SAFETY DATA SHEET

S00212000

Section 1. Identification

Product name : LU™212 Food Grade Silicone Lubricant Aerosol

Product code : S00212000

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Paint or paint related material.

Manufacturer : Sprayon Products Group
101 W. Prospect Avenue,
Cleveland, Ohio 44115

Emergency telephone number of the company : US / Canada: (800) 424-9300
Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Product Information Telephone Number : US / Canada: (800) 247-3266
Mexico: Not Available

Regulatory Information Telephone Number : US / Canada: (216) 566-2902
Mexico: Not Available

Transportation Emergency Telephone Number : US / Canada: (800) 424-9300
Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Section 2. Hazards identification

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

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
TOXIC TO REPRODUCTION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 49.9% (oral), 94.3% (dermal), 52.3% (inhalation)

GHS label elements

Hazard pictograms :



Section 2. Hazards identification

Signal word : Danger

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
May be fatal if swallowed and enters airways.
Causes skin and eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

Response : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place. Keep container tightly closed.

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

Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Hexane	≥25 - ≤50	110-54-3
2-Methylpentane	≥10 - ≤25	107-83-5
Propane	≥10 - ≤25	74-98-6
3-Methylpentane	≤10	96-14-0
2,3-Dimethylbutane	≤10	79-29-8
Cyclohexane	≤3	110-82-7
2,2-Dimethylbutane	≤3	75-83-2
Cyclopentane	<1	287-92-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

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

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

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths

Section 4. First aid measures

skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

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

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

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

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

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

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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

Remark : Flammable aerosol.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

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

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

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	CAS #	Exposure limits
Hexane	110-54-3	**ACGIH TLV (United States, 1/2023). Absorbed through skin.** TWA: 50 ppm 8 hours. **NIOSH REL (United States, 10/2020).** TWA: 50 ppm 10 hours. TWA: 180 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 500 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.
2-Methylpentane	107-83-5	**ACGIH TLV (United States, 1/2023). [Hexane isomers, other than n-Hexane]** TWA: 500 ppm 8 hours. TWA: 1760 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 3500 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020). [HEXANE ISOMERS EXCLUDING n-HEXANE]** TWA: 100 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 510 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.
Propane	74-98-6	**NIOSH REL (United States, 10/2020).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. **ACGIH TLV (United States, 1/2023). Oxygen Depletion [Asphyxiant]. Explosive potential.**
3-Methylpentane	96-14-0	**ACGIH TLV (United States, 1/2023). [Hexane isomers, other than n-Hexane]** TWA: 500 ppm 8 hours. TWA: 1760 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 3500 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020). [HEXANE ISOMERS EXCLUDING n-HEXANE]** TWA: 100 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 510 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.
2,3-Dimethylbutane	79-29-8	**ACGIH TLV (United States, 1/2023). [Hexane isomers, other than n-Hexane]**

Section 8. Exposure controls/personal protection

		TWA: 500 ppm 8 hours. TWA: 1760 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 3500 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020). [HEXANE ISOMERS EXCLUDING n-HEXANE]** TWA: 100 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 510 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.
Cyclohexane	110-82-7	**ACGIH TLV (United States, 1/2023).** TWA: 100 ppm 8 hours. **NIOSH REL (United States, 10/2020).** TWA: 300 ppm 10 hours. TWA: 1050 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 300 ppm 8 hours. TWA: 1050 mg/m³ 8 hours.
2,2-Dimethylbutane	75-83-2	**ACGIH TLV (United States, 1/2023). [Hexane isomers, other than n-Hexane]** TWA: 500 ppm 8 hours. TWA: 1760 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 3500 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020). [HEXANE ISOMERS EXCLUDING n-HEXANE]** TWA: 100 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 510 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.
Cyclopentane	287-92-3	**ACGIH TLV (United States, 1/2023). Explosive potential.** TWA: 1000 ppm 8 hours. **NIOSH REL (United States, 10/2020).** TWA: 600 ppm 10 hours. TWA: 1720 mg/m³ 10 hours.

Occupational exposure limits (Canada)

Ingredient name	CAS #	Exposure limits
Normal hexane	110-54-3	**CA Alberta Provincial (Canada, 6/2018). Absorbed through skin.** 8 hrs OEL: 50 ppm 8 hours. 8 hrs OEL: 176 mg/m³ 8 hours. **CA British Columbia Provincial (Canada, 6/2022). Absorbed through skin.** TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 6/2019). Absorbed through skin.** TWA: 50 ppm 8 hours. **CA Quebec Provincial (Canada, 6/2022). Absorbed through skin.** TWAEV: 50 ppm 8 hours. TWAEV: 176 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada,**

		7/2013). Absorbed through skin. STEL: 62.5 ppm 15 minutes. TWA: 50 ppm 8 hours.
2-Methylpentane	107-83-5	**CA Alberta Provincial (Canada, 6/2018).** 15 min OEL: 3500 mg/m³ 15 minutes. 8 hrs OEL: 1760 mg/m³ 8 hours. 15 min OEL: 1000 ppm 15 minutes. 8 hrs OEL: 500 ppm 8 hours. **CA British Columbia Provincial (Canada, 6/2022). [Hexane, all isomers except n-Hexane]** TWA: 200 ppm 8 hours. **CA Ontario Provincial (Canada, 6/2019). [Hexane isomers, other than n-hexane]** TWA: 500 ppm 8 hours. STEL: 1000 ppm 15 minutes. **CA Quebec Provincial (Canada, 6/2022). [Hexane (other isomers)]** TWAEV: 500 ppm 8 hours. TWAEV: 1760 mg/m³ 8 hours. STEV: 1000 ppm 15 minutes. STEV: 3500 mg/m³ 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013). [Hexane other isomers]** STEL: 1000 ppm 15 minutes. TWA: 500 ppm 8 hours.
Normal propane	74-98-6	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 1000 ppm 8 hours. **CA Quebec Provincial (Canada, 6/2022).** TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 6/2022). Oxygen Depletion [Asphyxiant]. Explosive potential.** **CA Ontario Provincial (Canada, 6/2019). Oxygen Depletion [Asphyxiant]. Explosive potential.**
3-Methylpentane	96-14-0	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 500 ppm 8 hours. 15 min OEL: 1000 ppm 15 minutes. 15 min OEL: 3500 mg/m³ 15 minutes. 8 hrs OEL: 1760 mg/m³ 8 hours. **CA British Columbia Provincial (Canada, 6/2022). [Hexane, all isomers except n-Hexane]** TWA: 200 ppm 8 hours. **CA Ontario Provincial (Canada, 6/2019). [Hexane isomers, other than n-hexane]** TWA: 500 ppm 8 hours. STEL: 1000 ppm 15 minutes. **CA Quebec Provincial (Canada, 6/2022). [Hexane (other isomers)]**

		TWAEV: 500 ppm 8 hours. TWAEV: 1760 mg/m³ 8 hours. STEV: 1000 ppm 15 minutes. STEV: 3500 mg/m³ 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013). [Hexane other isomers]** STEL: 1000 ppm 15 minutes. TWA: 500 ppm 8 hours.
2,3-Dimethylbutane	79-29-8	**CA Alberta Provincial (Canada, 6/2018). [Dimethylbutane (all isomers, except n-Hexane)]** 8 hrs OEL: 1760 mg/m³ 8 hours. 15 min OEL: 1000 ppm 15 minutes. 15 min OEL: 3500 mg/m³ 15 minutes. 8 hrs OEL: 500 ppm 8 hours. **CA British Columbia Provincial (Canada, 6/2022). [Hexane, all isomers except n-Hexane]** TWA: 200 ppm 8 hours. **CA Ontario Provincial (Canada, 6/2019). [Hexane isomers, other than n-hexane]** TWA: 500 ppm 8 hours. STEL: 1000 ppm 15 minutes. **CA Quebec Provincial (Canada, 6/2022). [Hexane (other isomers)]** TWAEV: 500 ppm 8 hours. TWAEV: 1760 mg/m³ 8 hours. STEV: 1000 ppm 15 minutes. STEV: 3500 mg/m³ 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013). [Hexane other isomers]** STEL: 1000 ppm 15 minutes. TWA: 500 ppm 8 hours.
Cyclohexane	110-82-7	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 344 mg/m³ 8 hours. 8 hrs OEL: 100 ppm 8 hours. **CA British Columbia Provincial (Canada, 6/2022).** TWA: 100 ppm 8 hours. **CA Ontario Provincial (Canada, 6/2019).** TWA: 100 ppm 8 hours. **CA Quebec Provincial (Canada, 6/2022).** TWAEV: 100 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
Neohexane	75-83-2	**CA Alberta Provincial (Canada, 6/2018). [Dimethylbutane (all isomers, except n-Hexane)]** 8 hrs OEL: 1760 mg/m³ 8 hours. 15 min OEL: 1000 ppm 15 minutes. 15 min OEL: 3500 mg/m³ 15 minutes. 8 hrs OEL: 500 ppm 8 hours. **CA British Columbia Provincial (Canada, 6/2022). [Hexane, all isomers except n-Hexane]**

		TWA: 200 ppm 8 hours. **CA Ontario Provincial (Canada, 6/2019). [Hexane isomers, other than n-hexane]** TWA: 500 ppm 8 hours. STEL: 1000 ppm 15 minutes. **CA Quebec Provincial (Canada, 6/2022). [Hexane (other isomers)]** TWAEV: 500 ppm 8 hours. TWAEV: 1760 mg/m³ 8 hours. STEV: 1000 ppm 15 minutes. STEV: 3500 mg/m³ 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013). [Hexane other isomers]** STEL: 1000 ppm 15 minutes. TWA: 500 ppm 8 hours.

Occupational exposure limits (Mexico)

	CAS #	Exposure limits
Hexane	110-54-3	**NOM-010-STPS-2014 (Mexico, 4/2016). Absorbed through skin.** TWA: 50 ppm 8 hours.
2-Methylpentane	107-83-5	**NOM-010-STPS-2014 (Mexico, 4/2016).** STEL: 1000 ppm 15 minutes. TWA: 500 ppm 8 hours.
Propane	74-98-6	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.
3-Methylpentane	96-14-0	**NOM-010-STPS-2014 (Mexico, 4/2016).** STEL: 1000 ppm 15 minutes. TWA: 500 ppm 8 hours.
2,3-Dimethylbutane	79-29-8	**NOM-010-STPS-2014 (Mexico, 4/2016).** STEL: 1000 ppm 15 minutes. TWA: 500 ppm 8 hours.
Cyclohexane	110-82-7	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 100 ppm 8 hours.
2,2-Dimethylbutane	75-83-2	**NOM-010-STPS-2014 (Mexico, 4/2016).** STEL: 1000 ppm 15 minutes. TWA: 500 ppm 8 hours.

Biological exposure indices (United States)

Ingredient name	Exposure indices
Hexane	**ACGIH BEI (United States, 1/2023)** BEI: 0.5 mg/l, 2,5-hexanedion [in urine]. Sampling time: end of shift.
Cyclohexane	**ACGIH BEI (United States, 1/2023)** BEI: 50 mg/g creatinine, 1,2-cyclohexanediol [in urine]. Sampling time: end of shift at end of workweek.

Biological exposure indices (Canada)

No exposure indices known.

Biological exposure indices (Mexico)

Section 8. Exposure controls/personal protection

Ingredient name	Exposure indices
Hexane	**Official Mexican STANDARD NOM-047-SSA1-2011, Environmental Health-Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012)** BEI: 0.4 mg/L, 2,5-hexanedione [in urine]. Sampling time: at the end of the shift at the end of the work week.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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

Individual protection measures

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

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point, initial boiling point, and boiling range : Not available.

Flash point : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 9.1 (butyl acetate = 1)

Flammability : Flammable aerosol.

Lower and upper explosion limit/flammability limit : Lower: 1%
Upper: 9.5%

Vapor pressure : 101.3 kPa (760 mm Hg)

Relative vapor density : 1.55 [Air = 1]

Relative density : 0.65

Solubility(ies) :

Media	Result
cold water	Not soluble

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): <20.5 mm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 42.156 kJ/g

Section 10. Stability and reactivity

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

Chemical stability : The product is stable.

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

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-
Cyclohexane	LD50 Oral	Rat	6240 mg/kg	-
Cyclopentane	LD50 Oral	Rat	11400 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hexane	Eyes - Mild irritant	Rabbit	-	10 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Hexane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
2-Methylpentane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Propane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
3-Methylpentane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
2,3-Dimethylbutane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Cyclohexane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
2,2-Dimethylbutane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Cyclopentane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Hexane	Category 2	-	-
2-Methylpentane	Category 2	-	-
Propane	Category 2	-	-
3-Methylpentane	Category 2	-	-
2,3-Dimethylbutane	Category 2	-	-
Cyclohexane	Category 2	-	-
2,2-Dimethylbutane	Category 2	-	-
Cyclopentane	Category 2	-	-

Aspiration hazard

Name	Result
Hexane	ASPIRATION HAZARD - Category 1
2-Methylpentane	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
3-Methylpentane	ASPIRATION HAZARD - Category 1
2,3-Dimethylbutane	ASPIRATION HAZARD - Category 1
Cyclohexane	ASPIRATION HAZARD - Category 1
2,2-Dimethylbutane	ASPIRATION HAZARD - Category 1
Cyclopentane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Hexane	Acute LC50 2500 µg/l Fresh water	Fish - *Pimephales promelas*	96 hours
Cyclohexane	Acute LC50 4530 µg/l Fresh water	Fish - *Pimephales promelas*	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Hexane	-	501.187	High
Cyclohexane	-	167	Low
Cyclopentane	-	70.8	Low

Mobility in soil

Section 12. Ecological information

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	- **ERG No.** 126 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). **ERG No.** 126 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	- **ERG No.** 126 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	- Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	**Emergency schedules** F-D, S-U Dependent upon container size, this product may ship under the Limited Quantity shipping exception.

Section 14. Transport information

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to IMO instruments : Not available.

Proper shipping name : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

International regulations

Montreal Protocol

Not listed.

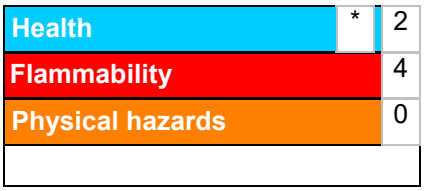
Stockholm Convention on Persistent Organic Pollutants

Not listed.

International lists : **Australia inventory (AIIC)**: Not determined.
China inventory (IECSC): Not determined.
Japan inventory (CSCL): Not determined.
Japan inventory (ISHL): Not determined.
Korea inventory (KECI): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan Chemical Substances Inventory (TCSI): Not determined.
Thailand inventory: Not determined.
Turkey inventory: Not determined.
Vietnam inventory: Not determined.

Section 16. Other information

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



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

History

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Version : 13

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.