

SECTION 1 - IDENTIFICATION**Chemical Name & Symbol:** N/A**Chemical Family:****Product No.:** CH061-FS**Supplier's Name:** Lonestar Maintenance Chemicals**Address:** P.O. Box 209, Buna TX 77612**Trade Names and Synonyms:** Citro-Blast FS
Classification:**Emergency Phone:** 1-800-721-2448**SECTION 2 - HAZARD(S) IDENTIFICATION****Emergency Overview: Appearance:** liquid, colorless**Warning!** Flammable liquid and vapor. May cause eye irritation. May cause skin and respiratory tract irritation. May cause allergic skin reaction.

| Potential Health Effects: | |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exposure routes | Inhalation, skin absorption, skin contact, eye contact, ingestion. |
| Eye contact | Can cause eye irritation. Symptoms include stinging, tearing, redness and swelling of eyes. |
| Skin contact | Can cause skin irritation. Symptoms may include redness and burning of skin, and other skin damage. May cause allergic skin reaction. |
| Ingestion | Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. |
| Inhalation | Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8). |
| Aggravated medical condition | Pre-existing disorders of the following organs (or organ systems) may be aggravated by exposure to this material: Skin, lung (for example, asthma-like conditions). |
| Symptoms | Signs and symptoms of exposure to this material through breathing, swallowing and/or passage of the material through the skin may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects), stomach or intestinal upset (nausea, vomiting diarrhea), irritation (nose, throat airways), headache, dizziness. |
| Target Organs | Exposure to this material (or a component) has been found to cause kidney damage in male rats. The mechanism by which this toxicity occurs is specific to the male rat and the kidney effects are not expected to occur in humans. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects. |
| Carcinogenicity | D-Limonene caused kidney cancer in male rats, but not in female rats or in mice of either sex, when given to the animals through a feeding tube. The relevance of this finding to humans is uncertain. |
| Reproductive hazard | This material (or a component) has been shown to cause harm to the fetus in laboratory animals studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain. |

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Components | CAS-No. | Concentration |
|-----------------------------|----------------|----------------------|
| D-Limonene | 5989-27-5 | < = 100% |

SECTION 4 - FIRST-AID MEASURES

| | |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eyes | If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention. |
| Skin | Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before use. |
| Ingestion | Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended. |
| Inhalation | If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention. |

Notes to Physician:

| | |
|------------------|---------------------------|
| Hazards | No information available. |
| Treatment | No information available. |

SECTION 5 – FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, carbon dioxide (CO₂), water spray

Hazardous combustion products: Carbon dioxide and carbon monoxide, hydrocarbons

Precautions for fire-fighting: If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full fire-fighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible

Liquids Classification: Combustible Liquid Class II

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions: For personal protection see Section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Ensure adequate ventilation, Eliminate all ignition sources (flares, flames, including pilot lights, electrical sparks). Pay attention to the spreading of gases especially at ground level (heavier than air) and to the direction of the wind.

Environmental precautions: Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

Methods for cleaning up: Contain spillage, and then collect with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13).

Other information: Comply with all applicable federal, state and local regulations. Suppress (knock down) gases/vapors/mists with a water spray jet.

SECTION 7 – HANDLING AND STORAGE

Handling: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid and/or solid), all hazard precautions given in the data sheet must be observed. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77. Warning – sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published “autoignition” or “ignition” temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this produce in elevated temperature processes should be thoroughly evaluated and maintain safe operating conditions.

Storage: Store in a coop, dry, ventilated area.

SECTION 8 -- EXPOSURE CONTROL/PERSONAL PROTECTION**Exposure Guidelines:**

| D-LIMONENE | | 5989-27-5 |
|-------------------|-----------------------|-------------------------|
| WEEL | time weighted average | 30 ppm |
| WEEL | time weighted average | 165.5 mg/m ³ |

General advice: These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection: Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation

develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use. Wear resistant gloves (consult your safety equipment supplier). Discard gloves that show tears, pinholes, or signs of wear.

Respiratory protection:

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------------------------------|----------------------------------------------------------------------------|
| Physical state | liquid |
| Form | no data available |
| Color | colorless |
| Odor | Fresh citrus-like odor |
| Boiling point/boiling range | 347.9 - 349° F / 175.5 - 176° C @ 101.72 kPa |
| Melting point/range | -139.9° F / -95.5° C |
| Sublimation point | no data available |
| pH | no data available |
| Flash point | 119.98° F / 48.88° C Pensky Martens closed cup |
| Ignition temperature | no data available |
| Evaporation rate | (>)1 Ethyl Ether |
| Lower explosion limit/Upper explosion limit | 0.7% (V) / 6.1% (V) |
| Particle size | 0.007 mm |
| Vapor pressure | 0.192 kPa @ 77° F / 25° C |
| Relative vapor density | 4.73 AIR = 1 |
| Density | (+/- 0.01) 0.8405 g/cm ³ @ 77.00° F / 25.00° C 7.5700 lb/gal |
| Bulk density | 0.94 kg/m ³ |
| Water solubility | slightly soluble |
| Solubility(ies) | no data available |
| Partition coefficient: n-octanol/water | no data available |
| Log Pow | 4.232 |
| Autoignition temperature | 458° F / 237° C |
| Viscosity, dynamic | no data available |
| Viscosity, Kinematic | no data available |
| Solids in Solution | no data available |
| Decomposition temperature | no data available |
| Burning number | no data available |
| Dust explosion constant | no data available |
| Minimum ignition energy | no data available |

SECTION 10 -- STABILITY AND REACTIVITY

| | |
|-----------------------------------------|---------------------------------------------------|
| Stability | Stable |
| Conditions to avoid | Heat, flames and sparks |
| Incompatible products | Oxidizing agents |
| Hazardous decomposition products | Carbon dioxide and carbon monoxide, hydrocarbons |
| Hazardous reactions | Product will not undergo hazardous polymerization |
| Thermal decomposition | No data |

SECTION 11 – TOXICOLOGICAL INFORMATION

| | | |
|----------------------------------|---|----------------------|
| Acute oral toxicity | : | LD 50 Rat: > 5 g/kg |
| Acute inhalation toxicity | : | |
| D-Limonene | : | no data available |
| Acute toxicity | : | LD 50 Rabbit: 5 g/kg |

03/13/12

MATERIAL SAFETY DATA SHEET

CITRO-BLAST FS

SECTION 12 – ECOLOGICAL INFORMATION**Biodegradability**

D-Limonene : no data available

Bioaccumulation

D-Limonene : no data available

Ecotoxicity effects:**Toxicity to fish**D-Limonene : 94 h LC 50 Oncorhynchus Mykiss (rainbow trout): 35.00 mg/l
96 h flow-through test LC 50 Fathead Minnow (Pimephales Promelas): 0.61 – 0.79 mg/l**Toxicity to daphnia and other aquatic invertebrates**

D-Limonene : 48 h static test EC 50 Water Flea (Daphnia pulex): 69.60 mg/l

Toxicity to algae

D-Limonene : no data available

Toxicity to bacteria

D-Limonene : no data available

Biochemical Oxygen Demand (BOD)

D-Limonene : no data available

Chemical Oxygen Demand (COD)

D-Limonene : no data available

Additional ecological information

D-Limonene : no data available

SECTION 13 – DISPOSAL CONSIDERATION**Waste disposal methods:** Dispose of in accordance with all applicable local, state and federal regulations.**SECTION 14 – TRANSPORT INFORMATION****Mexican Regulation for the Land Transport of Hazardous Materials and Wastes:**

ID No.: UN Proper Shipping Name: Dipenteno Hazard Class: 3

Packing Group: III Marine Pollutant/Ltd. Qty.: N/A

International Air Transport Association – Passenger:

ID No.: UN Proper Shipping Name: Dipentene Hazard Class: 3

Packing Group: III Marine Pollutant/Ltd. Qty.: N/A

International Air Transport Association – Cargo:

ID No.: UN - 2052 Proper Shipping Name: Dipentene Hazard Class: 3

Packing Group: III Marine Pollutant/Ltd. Qty.: N/A

International Maritime Dangerous Goods:

ID No.: UN Proper Shipping Name: Dipentene Hazard Class: 3

Packing Group: III Marine Pollutant/Ltd. Qty.: Marine Pollutant: (D-Limonene)

Transport Canada – Inland Waterways:

ID No.: N/A Proper Shipping Name: Not dangerous goods Hazard Class: N/A

Packing Group: N/A Marine Pollutant/Ltd. Qty.: Marine Pollutant: (D-Limonene)

Transport Canada – Rail

ID No.: N/A Proper Shipping Name: Not dangerous goods Hazard Class: N/A

Packing Group: N/A Marine Pollutant/Ltd. Qty.: N/A

Transport Canada – Road:

ID No.: 2052 Proper Shipping Name: Not dangerous goods Hazard Class: N/A

Packing Group: N/A Marine Pollutant/Ltd. Qty.: N/A

U.S. DOT – Inland Waterways:

ID No.: UN - 2052 Proper Shipping Name: Dipentene Hazard Class: 3

Packing Group: III Marine Pollutant/Ltd. Qty.: Marine Pollutant: (D-Limonene)

U.S. DOT – Rail:

ID No.: 2052 Proper Shipping Name: Not dangerous goods Hazard Class: N/A

Packing Group: N/A Marine Pollutant/Ltd. Qty.: Marine Pollutant: (D-Limonene)

U.S. DOT – Road:

ID No.: 2052 Proper Shipping Name: Not dangerous goods Hazard Class: N/A

Packing Group: N/A Marine Pollutant/Ltd. Qty.: Marine Pollutant: (D-Limonene)

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15 – REGULATORY INFORMATION

California Prop. 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

SARA Hazard Classification: Fire hazard. Acute health hazard

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313.

New Jersey RTK Label Information: D-Limonene 5989-27-5

Pennsylvania RTK Label Information: D-Limonene 5989-27-5

Notification status:

Australia. Industrial Chemical (Notification and Assessment) Act y (positive listing)

Canada. Canadian Environmental Protection Act (CEPA) y (positive listing)

Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133) China.

Inventory of Existing Chemical Substances y (positive listing)

Japan. Kashin-Hou Law List y (positive listing)

Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act y (positive listing)

U.S. Toxic Substances Control Act y (positive listing)

Korea. Toxic Chemical Control Law (TCCL) List y (positive listing)

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA of New Zealand y (positive listing)

| | HMIS | NFPA |
|------------------|------|------|
| Health | 2 | 2 |
| Flammability | 2 | 2 |
| Physical Hazards | 0 | |
| Instability | | 0 |
| Specific Hazards | -- | -- |

SECTION 16 – OTHER INFORMATION

The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the user. No suggestions for use are intended as, and nothing herein shall be construed as a recommendation to infringe any existing patents or violate any federal, state or local laws, rules, regulations or ordinances.