergency procedures       : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below groun level.  | re hazard   | : Thermal decomposition g           | enerates: Carbon oxides.         |   |
| refighting instructions       : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.         rotection during firefighting       : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".         ECTION 6: Accidental release measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1. For non-emergency personnel       : Only qualified personnel equipped with suitable protective equipment may intervene.         1.2. For emergency responders       : Do not attempt to take action without suitable protection".         rotective equipment       : Do not attempt to take action without suitable protection".         mergency procedures       : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below groun level.   | xplosion hazard                                       |                                     | J under confinement. Use wate    | er spray or fog for cooling exposed     |
| rotection during firefighting       : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".         ECTION 6: Accidental release measures       : Personal precautions, protective equipment and emergency procedures         eneral measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1. For non-emergency personnel       : Only qualified personnel equipped with suitable protective equipment may intervene.         1.2. For emergency responders       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         nergency procedures       : So ont attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         nergency procedures       : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below groun level.   | 3. Advice for firefighters                            |                                     |                                  |   |
| apparatus. For further information refer to section 8: "Exposure controls/personal protection".         ECTION 6: Accidental release measures         1. Personal precautions, protective equipment and emergency procedures         eneral measures       : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.         1.1. For non-emergency personnel       : Only qualified personnel equipped with suitable protective equipment may intervene.         1.2. For emergency responders       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         mergency procedures       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         mergency procedures       : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below groun level.   | refighting instructions                               | : In case of fire: Evacuate a       | area. Fight fire remotely due to | the risk of explosion.                  |
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| <ul> <li>Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.</li> <li>1.1. For non-emergency personnel mergency procedures</li> <li>I.2. For emergency responders rotective equipment</li> <li>Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".</li> <li>Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below groun level.</li> </ul>  |   |                                     |                                  |   |
| <ul> <li>Construction</li> <li>Const</li></ul>   |   | : Evacuate unnecessary pe           |                                  | ventilation. Do not breathe gas, fumes, |
| rotective equipment       : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".         mergency procedures       : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level.  | 0 11  | : Only qualified personnel e        | equipped with suitable protectiv | re equipment may intervene.             |
| mergency procedures : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level.  |   |                                     |                                  |   |
|  | mergency procedures                                   | : Gas/vapor heavier than a          |                                  |   |
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| 6.2. Environmental precautions   |   |  |  |
|--|---|--|--|
| Avoid release to the environment. Notify authorities if product enters sewers or public waters.  |   |  |  |
| 6.3. Methods and material for contain  | Methods and material for containment and cleaning up  |  |  |
| For containment : Stop leak if safe to do so. Dike for recovery or absorb with appropriate material.   |   |  |  |
| Methods for cleaning up  | : Take up large spills with pump or vacuum and finish with dry chemical absorbent. Use explosion-proof equipment. Take up small spills with dry chemical absorbent. Sweep or shovel spills into appropriate container for disposal. Ventilate area. |  |  |
| Other information  | : For disposal of solid materials or residues refer to section 13 : "Disposal considerations".  |  |  |
| 6.4. Reference to other sections   |   |  |  |
| No additional information available  |   |  |  |
| SECTION 7: Handling and storage  |   |  |  |
| 7.1. Precautions for safe handling   |   |  |  |
| Precautions for safe handling  | Do not handle until all safety precautions have been read and understood. Ensure good<br>ventilation of the work station. Do not breathe fumes, mist, spray, vapors. Wear personal<br>protective equipment. Avoid contact with skin and eyes.       |  |  |
| Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink o smoke when using this product. Always wash hands after handling the product. |   |  |  |
| 7.2. Conditions for safe storage, including any incompatibilities  |   |  |  |
| Technical measures   | : Comply with applicable regulations.   |  |  |
| Storage conditions   | : Keep container closed when not in use.  |  |  |
| Incompatible materials   | : Refer to Section 10 on Incompatible Materials.  |  |  |
| Storage area   | : Store in dry, cool, well-ventilated area.   |  |  |
|  |   |  |  |

## **SECTION 8: Exposure controls/personal protection**

#### **Control parameters** 8.1.

No additional information available

| 8.2. Exposure controls           |  |
|----------------------------------|--|
| Appropriate engineering controls | : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers<br>should be available in the immediate vicinity of any potential exposure. |
| Hand protection                  | : Protective gloves. 29 CFR 1910.138: Hand Protection.   |
| Eye protection                   | : Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection.   |
| Skin and body protection         | : Wear suitable protective clothing.   |
| Respiratory protection           | : In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory<br>Protection.   |
| Other information                | : Safety shoes. 29 CFR 1910.136: Foot Protection.  |

## **SECTION 9: Physical and chemical properties**

| 9.1. Information on basic physical and      | d chemical properties      |                 |     |
|---|----------------------------|-----------------|-----|
| Physical state                              | : Liquid                   |                 |     |
| Color                                       | : No data available        |                 |     |
| Odor  | : No data available        |                 |     |
| Odor threshold                              | : No data available        |                 |     |
| рН  | : No data available        |                 |     |
| Melting point                               | : No data available        |                 |     |
| Freezing point                              | : No data available        |                 |     |
| Boiling point                               | : 135 - 138 °C (@ 9 mm Hg) |                 |     |
| Flash point                                 | : > 113 °C                 |                 |     |
| Relative evaporation rate (butyl acetate=1) | : No data available        |                 |     |
| Flammability (solid, gas)                   | : No data available        |                 |     |
| Explosion limits                            | : No data available        |                 |     |
| Explosive properties                        | : No data available        |                 |     |
| Oxidizing properties                        | : No data available        |                 |     |
| Vapor pressure                              | : No data available        |                 |     |
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| Relative density                | : No data available    |
|---------------------------------|------------------------|
| Relative vapor density at 20 °C | : No data available    |
| Specific gravity / density      | : 1.035 g/ml (@ 25 °C) |
| Molecular mass                  | : 142.1956 g/mol       |
| Solubility                      | : No data available    |
| Log Pow                         | : No data available    |
| Auto-ignition temperature       | : No data available    |
| Decomposition temperature       | : No data available    |
| Viscosity                       | : No data available    |
| Viscosity, kinematic            | : No data available    |
| Viscosity, dynamic              | : No data available    |
| 9.2. Other information          |                        |
| Refractive index                | : 1.47 (@ 20 °C)       |
|                                 |                        |

| SECT    | SECTION 10: Stability and reactivity                      |  |  |  |
|---------|---|--|--|--|
| 10.1.   | Reactivity  |  |  |  |
| No addi | itional information available                             |  |  |  |
| 10.2.   | 10.2. Chemical stability                                  |  |  |  |
| The pro | duct is stable at normal handling and storage conditions. |  |  |  |
| 10.3.   | Possibility of hazardous reactions                        |  |  |  |
| No addi | itional information available                             |  |  |  |
| 10.4.   | Conditions to avoid                                       |  |  |  |
| Keep av | Keep away from heat, sparks and flame.                    |  |  |  |

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

| SECTION 11: Toxicological information 11.1. Information on toxicological effects |                                     |  |
|--|-------------------------------------|--|
| Acute toxicity   | : Not classified                    |  |
| Skin corrosion/irritation  | : Causes skin irritation.           |  |
| Serious eye damage/irritation  | : Causes serious eye irritation.    |  |
| Respiratory or skin sensitization  | : Not classified                    |  |
| Germ cell mutagenicity   | : Not classified                    |  |
| Carcinogenicity  | : Not classified                    |  |
| Reproductive toxicity  | : Not classified                    |  |
| Specific target organ toxicity (single exposure)                                 | : May cause respiratory irritation. |  |
| Specific target organ toxicity (repeated exposure)                               | : Not classified                    |  |
| Aspiration hazard  | : Not classified                    |  |

| SECTION 12: Ecological information |                                     |  |  |  |
|------------------------------------|-------------------------------------|--|--|--|
| 12.1.                              | Toxicity                            |  |  |  |
| No additi                          | onal information available          |  |  |  |
| 12.2.                              | Persistence and degradability       |  |  |  |
| No additi                          | No additional information available |  |  |  |
| 12.3.                              | Bioaccumulative potential           |  |  |  |
| No additi                          | onal information available          |  |  |  |

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#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

| 13.1. Waste treatment methods  |   |  |
|--|---|--|
| Waste treatment methods  | : Remove to an authorized incinerator equipped with                           | an afterburner and a flue gas scrubber.  |
| Waste disposal recommendations   | : Dispose of contents/container in accordance with I                          | censed collector's sorting instructions. |
| Additional information   | : Recycle the material as far as possible.                                    |  |
| SECTION 14: Transport informa  | tion  |  |
| Department of Transportation (DOT)   |   |  |
| In accordance with DOT   |   |  |
| Not regulated for transport  |   |  |
| TDG  |   |  |
| No additional information available  |   |  |
| Transport by sea   |   |  |
| No additional information available  |   |  |
| Air transport  |   |  |
| No additional information available  |   |  |
| SECTION 15: Regulatory inform  | ation   |  |
| 15.1. US Federal regulations   |   |  |
| č  |   |  |
| All components of this product are listed,<br>Substances Control Act (TSCA) inventor | or excluded from listing, on the United States Environmental<br>y except for: | Protection Agency Toxic                  |
| Cycloheptanecarboxylic acid  | CAS No 1460-16-8  | 100%                                     |

and 40 CFR Part 372.

### 15.2. International regulations

#### CANADA

No additional information available

#### **EU-Regulations**

No additional information available

#### National regulations

Cycloheptanecarboxylic acid (1460-16-8) Listed on the Korean ECL (Existing Chemicals List) Listed on the TCSI (Taiwan Chemical Substance Inventory)

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

### SECTION 16: Other information

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| Full text of H-phrases:   |   |  |
|---|---|--|
| Eye Irrit. 2A   | Serious eye damage/eye irritation Category 2A   |  |
| Skin Irrit. 2   | Skin corrosion/irritation Category 2  |  |
| STOT SE 3   | Specific target organ toxicity (single exposure) Category 3   |  |
| H315  | Causes skin irritation  |  |
| H319  | Causes serious eye irritation   |  |
| H335  | May cause respiratory irritation  |  |
| NFPA health hazard  | : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.   |  |
| NFPA fire hazard : 1 - Must be preheated before ignition can occur. |   |  |
| NFPA reactivity   | : 0 - Normally stable, even under fire exposure conditions,<br>and are not reactive with water.   |  |
| HMIS III Rating   |   |  |
| Health  | : 1 Slight Hazard - Irritation or minor reversible injury possible  |  |
| Flammability  | : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)            |  |
| Physical  | : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives. |  |
| SDS US (GHS HazCom 2012)  |   |  |

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable or any damage resulting from handling or from contact with the above product.