

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 15/10/2014 Revision date: 02/10/2020 Supersedes: 15/10/2014 Version: 2.0 ECN-5270-A

| SECTION 1.1 | dentification of the sub | stance/mixture and of the company/undertaking |
|---------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------|
| | t identifier | stance/mixture and or the company/undertaking |
| Product form | tidentiner | : Mixtures |
| Product name | | : 1,2,3,4,5,6,7-HEPTACN (PCN-73) (13C10, 98%) 10 UG/ML IN ISOOCTANE |
| Product code | | : ECN-5270-A |
| | at identified uses of the subs | tance or mixture and uses advised against |
| | | |
| | nt identified uses | : Professional use |
| Main use category Industrial/Profession | | : For professional use only |
| industrial/F101essi | unal use spec | |
| | dvised against | |
| No additional infor | mation available | |
| | of the supplier of the safety | data sheet |
| Cambridge Isotop 50 Frontage Road | e Laboratories, Inc. | |
| Andover, MA 018 | | |
| USA | | |
| | 1174 Int: 1-978-749-8000 | |
| cilsales@isotope.c | · | |
| | ency telephone number | |
| Emergency number | | |
| | 424-9300 (24 hours) 03-741-5970 (24 hours) | |
| SECTION 2: H | lazards identification | |
| 2.1. Classifi | cation of the substance or m | lixture |
| Classification ac | cording to Regulation (EC) N | lo. 1272/2008 [CLP] |
| Flam. Liq. 1 | H224 | |
| Skin Irrit. 2 | H315 | |
| STOT SE 3 | H336 | |
| Asp. Tox. 1 | H304 | |
| Aquatic Acute 1 | H400 | |
| Aquatic Chronic 1 | H410 | |
| Full text of hazard | classes and H-statements : se | ee section 16 |
| Classification ac | cording to Directive 67/548/E | EC [DSD] or 1999/45/EC [DPD] |
| F+; R12 | • | |
| Xn; R65 | | |
| Xi; R38 N; R50/53 | | |
| R67 | | |
| 1.07 | | |
| Full text of R-phra | ses: see section 16 | |
| | | |
| Full text of R-phra | | |
| Full text of R-phra GHS-US classific Flam. Liq. 1 Skin Irrit. 2 | H224 H315 | |
| Full text of R-phra GHS-US classific Flam. Liq. 1 Skin Irrit. 2 STOT SE 3 | H224 H315 H336 | |
| Full text of R-phra GHS-US classific Flam. Liq. 1 Skin Irrit. 2 | H224 H315 | |

Full text of H statements : see section 16

Aquatic Chronic 1 H410

Adverse physicochemical, human health and environmental effects Liver, Kidney.

ISOOCTANE ECN-5270-A

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.2. Label elements



P405 - Store locked up

ISOOCTANE ECN-5270-A

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P501 - Dispose of contents/container to Comply with applicable regulations

2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

| 3.2. Mixtures | | | |
|------------------------------------|--------------------------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | Product identifier | % | Classification according to Directive 67/548/EEC |
| ISOOCTANE UNLABELED | (CAS-No.) 540-84-1 (EC-No.) 208-759-1 (EC Index-No.) 601-009-00-8 (REACH-no) 01-2119457965-22 | 99.9986 | Xi; R38 N; R50/53 R67 F; R11 Xn; R65 |
| 1,2,3,4,5,6,7-HEPTACN (13C10, 98%) | (CAS-No.) 58863-14-2 (Unlabeled) (EC-No.) 215-320-8 (EC Index-No.) 602-041-00-5 | 0.0014 | Xn; R20/21 Xi; R36/37/38 N; R50/53 |
| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
| ISOOCTANE UNLABELED | (CAS-No.) 540-84-1 (EC-No.) 208-759-1 (EC Index-No.) 601-009-00-8 (REACH-no) 01-2119457965-22 | 99.9986 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 1,2,3,4,5,6,7-HEPTACN (13C10, 98%) | (CAS-No.) 58863-14-2 (Unlabeled) (EC-No.) 215-320-8 (EC Index-No.) 602-041-00-5 | 0.0014 | Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT RE 1, H372 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| Name | Product identifier | % | GHS-US classification |
| ISOOCTANE UNLABELED | (CAS-No.) 540-84-1 | 99.9986 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 1,2,3,4,5,6,7-HEPTACN (13C10, 98%) | (CAS-No.) 58863-14-2 (Unlabeled) | 0.0014 | Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT RE 1, H372 STOT RE 2, H373 Aquatic Chronic 1, H410 |

Full text of R- and H- phrases: see section 16

| SECTION 4: First aid measures | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1. Description of first aid measures | |
| First-aid measures general | : If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area |
| First-aid measures after inhalation | : When symptoms occur: go into open air and ventilate suspected area. If not breathing give artificial respiration. Get medical advice/attention. |
| First-aid measures after skin contact | : Wash with plenty of soap and water. Get immediate medical advice/attention. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. |
| First-aid measures after ingestion | : Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention. |
| 4.2. Most important symptoms and effective statements and effective sta | fects, both acute and delayed |
| Symptoms/effects after inhalation | : May cause drowsiness or dizziness. |
| Symptoms/effects after skin contact | : Causes skin irritation. |
| Symptoms/effects after eye contact | : May cause eye irritation. |

ISOOCTANE ECN-5270-A

Safety Data Sheet

| 26, 2012 / Rules and Regulations | |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Symptoms/effects after ingestion | : May be fatal if swallowed and enters airways. |
| 4.3. Indication of any immediate medic | al attention and special treatment needed |
| No additional information available | |
| SECTION 5: Firefighting measures | |
| 5.1. Extinguishing media | |
| Suitable extinguishing media | : Flood fire area with water from a distance. Water spray. Dry powder. Foam. Carbon dioxide. |
| 5.2. Special hazards arising from the se | ubstance or mixture |
| Fire hazard | : Extremely flammable liquid and vapour. |
| Explosion hazard | : Flash back possible over important distance. |
| Reactivity | : Vapors may form flammable mixture with air. Highly flammable liquid and vapor. |
| 5.3. Advice for firefighters | |
| Firefighting instructions | : Wear a self contained breathing apparatus. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |
| Other information | : Use water spray to cool exposed surfaces. |
| SECTION 6: Accidental release mea | |
| | quipment and emergency procedures |
| | dupment and emergency procedures |
| 6.1.1. For non-emergency personnel | · Ventilate spillage area. Use personal protective equipment as required. Remove all sources of |
| Emergency procedures | : Ventilate spillage area. Use personal protective equipment as required. Remove all sources of ignition. Ensure adequate air ventilation. Provide adequate ventilation to minimize dust and/or vapor concentrations. No open flames, no sparks, and no smoking. Avoid breathing gas, mist, vapors. Avoid contact with skin and eyes. Evacuate danger area. Special attention should be given to low areas/pits where flammable vapors can accumulate. |
| 6.1.2. For emergency responders | |
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
| 6.2. Environmental precautions | |
| Stop leak, if possible without risk. Prevent entry | to sewers and public waters. Avoid release to the environment. |
| 6.3. Methods and material for containm | nent and cleaning up |
| For containment | : Vacuum with an equipment that avoids ignition risk. This material and its container must be disposed of in a safe way, and as per local legislation. Collect spillage. |
| Methods for cleaning up | : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. This material and its container must be disposed of in a safe way, and as per local legislation. |
| Other information | : Dispose of materials or solid residues at an authorized site. |
| 6.4. Reference to other sections | |
| For further information refer to section 13. | |
| SECTION 7: Handling and storage | |
| 7.1. Precautions for safe handling | |
| Additional hazards when processed | : Avoid all contact with skin, eyes, or clothing. |
| Precautions for safe handling | : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing vapors, mist. Avoid contact with skin and eyes. |
| Hygiene measures | : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |
| 7.2. Conditions for safe storage, includ | ling any incompatibilities |
| Technical measures | : Keep dry. Store in tightly closed, leak-proof containers. Containers which are opened should be properly resealed and kept upright to prevent leakage. Ground/bond container and receiving equipment. |
| Storage conditions | : Store at room temperature away from light and moisture. |

ISOOCTANE ECN-5270-A

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| 7.3. Specific end use(s) | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------------------|--|--|
| No additional information available | | | | |
| SECTION 8: Exposure c | ontrols/personal protection | | | |
| 8.1. Control parameters | 8.1. Control parameters | | | |
| 1,2,3,4,5,6,7-HEPTACN (PCN | -73) (13C10, 98%) 10 UG/ML IN ISOOCTANE | | | |
| Italy - Portugal - USA ACGIH | ACGIH TWA (ppm) | 300.00000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV) | | |
| Italy - Portugal - USA ACGIH | Remark (ACGIH) | Upper Respiratory Tract irritation | | |
| ISOOCTANE UNLABELED (5 | ISOOCTANE UNLABELED (540-84-1) | | | |
| Italy - Portugal - USA ACGIH | ACGIH TWA (ppm) | 300.00000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV) | | |
| Italy - Portugal - USA ACGIH | Remark (ACGIH) | Upper Respiratory Tract irritation | | |
| 8.2. Exposure controls | | | | |
| Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Ensure good ventilation of the work station. | | | | |

Personal protective equipment

: Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



| Materials for protective clothing | : Wear suitable protective clothing and gloves. |
|-----------------------------------|----------------------------------------------------------------------------------------------------|
| Hand protection | : Wear suitable protective clothing and gloves. |
| Eye protection | : Wear eye protection. Chemical goggles or face shield with safety glasses. Safety glasses. |
| Skin and body protection | : Wear suitable protective clothing, gloves and eye/face protection. |
| Respiratory protection | : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator. |
| Environmental exposure controls | : Avoid release to the environment. |

SECTION 9: Physical and chemical properties

| 9.1. Information on basic physical and | d chemical properties |
|---------------------------------------------------------------|----------------------------------------------------------------------------------|
| The properties listed below are for the solvent, the main com | |
| Physical state | : Liquid |
| Appearance | : Liquid |
| Molecular mass | : 114.23 g/mol |
| Color | : Colorless |
| Odor | : No data available |
| Odor threshold | : No data available |
| рН | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Melting point | : -107 °C (-161 °F) |
| Freezing point | : No data available |
| Boiling point | : 98 - 99 °C (208 - 210 °F) at 1,013 hPa (760 mmHg) |
| Flash point | : -12 °C (10 °F) - closed cup |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Not applicable |
| Vapor pressure | : 55 hPa (41 mmHg) at 21 °C (70 °F); 117 hPa (88 mmHg) at 37.8 °C (100.04 °F) |
| Relative vapor density at 20 °C | : 3.94 - (Air = 1.0) |
| Relative density | : No data available |
| Specific gravity / density | : 0.69 g/ml at 20 °C (68 °F) |
| Solubility | : Water: insoluble |
| Log Pow | : 4.6 |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| 02/10/2020 | EN (English LIS) |

ISOOCTANE ECN-5270-A

Safety Data Sheet

| 26, 2012 / Rules and Regulations | |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosion limits | : 1 - 6 % (V) |
| 9.2. Other information | |
| No additional information available | |
| | |
| SECTION 10: Stability and reactivity | |
| 10.1. Reactivity | |
| Vapors may form flammable mixture with air. High | ily flammable liquid and vapor. |
| 10.2. Chemical stability | |
| See storage and expiration date on CoA. | |
| 10.3. Possibility of hazardous reactions | |
| Vapors may form explosive mixture with air. | |
| 10.4. Conditions to avoid | |
| Avoid contact with hot surfaces. Heat. No flames, | no sparks. Eliminate all sources of ignition. |
| 10.5. Incompatible materials | |
| Strong oxidizing agents. | |
| | |
| 10.6. Hazardous decomposition products | |
| Carbon oxides (CO, CO2). | |
| SECTION 11: Toxicological information | on |
| 11.1. Information on toxicological effects | |
| Acute toxicity | : Not classified |
| 1,2,3,4,5,6,7-HEPTACN (PCN-73) (13C10, 98% |) 10 UG/ML IN ISOOCTANE |
| LD50 oral rat | > 5000 mg/kg (OECD Test Guideline 401) |
| LD50 dermal rabbit | > 2000 mg/kg (OECD Test Guideline 402) |
| LC50 inhalation rat (mg/l) | > 33.52 mg/l/4h (OECD Test Guideline 403) |
| 1,2,3,4,5,6,7-HEPTACN (13C10, 98%) (58863-1 | I4-2 (Unlabeled)) |
| ATE CLP (oral) | 500.000 mg/kg body weight |
| ISOOCTANE UNLABELED (540-84-1) | |
| LD50 oral rat | > 5000 mg/kg (OECD Test Guideline 401) |
| LD50 dermal rabbit | > 2000 mg/kg (OECD Test Guideline 402) |
| LC50 inhalation rat (mg/l) | > 33.52 mg/l/4h (OECD Test Guideline 403) |
| Skin corrosion/irritation | : Skin - Rabbit - Result: Irritating to skin. (OECD 404 method) |
| Serious eye damage/irritation | : Eyes - Rabbit - Result: No eye irritation. (OECD 405 method) |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Rat - Unscheduled DNA synthesis |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| Specific target organ toxicity – single exposure | : May cause drowsiness or dizziness |
| Specific target organ toxicity – repeated exposure | : Health hazard - Aspiration hazard |
| Aspiration hazard | : Aspiration hazard |
| Potential Adverse human health effects and symptoms | This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Affects the liver. |
| Symptoms/effects after inhalation | : May cause drowsiness or dizziness. |
| Symptoms/effects after skin contact | : Causes skin irritation. |
| Symptoms/effects after eye contact | : May cause eye irritation. |
| Symptoms/effects after ingestion | : May be fatal if swallowed and enters airways. |
| | |

ISOOCTANE ECN-5270-A

Safety Data Sheet

| SECTION 12: Ecological information | |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12.1. Toxicity | |
| Ecology - general | : Very toxic to aquatic life with long lasting effects. |
| 40.0 Development of the second of the | |
| 12.2. Persistence and degradability | |
| No additional information available | |
| 12.3. Bioaccumulative potential | |
| 1,2,3,4,5,6,7-HEPTACN (PCN-73) (13C10, 98% | |
| Log Pow | 4.6 |
| ISOOCTANE UNLABELED (540-84-1) | 4.0 |
| Log Pow | 4.6 |
| 12.4. Mobility in soil No additional information available | |
| | |
| 12.5. Results of PBT and vPvB assessmer | it in the second se |
| No additional information available | |
| 12.6. Other adverse effects | |
| Other adverse effects | : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. |
| SECTION 13: Disposal consideration | S |
| 13.1. Waste treatment methods | |
| Regional legislation (waste) | : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations. |
| Product/Packaging disposal recommendations | : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. |
| Ecology - waste materials | Dispose of as unused product. |
| SECTION 14: Transport information | |
| In accordance with ADR / RID / IMDG / IATA / AD | N |
| 14.1. UN number | |
| UN-No.(DOT) | : 1262 |
| DOT NA no. | UN1262 |
| 14.2. UN proper shipping name | |
| Proper Shipping Name (DOT) | : Octanes |
| Class (DOT) | : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 |
| Hazard labels (DOT) | : 3 - Flammable liquid |
| | FLAMMABLE LIQUID |
| Packing group (DOT) DOT Special Provisions (49 CFR 172.102) | II - Medium Danger IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal |
| DOT Packaging Exceptions (49 CFR 173.xxx) DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx) | : 150 : 202 : 242 |
| 14.3. Additional information | |
| Emergency Response Guide (ERG) Number | : 128 |
| Other information | : No supplementary information available. |
| 02/10/2020 | EN (English US) 7/10 |

ISOOCTANE ECN-5270-A

Safety Data Sheet

| Overland transport | |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Packing group (ADR) | : 11 |
| Class (ADR) | : 3 - Flammable liquid |
| Hazard identification number (Kemler No.) | : 33 |
| Classification code (ADR) | : F1 |
| Hazard labels (ADR) | : 3 - Flammable liquids |
| | |
| Orange plates | 33 1262 |
| Tunnel restriction code (ADR) | : D/E |
| Limited quantities (ADR) | 11 |
| EAC | : 3YE |
| Excepted quantities (ADR) | : E2 |
| | |
| Transport by sea | |
| DOT Vessel Stowage Location | : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded. |
| MFAG-No | : 128 |
| Air transport | |
| DOT Quantity Limitations Passenger aircraft/rai | 51 |
| (49 CFR 173.27) | |
| DOT Quantity Limitations Cargo aircraft only (48 CFR 175.75) | 9 : 60 L |
| Civil Aeronautics Law | : Flammable liquids |
| | |
| 14.4. Environmental hazards | |
| Dangerous for the environment | |
| Other information | : No supplementary information available. |
| 14.5. Special precautions for user | |
| 14.6. Transport in bulk according to Ann | ex II of MARPOL 73/78 and the IBC Code |
| Not applicable | |

| SECTION 15: Regulatory information | | |
|-------------------------------------------------------------------|------------------------------------------------------------------------------|--|
| 15.1. US Federal regulations | | |
| 1,2,3,4,5,6,7-HEPTACN (PCN-73) (13C10, 98%) 10 UG/ML IN ISOOCTANE | | |
| SARA Section 302 Threshold Planning Quantity (TPQ) | Not subject to reporing requirements of the United States SARA Section 302. | |
| SARA Section 311/312 Hazard Classes | Fire hazard Delayed (chronic) health hazard | |
| SARA Section 313 - Emission Reporting | Not subject to reporing requirements of the United States SARA Section 313. | |
| 1,2,3,4,5,6,7-HEPTACN (13C10, 98%) (58863-14-2 (Unlabeled)) | | |
| SARA Section 302 Threshold Planning Quantity (TPQ) | Not subject to reporting requirements of the United States SARA Section 302. | |
| h. | · | |

ISOOCTANE ECN-5270-A

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| 1,2,3,4,5,6,7-HEPTACN (13C10, 98%) (58863-14-2 (Unlabeled)) | | |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--|
| SARA Section 313 - Emission Reporting Not subject to reporting requirements of the United States SARA Section 313. | | |
| ISOOCTANE UNLABELED (540-84-1) | | |
| SARA Section 302 Threshold Planning Quantity (TPQ) | Not subject to reporing requirements of the United States SARA Section 302. | |
| SARA Section 311/312 Hazard Classes | Fire hazard Delayed (chronic) health hazard | |
| SARA Section 313 - Emission Reporting | Not subject to reporing requirements of the United States SARA Section 313. | |

15.2. International regulations

CANADA

| 1,2,3,4,5,6,7-HEPTACN (PCN-73) (13C10, 98%) 10 UG/ML IN ISOOCTANE | |
|-------------------------------------------------------------------|--|
| Listed on the Canadian DSL (Domestic Substances List) | |

15.2.1. National regulations

No additional information available

15.3. US State regulations

| 1,2,3,4,5,6,7-HEPTACN | (PCN-73) (13C10, 98%) 10 UG | /ML IN ISOOCTANE() | | |
|--------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------|
| U.S California - Proposition 65 - Carcinogens List | | No | | |
| U.S California - Proposition 65 - Developmental Toxicity | | No | | |
| U.S California - Proposition 65 - Reproductive Toxicity - Female | | No | | |
| U.S California - Proposition 65 - Reproductive Toxicity - Male | | No | | |
| State or local regulations | | U.S Massachusetts - Right To Know List U.S Pennsylvania - RTK (Right to Know) List U.S New Jersey - Right to Know Hazardous Substance List | | |
| 1,2,3,4,5,6,7-HEPTACN | (13C10, 98%) (58863-14-2 (Un | labeled)) | | |
| U.S California - Proposition 65 - Carcinogens List | U.S California - Proposition 65 - Developmental Toxicity | U.S California - Proposition 65 - Reproductive Toxicity - Female | U.S California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) |
| No | No | No | No | |
| ISOOCTANE UNLABEL | ED (540-84-1) | • | | |
| U.S California - Proposition 65 - Carcinogens List | U.S California - Proposition 65 - Developmental Toxicity | U.S California - Proposition 65 - Reproductive Toxicity - Female | U.S California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) |
| No | No | No | No | |
| 1,2,3,4,5,6,7-HEPTACN | (13C10, 98%) (58863-14-2 (Un | labeled)) | | |
| State or local regulation | | | | |
| U.S Pennsylvania - RTI U.S New Jersey - Right | K (Right to Know) List to Know Hazardous Substanc | e List | | |
| ISOOCTANE UNLABEL | ED (540-84-1) | | | |
| State or local regulation | IS | | | |
| U.S Massachusetts - R U.S Pennsylvania - RT U.S New Jersey - Right | | e List | | |
| SECTION 16: Other | information | | | |
| Other information | | s product is not radioactive. Th | ne data given for this product are | e those of the corresponding |

unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the

corresponding unlabeled compound.

ISOOCTANE ECN-5270-A

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| II text of R-, H- and EUH-phrases: | | | | |
|------------------------------------|-------------------------------------------------------------------------------------------------|--|--|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4 | | | |
| Aquatic Acute 1 | Hazardous to the aquatic environment - Acute Hazard Category 1 | | | |
| Aquatic Chronic 1 | Hazardous to the aquatic environment - Chronic Hazard Category 1 | | | |
| Asp. Tox. 1 | Aspiration hazard Category 1 | | | |
| Eye Dam. 1 | Serious eye damage/eye irritation Category 1 | | | |
| Flam. Liq. 1 | Flammable liquids Category 1 | | | |
| Flam. Liq. 2 | Flammable liquids Category 2 | | | |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 | | | |
| STOT RE 1 | Specific target organ toxicity (repeated exposure) Category 1 | | | |
| STOT RE 2 | Specific target organ toxicity (repeated exposure) Category 2 | | | |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 | | | |
| H224 | Extremely flammable liquid and vapour | | | |
| H225 | Highly flammable liquid and vapor | | | |
| H302 | Harmful if swallowed | | | |
| H304 | May be fatal if swallowed and enters airways | | | |
| H315 | Causes skin irritation | | | |
| H318 | Causes serious eye damage | | | |
| H336 | May cause drowsiness or dizziness | | | |
| H372 | Causes damage to organs through prolonged or repeated exposure | | | |
| H373 | May cause damage to organs through prolonged or repeated exposure | | | |
| H400 | Very toxic to aquatic life | | | |
| H410 | Very toxic to aquatic life with long lasting effects | | | |
| R11 | Highly flammable | | | |
| R12 | Extremely flammable | | | |
| R20/21 | Harmful by inhalation and in contact with skin | | | |
| R36/37/38 | Irritating to eyes, respiratory system and skin | | | |
| R38 | Irritating to skin | | | |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment | | | |
| R65 | Harmful: may cause lung damage if swallowed | | | |
| R67 | Vapors may cause drowsiness and dizziness | | | |
| F | Highly flammable | | | |
| F+ | Extremely flammable | | | |
| Ν | Dangerous for the environment | | | |
| Xi | Irritant | | | |
| Xn | Harmful | | | |

| NFPA health hazard | : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| NFPA fire hazard | : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions. |
| NFPA reactivity | : 0 - Material that in themselves are normally stable, even under fire conditions. |
| Hazard Rating | |
| Health | : 2 Moderate Hazard - Temporary or minor injury may occur |
| Flammability | : 3 Serious Hazard |
| Physical | : 0 Minimal Hazard |

CIL Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product