SAFETY DATA SHEET

1. Identification

Product Identifier	**Citra Clean**
Other means of identification	
Product code	CU-6235
Recommended use	D-limonene based degreaser.
Recommended restrictions	Professional use only.
Manufacturer information	
Company name	Chemical Universe, Inc.
Address	1133 Saline St. North Kansas City, MO 64116
Telephone	(816) 471-3602
FAX	(816) 474-3302
Emergency phone number	PERS (800) 633-8253 24-hour Emergency (800) 633-8253

2. Hazard(s) Identification

Physical hazards	Flammable Liquids	Category 3
Health hazards	Acute toxicity, oral	Category 5
	Skin irritation	Category 2
	Eye irritation	Category 2A
	Aspiration Hazard	Category 1
	Skin Sensitization	Category 1
Environmental hazards	Very toxic to aquatic life – Short-term	Category 1
	Very toxic to aquatic life – Chronic effects	Category 1

OSHA defined hazards None

Label elements

Signal word **DANGER**

Hazard statement

Flammable liquid and vapor
May be harmful if swallowed.
Causes skin irritation.
May cause an allergic skin reaction
Causes serious eye irritation.
May be fatal if swallowed and enters airways.
Very toxic to aquatic life -Short term effects
Very toxic to aquatic life with long-term effects

Precautionary statement

Prevention

Keep away from heat, flames, sparks and hot surfaces. No smoking. Wash hands and exposed skin thoroughly after handling. Wear protective gloves/eye protection/face protection. Wash hands and exposed skin thoroughly after handling. Ground and/or bond container and receiving equipment. Use explosion-proof electrical equipment, tools and lighting where vapors can accumulate. Use non-sparking tools. Avoid conditions that may generate static electrical discharge. Avoid breathing dust, mists, vapor or fume. Keep containers tightly closed when not dispensing liquid.

Response	Call a POISON CENTER/doctor/medical professional if you feel unwell. **IF ON SKIN**: Wash with plenty water for 15 minutes. Specific treatment (see Section 4 on the Safety Data Sheet). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use water fog, foam or carbon dioxide (CO_2) to extinguish. **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/attention. **IF SWALLOWED**: Immediately call a POISON CENTER/doctor/medical professional. Do NOT induce vomiting. **IN THE EVENT OF FIRE**: Use suitable extinguishing media to quench fire.
Storage	Store in a well-ventilated place. Keep cool. Store locked up. Keep containers tightly closed.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None.
Supplemental information	None

3. Composition/infor mation on ingredients

Mixtures		
Chemical name	**CAS number**	**%**
D-limonene	5989-27-5	92-97
Nonylphenol ethoxylate	127087-87-0	1-3
Other components below reportable levels		1-3

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema, rash or other skin disorders: Seek medical attention and take along these instructions.
Eye contact	Rinse with water for at least 15 minutes. Remove contact lenses if present and easy to do so. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or Poison Control Center immediately. Rinse mouth. Get medical attention if symptoms occur. Only induce vomiting at the instruction of medical personnel. In the event of involuntary vomiting keep the victim's head in a lowered position to avoid stomach content entering the lungs. Monitor victim's airway to keep clear.
Most important symptoms/effects, acute and delayed	Dermatitis. Rash. May cause an allergic skin reaction. Seek medical attention is symptom persist. Causes severe eye irritation with symptoms of stinging, swelling, excessive tearing and/or blurred vision Aspiration may cause pulmonary edema and pneumonitis.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to the hospital. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Removed contaminated clothing immediately. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Carbon dioxide (CO_2). Dry chemical powder, sand, or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this may spread liquidsourced fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source or ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protecting clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Remove all sources of ignition. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources. Use only non-sparking tools. Take precautionary measures against static discharge. Keep combustibles away from spilled material. Large spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small spills: Absorb with earth, sand, or other non-combustible material and transfer to container for later disposal. Clean surface thoroughly to remove residual contamination. Never return spills to original container for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform supervisor or appropriate managerial personnel of all environmental releases. Avoid discharge into surface drainages, onto the ground and other areas not consistent with package labeling. This product is immiscible in water and spread across the surface of water. Prevent accumulation in closed or confined areas.

7. Handling and storage

Precautions for safe handling	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Do not smoke. Protect material from direct sunlight. Use explosion proof equipment and non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation using appropriate explosion-proof or intrinsically safe ventilation equipment. Take precautions against static discharges. Ensure that containers and transfer and receiving equipment are properly grounded and/or bonded to prevent static

	build-up. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep away from heat, sparks and open flame. Ground/bond container and equipment. Store in original tightly closed container. Store away from incompatible materials (see section 10 of the SDS). Store in areas with fire sprinkler system

8. Exposure controls/personal protection

Occupational exposure limits	Workplace environmental Exposure Level (WEEL) Guidelines	
D-limonene	TWA	30 ppm (165 mg/m$^{3)}$

Biological limit values No biological exposure limit noted for the product ingredients

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use explosion-proof process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Provide a suitable eyewash and safety shower for work areas that pose direct exposure risks
Individual protection measures, such as personal protective equipment	
Eye/face protection	Avoid contact with eyes. Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	In case of insufficient ventilation or absence of engineering controls, wear suitable approved respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke or use chewing tobacco. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	
Physical State	Liquid.
Color	Colorless.
Odor	Citrus aroma
Odor threshold	Not available.
pH	Not available.
Melting/freezing point	Not available.
Initial boiling point and boiling range	300-410°F (148.9-210°C) estimated.
Flash point	117°F (47°C) (estimated)
Evaporation rate	Not available.
Flammability	Not available.
Flammability Limits	
Upper	6% - estimated.
Lower	0.8% - estimated.
Vapor pressure	2 mmHg @ 20°C (estimated)
Vapor density	Not available.

Specific gravity (water=1)	0.85
Solubility in water	Insoluble.
Partition coefficient (n-octanol/water)	4.250
Auto-ignition temperature	458°F (237°C)
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	This product is stable and non-reactive under normal conditions of use.
Chemical stability	Material is stable under normal conditions. Store in a cool dark place.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents, acids.
Hazardous decomposition products	Carbon dioxide, carbon monoxide can be generated during incomplete combustion. No hazardous decomposition products are reported for product components.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful. Droplets of this product aspirated into the lungs may cause serious chemical pneumonia.
Skin contact	May cause mild skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Dermatitis. Rash. Aspiration can cause pulmonary edema and pneumonitis May cause an allergic skin reaction. Seek medical attention is symptom persist. Causes severe eye irritation with symptoms of stinging, swelling, excessive tearing and/or blurred vision
Acute toxicity	May be fatal if aspirated into lungs in substantial quantity.

Product Citra Clean (CAS mixture)		
Exposure Classification	**Route and Species**	**LD_{50}**
Acute	*Oral*, mouse	5,690 mg/kg
Acute	*Dermal,* rabbit	5 g/kg (estimated)
*Estimates for product may be based on additional component data not shown		

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/ irritation	Causes serious eye irritation.
Respiratory sensitization	Not available.
Skin sensitization	Not available.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	The components of this product are not reported to be listed carcinogens.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not Listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity – single exposure	Not classified.
Specific target organ toxicity – repeated exposure	Not classified.
Aspiration hazard	May be harmful or fatal if product enters airways.

12. Ecological information

Ecotoxicity		
Aquatic Receptor	**Species**	**Test Threshold(s)**
Crustacea	Daphnia pulex (water flea)	67 mg/l (48-hours)
Fish	Pimephales promelus (fathead minnow)	0.619 – 0.796 mg/l (96-hours)
* Estimates for product may be based on additional component data not shown		

Persistence and degradability	No data available. Chemicals of this class are not expected to be persistent in an open, aerobic environment
Bioaccumulative potential	Potential to bioaccumulation is expected to be low.
Mobility in soil	No data available. Chemicals of these classes are expected to exhibit low to moderate mobility in saturated and semi-saturated soils and partition as LNAPL in the soil lithographic column
Other adverse effects	This product contains limited volatile organic compounds that may contribute to photochemical ozone impacts

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company. As packaged, this product is expected to meet criteria defining RCRA ignitable (D001) hazardous wastes when disposed. (40 CFR Part 261, Subpart C). Before selecting disposal method, ensure that the waste materials have been properly assessed and, as necessary, tested to confirm regulatory status.
Waste from residues/unused product	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may contain product residue, follow label warnings even after container is emptied.

14. Transport information

USDOT

UN number	UN2319
UN proper shipping name	Terpene hydrocarbons mixture, n.o.s
Transport hazard class(es)	**3**
Hazard Class	**3**
Subsidiary risk	None
Packaging group	III
Marine pollutant	YES

Special precautions for user	DOT-regulated Marine Pollutant (bulk and intermiate bulk shipment only) Read safety instructions, SDS, and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not intended to be transported in bulk.

DOT Label/Placard

15. Regulatory information

US federal regulations .

SARA 302 Extremely hazardous substance Not listed

SARA 304 Emergency release notification Not listed

SARA 311/312 Hazard Categories

Immediate Hazard - Yes

Delayed Hazard – Yes

Fire Hazard – Yes

Pressure Hazard – No

Reactivity Hazard – No

SARA 313 (TRI reporting) Not listed

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986

This product is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to threshold determination and Safe Harbor notification (1/2019)

16. Other information, including date of preparation or last revision

Issue date	3/9/2015
Revision date	8/6/2019
Version #	2

HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0	**NFPA ratings**	Health: 2 Flammability: 3 Instability: 0

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, and have been obtained from resources believed to be reliable. The information given is

designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information related only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified by the text.

Revision information

8/6/2019
Change Acute Toxicity-Oral from 5 to 4 (definition). Change Flammable liquid category from 4 to 3 (reflect feedstock SDS data). Add pictograms for flammability and Environmental hazard category additions. Change NFPA and HMIS flammability classification from 2 to 3 to reflect low flash point. Change NFPA and HMIS health ratings from 1 to 2 (short term exposure criteria)
General format update; Refine composition table, amend physical data; Update toxicology thresholds and environmental fate information; Text clarification amendments Sections 5,6,8,9 and 12. PPE recommendation updated; California Proposition 65 notice; HMIS and NFPA pictograms added.