

SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, and Canadian WHMIS Standards

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

IDENTIFICATION of the SUBSTANCE or PREPARATION:

TRADE NAME (AS LABELED): SRP 180 HV
PRODUCT CODE(S): 1755, 1806
CHEMICAL NAME/CLASS: Polymer/Isocyanate Mixture
U.N. NUMBER: Not Applicable
U.N. DANGEROUS GOODS CLASS/SUBSIDIARY RISK: Not Applicable
RELEVANT USES of the SUBSTANCE: Automotive Glass Polyurethane Adhesive
USES ADVISED AGAINST: Other than Relevant Use
COMPANY/UNDERTAKING IDENTIFICATION:
U.S./DISTRIBUTOR'S NAME: SHAT-R-PROOF CORP.
ADDRESS: 650 Pelham Boulevard, Suite 100
St Paul, MN 55114
MEDICAL EMERGENCIES: 1-800-420-8036
U.S. EMERGENCY PHONE: 1-800-424-9300 (ChemTrec)
1-703-527-3887 (ChemTrec International)
EMAIL ADDRESS FOR MSDS INFORMATON: msds-info@novusglass.com
DATE OF PREPARATION: August 8, 2003
DATE OF REVISION: December 16, 2014

2. HAZARD IDENTIFICATION

OSHA HAZARD COMMUNICATION (GLOBAL HARMONIZATION) LABELING AND CLASSIFICATION: This product would be classified as follows, per OSHA's Hazard Communication Standard (29CFR §1910.1200). This is a self-classification.

Classification: Skin Irritant Category 2, Eye Irritant Category 2A

Signal Word: Warning

Hazard Statement Codes: H315, H319



See Section 16 for full text of Hazard and Precautionary Statements

EMERGENCY OVERVIEW: **Product Description:** This product is a viscous, black liquid with a fruity odor. **Health Hazards:** This product may mildly to moderately irritate contaminated tissue, especially upon prolonged exposure. Exposure to this product may cause adverse effects on the liver, based on animal testing of the DINP component. **Flammability Hazards:** This product is a combustible liquid that may be ignited if exposed to sources of ignition or if highly heated. In the event of a fire, the components of this product may decompose to release smoke, irritating vapors and toxic gases (e.g., carbon dioxide, carbon monoxide, nitrogen oxides, hydrogen cyanide, calcium oxides, carbon oxides and sulfur oxides). **Reactivity Hazards:** This product is not normally reactive. **Environmental Hazards:** Releases of this product to the environment, especially in large quantity, may result in environmental damage. **Emergency Recommendations:** Emergency responders must wear personal protective equipment, and appropriate fire equipment suitable for the situation to which they are responding.

3. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	% w/v	OSHA GHS Hazard Symbol	OSHA GHS Classification/Hazard Codes
1-Octadecene	112-88-9	1-10%	None	Not Applicable
C20-24 Alkene	93924-10-8	≤ 2.5%	None	Not Applicable.
Calcium Carbonate	1317-65-3	5-10%	None	Not Applicable
Carbon Black	1333-86-4	10-30%		SELF CLASSIFICATION: <u>Classification:</u> Carcinogenic Cat. 2 <u>Hazard Codes:</u> H351
Triphenyl Phosphite	101-02-0	≤ 2.5%	 	Classification: Eye Irritant Cat. 2, Skin Irritant Cat. 2, Aquatic Toxicity Acute Cat. 1, Aquatic Toxicity Chronic Cat. 1 <u>Hazard Codes:</u> H315, H319, H410
1,2-Benzenedicarboxylic Acid, di-C8-10 Branched Alkylesters, C ₉ rich and di-"Isononyl" Phthalate (DINP)	68515-48-0	10-30%	None	Not Applicable
Polypropylene Polyoldiphenyl Methane Diisocyanate Prepolymer (<0.1% free MDI)	9048-57-1	30-60%	None	Not Applicable

NE = Not Established.

NIC = Notice of Intended Change See Section 16 for Definitions of Terms Used.

NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES: Contaminated individuals should be taken for medical attention if they feel unwell or if adverse effects occur. Take copy of label and SDS to physician or health professional with contaminated individual.

SKIN EXPOSURE: If this material contaminates the skin, begin decontamination with running water. Recommended flushing is for 15 minutes if any sign of skin irritation develops. Contaminated individual should seek immediate medical attention if any adverse exposure symptoms develop.

EYE EXPOSURE: If this product enters the eyes, open contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Have contaminated individual "roll" eyes. Minimum flushing is for 15 minutes. Do not interrupt flushing. Contaminated individual must seek medical attention if any adverse effect occurs.

INHALATION: If this product is inhaled, remove contaminated individual to fresh air. If adverse effect occurs, seek medical attention.

INGESTION: If this material is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

MOST IMPORTANT SYMPTOMS/EFFECTS: See Sections 2 (Hazard Identification) and 11 (Toxicological Information) for description of possible health effects from exposure to this product.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin disorders and central nervous system conditions may be aggravated by prolonged overexposure to this product.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT IF NEEDED: Treat symptoms and eliminate overexposure. Consider gastric lavage with activated charcoal in event of ingestion.

5. FIRE-FIGHTING MEASURES

FLASH POINT: > 93.3°C (> 200°F)

AUTOIGNITION TEMPERATURE: Not established for product. 350°C (662°F) for a main component, DINP.

FLAMMABLE LIMITS (in air by volume, %): Not established for product.

FIRE EXTINGUISHING MEDIA: Use extinguishing material suitable to the surrounding fire, including halon, carbon dioxide, dry chemical and ABC class. Water spray may be used for cooling of containers.

UNSUITABLE FIRE EXTINGUISHING MEDIA: None known.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE: This product is a combustible liquid that must be highly heated in order to ignite. When involved in a fire, this material may decompose and produce irritating vapors and toxic gases (e.g., carbon dioxide, carbon monoxide, nitrogen oxides, hydrogen cyanide, calcium oxides and sodium oxides).

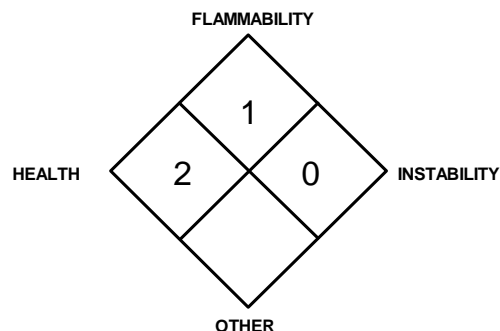
Explosion Sensitivity to Mechanical Impact: Not applicable.

Explosion Sensitivity to Static Discharge: May be sensitive to static discharge.

SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS: Structural

fire-fighters must wear Self-Contained Breathing Apparatus and full protective equipment. Chemical resistant clothing may be necessary. Move containers from fire area if it can be done without risk to personnel. Water spray can be used to cool fire-exposed containers. Water fog or spray can also be used by trained fire-fighters to disperse this product's vapors and to protect personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. Rinse contaminated equipment thoroughly with soapy water before returning such equipment to service.

NFPA RATING



Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES: Proper protective equipment should be used. In case of a spill, clear the affected area and protect people. Eliminate all sources of ignition before clean-up begins. Use non-sparking tools. Care should be taken as vapors of this product are heavier than air and can accumulate in low-lying pockets, creating a fire hazard. The atmosphere must have levels of components lower than those listed in Section 8, (Exposure Controls-Personal Protection) and at least 19.5 percent oxygen before personnel can be allowed into the area without Self-Contained Breathing Apparatus (SCBA).

PERSONAL PROTECTIVE EQUIPMENT:

Small spills: Wear gloves, goggles and apron.

Large Spills: Minimum Personal Protective Equipment should be **Level B: triple-gloves (rubber gloves and nitrile gloves, over latex gloves), chemically resistant suit and boots, hard-hat, and Self-Contained Breathing Apparatus.**

6. ACCIDENTAL RELEASE MEASURES, continued

METHODS FOR CLEANUP AND CONTAINMENT:

Small spills: Absorb spilled liquid with polypads or other suitable absorbent materials.

Large Spills: The level of vapors must be below 10% of the LEL (see Section 5, Fire-Fighting Measures), before personnel are allowed into the spill area. Absorb spilled liquid with activated carbon, polypads, or other suitable absorbent materials. Decontaminate the area thoroughly. Prevent material from entering sewer or confined spaces.

All spills: Place all spill residue in a double plastic bag and seal. Dispose of in accordance with applicable U.S. Federal, State, or local procedures, or appropriate Canadian Standards (see Section 13, Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment. Run-off water may be contaminated by other materials and should be contained to prevent possible environmental damage.

REFERENCE TO OTHER SECTIONS: See information in Section 8 (Exposure Controls – Personal Protection) and Section 13 (Disposal Considerations) for additional information.

7. HANDLING AND USE

PRECAUTIONS FOR SAFE HANDLING: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors or mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately. All employees who handle this material should be trained to handle it safely. Keep away from heat, sparks, and other sources of ignition. Keep container tightly closed when not in use. Use non-sparking tools. Bond and ground containers during transfers of material. If this product is transferred into another container, only use portable containers and dispensing equipment (faucet, pump, drip can) approved for flammable liquids.

CONDITIONS FOR SAFE STORAGE: Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Containers should be separated from oxidizing materials by a minimum distance of 20 ft. or by a barrier of non-combustible material at least 5 ft. high having a fire-resistance rating of at least 0.5 hours. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged.

SPECIFIC END USES: This product is used as a windshield replacement adhesive.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely, if necessary. Collect all rinsates and dispose of according to applicable U.S. Federal, State, or local procedures and appropriate Canadian standards.

8. EXPOSURE CONTROLS – PERSONAL PROTECTION

EXPOSURE LIMITS/CONTROL PARAMETERS:

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Use a mechanical fan or vent area to outside. Where appropriate, use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems. Ensure eyewash/safety shower stations are available near areas where this product is used.

OCCUPATIONAL/WORKPLACE EXPOSURE LIMITS/GUIDELINES:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							
		ACGIH-TLVS		OSHA-PELS		NIOSH-RELS		NIOSH	OTHER
		TWA mg/m ³	STEL mg/m ³	TWA mg/m ³	STEL mg/m ³	TWA mg/m ³	STEL mg/m ³	IDLH mg/m ³	
Calcium Carbonate	1317-65-3	10 NIC = Withdraw TLV	NE	5 (resp. fraction); 15 (total dust)	NE	5 (resp. fraction); 10 (total dust)	NE	NE	NE
Carbon Black	1333-86-4	3.5	NE	3.5	NE	3.5 (0.1 in presence of Polycyclic Aromatic Hydrocarbons; 10-hr TWA)	NE	NE	DFG MAK: As Inhalable dust Carcinogen: IARC-2B, MAK-3B, NIOSH-Ca, TLV-A4
1,2-Benzenedicarboxylic Acid, di-C8-10 Branched Alkylesters, C ₉ rich and di- "Isononyl" Phthalate	68515-48-0	NE	NE	NE	NE	NE	NE	NE	Exxon Recommended OEL: 5
1-Octadecene	112-88-9	NE	NE	NE	NE	NE	NE	NE	NE
Polypropylene Polyoldiphenyl Methane Diisocyanate Prepolymer	9048-57-1	NE	NE	NE	NE	NE	NE	NE	NE

NE = Not Established.

NIC = Notice of Intended Change

8. EXPOSURE CONTROLS – PERSONAL PROTECTION, continued

INTERNATIONAL OCCUPATIONAL EXPOSURE LIMITS: In addition to the exposure limit values cited above, other exposure limits have been established by various countries for the components of this mixture. Individual country regulatory authorities should be checked to ensure no new limits are available.

CALCIUM CARBONATE:

Australia: TWA = 10 mg/m³, JAN 1993
Belgium: TWA = 10 mg/m³, JAN 1993
The Netherlands: MAC-TGG = 10 mg/m³, JAN 1999
Poland: MAC(TWA) dust = 10 mg/m³, JAN 1999
Russia: STEL = 6 mg/m³, JAN 1993
Switzerland: MAK-W = 6 mg/m³ (resp. dust), JAN 1999
United Kingdom: TWA = 10 mg/m³, total inhalable dust, SEP 2000
United Kingdom: TWA = 4 mg/m³, respirable dust, SEP 2000
In Argentina, Bulgaria, Colombia, Jordan, Korea, New Zealand, Singapore, Vietnam check ACGIH TLV

CARBON BLACK:

Australia: TWA = 3 mg/m³
Belgium: TWA = 3.5 mg/m³
Denmark: TWA = 3.5 mg/m³
Finland: TWA = 3.5 mg/m³; STEL = 7 mg/m³
France: TWA = 3.5 mg/m³
The Netherlands: TWA = 3.5 mg/m³
The Philippines: TWA = 3.5 mg/m³
Russia: STEL = 4 mg/m³
Sweden: TWA = 3 mg/m³
United Kingdom: TWA = 3.5 mg/m³; STEL = 7 mg/m³
In Bulgaria, Colombia, Jordan, Korea, New Zealand, Singapore, and Vietnam check ACGIH TLV.

PROTECTIVE EQUIPMENT: The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standards of Canada. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below guidelines listed in this section, if applicable. If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134 or applicable State regulations. For operations in which mists or sprays of this product will be generated use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, or Canadian CSA Standard Z94.4-93.

DIPHENYL METHANE DIISOCYANATE

CONCENTRATION

Up to 0.5 mg/m³:
Up to 1.25 mg/m³:
Up to 2.5 mg/m³:
Up to 75 mg/m³:

RESPIRATORY PROTECTION

Any Supplied-Air Respirator (SAR).
Any SAR operated in a continuous-flow mode.
Any Self-Contained Breathing Apparatus(SCBA) with a full facepiece, or any SAR with a full facepiece.
Any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
Emergency or Planned Entry into Unknown Concentrations or IDLH Conditions: Any SCBA that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary SCBA operated in pressure-demand or other positive-pressure mode.

Escape: Any Air-Purifying, Full-Facepiece Respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having a high-efficiency particulate filter, or any appropriate escape-type, SCBA.

EYE PROTECTION: If necessary, refer to U.S. OSHA 29 CFR 1910.133 or the Canadian CSA Standard Z94.3-M1982, *Industrial Eye and Face Protectors* for further information.

HAND PROTECTION: Polyvinyl alcohol, polyethylene/ethylene vinyl alcohol, 4H™, Barricade™, or Responder™ gloves. Natural rubber, butyl rubber, neoprene, polyvinyl chloride, and nitrile gloves are not recommended. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada for further information.

BODY PROTECTION: None normally needed under typical circumstances of use. If necessary, use body protection appropriate for task (e.g., Tyvek suit, rubber apron). If necessary, refer to appropriate Standards of Canada for further information. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, as described in U.S. OSHA 29 CFR 1910.136 or Canadian CSA Standard Z195-M1984, *Protective Footwear*.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Viscous Liquid.

MOLECULAR FORMULA: Mixture.

ODOR: Glycol.

RELATIVE VAPOR DENSITY (air = 1): >1

SPECIFIC GRAVITY (water = 1): Not established

SOLUBILITY IN WATER: Insoluble.

VAPOR PRESSURE: Not established

% VOLATILE: <40%

COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not established.

HOW TO DETECT THIS SUBSTANCE (warning properties): The color and viscosity of this product may act as a warning of this product.

COLOR: Black.

MOLECULAR WEIGHT: Mixture.

ODOR THRESHOLD: Not established for product.

EVAPORATION RATE (nBuAc = 1): Not established.

MELTING/FREEZING POINT: Not established.

BOILING POINT: Not established.

pH: Not established.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal conditions of temperature and pressure.

DECOMPOSITION PRODUCTS: The products of thermal decomposition of this material include irritating vapors and toxic gases (e.g., carbon dioxide, carbon monoxide, nitrogen oxides, hydrogen cyanide, phosgene, phosphorous oxides).

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product will attack some forms of rubber, plastics and coatings.

POSSIBILITY OF HAZARDOUS REACTIONS: None known.

CONDITIONS TO AVOID: Contact with incompatible chemicals, exposure to elevated temperatures.

11. TOXICOLOGICAL INFORMATION

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE:

The most significant routes of occupational overexposure are inhalation of vapors and contact with skin and eyes. The symptoms of overexposure to this product, via route of exposure, are as follows:

INHALATION: Inhalation of high concentrations of vapors of this product, as may occur if this material is used in a poorly ventilated area, may cause immediate irritation of the respiratory system. If vapor high concentrations of this product occur, symptoms of central nervous system depression may occur (e.g., headaches, dizziness, nausea). Symptoms are generally alleviated upon breathing fresh air. Isocyanate compound vapors or aerosols may cause respiratory tract irritation, possible severe enough to produce bronchospasm and pulmonary edema. Pulmonary sensitization and asthmatic reactions, ranging in severity from minor difficulty breathing to an acute attack, may also occur. Once sensitized, susceptible individuals may experience allergic reaction after exposure to very low levels of the product. Possible neurological symptoms from isocyanate exposure may include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression, and paranoia. Gastrointestinal disturbances may include nausea, vomiting, and abdominal pain. Chronic exposure to this product via inhalation may aggravate existing symptoms of bronchitis and emphysema.

CONTACT WITH SKIN or EYES: Skin contact may cause reddening, discomfort, and irritation. Symptoms are generally alleviated upon rinsing. Components are potential skin sensitizers. Susceptible individuals may experience allergic reaction after exposure to this product, including itching, eczema, welts and other reaction. Prolonged or repeated skin contact may cause dermatitis (dry, red skin), skin discoloration, and hardening of the skin. Direct contact with the eyes and the liquid product will be irritating and will result in immediate pain, and tearing of the eyes. Vapors of the product may cause watering and irritation of the eyes. Conjunctivitis may occur if contact is prolonged or chronic.

SKIN ABSORPTION: The DINP component of this product is known to be absorbed via intact skin; however, adverse reactions by this route of exposure are not well-known.

INGESTION: Ingestion is not anticipated to be a likely route of exposure to this product. If this material is swallowed, it may cause nausea, diarrhea, and vomiting and symptoms of central nervous system depression, such as described under "Inhalation". A danger of aspiration into the lungs exists after ingestion and can cause damage to the tissues of the lungs, resulting in chemical pneumonia and edema (accumulation of fluid in the lungs). Ingestion of large quantities of this product may be fatal.

INJECTION: Though not anticipated to be a likely route of occupational exposure, injection of this material (via puncture or laceration by a contaminated object) may cause local reddening, tissue swelling, and discomfort in addition to the wound.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in **Lay Terms**.

ACUTE: This material may irritate the eyes, skin, and mucous membranes. Inhalation of high concentrations of this product's vapors may cause dizziness, headaches, and nausea.

CHRONIC: Prolonged or repeated skin contact may cause dermatitis (inflammation of the skin, resulting in redness and dryness). Due to the presence of the isocyanate compound, a risk of respiratory and skin sensitization exists for susceptible individuals. Chronic inhalation of this product may cause adverse effects on the neurological system.

TARGET ORGANS: **Acute:** Skin, eyes, central nervous system. **Chronic:** Skin, respiratory system, neurological system.



HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD	(BLUE)	2*
----------------------	--------	----

FLAMMABILITY HAZARD	(RED)	1
----------------------------	-------	---

PHYSICAL HAZARD	(YELLOW)	0
------------------------	----------	---

PROTECTIVE EQUIPMENT

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8

For Routine Industrial Use and Handling Applications

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe * = Chronic hazard

11. TOXICOLOGICAL INFORMATION, continued

TOXICITY DATA: The specific toxicology data available for the components of this product present in greater than 1 percent concentration are presented below:

CALCIUM CARBONATE:

TCLo (Inhalation-Rat) 84 mg/m³/4 hours/40 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis (interstitial); Liver: other changes; Kidney, Ureter, Bladder: other changes

TCLo (Inhalation-Rat) 250 mg/m³/2 hours/24 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis, focal (pneumoconiosis)

CARBON BLACK:

Mutation in Microorganisms-Salmonella typhimurium 1 mg/plate

add-Mouse-Inhalation 6200 mg/m³/16 hours/12 weeks-intermittent

LD₅₀ (Oral-rat) > 15400 mg/kg; Behavioral: somnolence (general depressed activity)

LD₅₀ (Skin-rabbit) >3 gm/kg

TCLo (Inhalation-rat) 50 mg/m³/6 hours/90 days-intermittent; Lungs, Thorax, or Respiration: other changes.

TCLo (Inhalation-rat) 11600 µg/m³/18 hours/2 years-intermittent; Tumorigenic: Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration: tumors

1,2-BENZENEDICARBOXYLIC ACID, DI-C8-10 BRANCHED ALKYLESTERS, C₉ RICH AND "DI-ISONONYL" PHTHALATE:

TDLo (Oral-Rat) 10,080 mg/kg/2 weeks-continuous: Liver: other changes

TDLo (Oral-Rat) 85,880 mg/kg/113 days-continuous: Liver: changes in liver weight; Kidney/Ureter/Bladder: changes in kidney weight; Related to Chronic Data: changes in ovarian weight

TDLo (Oral-Rat) 45,765 mg/kg/113 days-continuous: Nutritional and Gross Metabolic: weight loss or decreased weight gain

TDLo (Oral-Rat) 11,413 mg/kg/113 days-continuous: Liver: changes in liver weight

TDLo (Oral-Rat) 44,800 mg/kg/70 days-continuous: Nutritional and Gross Metabolic: weight loss or decreased weight gain

TDLo (Oral-Rat) 22,400 mg/kg/70 days-continuous: Liver: changes in liver weight;

Kidney/Ureter/Bladder: changes in kidney weight

TDLo (Oral-Rat) 67,200 mg/kg/70 days-continuous: Related to Chronic Data: changes in testicular weight

TDLo (Oral-Rat) 16,450 mg/kg/70 days-continuous: Kidney/Ureter/Bladder: changes in kidney weight

1,2-BENZENEDICARBOXYLIC ACID, DI-C8-10 BRANCHED ALKYLESTERS, C₉ RICH AND "DI-ISONONYL" PHTHALATE (continued):

TDLo (Oral-Rat) 32,900 mg/kg/70 days-continuous: Liver: changes in liver weight

TDLo (Oral-Rat) 1133 gm/kg/4 years-continuous: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Kidney/Ureter/Bladder: Kidney tumors

TDLo (Oral-Rat) 405 gm/kg/79 weeks-continuous: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Liver: tumors

TDLo (Oral-Rat) 10 gm/kg: female 6-15 day(s) after conception: Reproductive: Effects on Embryo or Fetus: fetotoxicity (except death, e.g., stunted fetus)

TDLo (Oral-Rat) 153 gm/kg: male 70 day(s) pre-mating; female 70 day(s) pre-mating: 3 week(s) post-birth: Reproductive: Effects on Newborn: live birth index (measured after birth), weaning or lactation index (e.g., # alive at weaning per # alive at day 4)

TDLo (Oral-Rat) 510 gm/kg: male 70 day(s) pre-mating; female 70 day(s) pre-mating: 3 week(s) post-birth: Reproductive: Effects on Newborn: growth statistics (e.g.%, reduced weight gain)

TDLo (Oral-Rat) 20 gm/kg: male 70 day(s) pre-mating; female 70 day(s) pre-mating - 21 day(s) post-birth: Reproductive: Fertility: litter size (e.g. # fetuses per litter; measured before birth); Specific Developmental Abnormalities: hepatobiliary system; Effects on Newborn: growth statistics (e.g.%, reduced weight gain)

TDLo (Oral-Rat) 79 gm/kg: male 70 day(s) pre-mating; female 70 day(s) pre-mating: 21 day(s) post-birth: Reproductive: Specific Developmental Abnormalities: hepatobiliary system, urogenital system

TDLo (Oral-Rat) 109 mg/kg: Multi-generations: Reproductive: Fertility: litter size (e.g. # fetuses per litter; measured before birth); Specific Developmental Abnormalities: hepatobiliary system

TDLo (Oral-Rat) 219 mg/kg: Multi-generations: Reproductive: Effects on Newborn: growth statistics (e.g.%, reduced weight gain)

TDLo (Oral-Rat) 39 gm/kg: male 70 day(s) pre-mating; female 70 day(s) pre-mating: 21 day(s) post-birth: Reproductive: Specific Developmental Abnormalities: urogenital system

1,2-BENZENEDICARBOXYLIC ACID, DI-C8-10 BRANCHED ALKYLESTERS, C₉ RICH AND "DI-ISONONYL" PHTHALATE (continued):

TDLo (Oral-Rat) 1000 mg/kg: female 6-15 day(s) after conception: Reproductive: Specific Developmental Abnormalities: urogenital system

TDLo (Oral-Rat) 5000 mg/kg: female 6-15 day(s) after conception: Reproductive: Specific Developmental Abnormalities: musculoskeletal system

TDLo (Oral-Rat) 10 gm/kg: female 6-15 day(s) after conception: Reproductive: Fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants); Specific Developmental Abnormalities: musculoskeletal system, urogenital system

TDLo (Oral-Rat) 33 gm/kg: male 10 week(s) pre-mating; female 10 week(s) pre-mating: 3 week(s) post-birth: Reproductive: Effects on Newborn: growth statistics (e.g.%, reduced weight gain)

TDLo (Oral-Rat) 16,500 mg/kg: female 14 day(s) after conception: 3 day(s) post-birth: Reproductive: Specific Developmental Abnormalities: urogenital system

TDLo (Oral-Rat) 1086 gm/kg/4 years-continuous: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Liver: tumors

TDLo (Oral-Rat) 2764 gm/kg/4 years-continuous: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Liver: tumors

TDLo (Oral-Rat) 10,080 mg/kg/2 weeks-continuous: Liver: other changes; changes in liver weight

TDLo (Oral-Rat) 6720 mg/kg/1 weeks-intermittent: Liver: changes in liver weight; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: other oxidoreductases' Metabolism (Intermediary): lipids including transport

TDLo (Oral-Rat) 2520 mg/kg/2 weeks-intermittent: Liver: changes in liver weight

TDLo (Oral-Rat) 7 gm/kg/14 days-intermittent: Blood: changes in other cell count (unspecified)

TDLo (Unreported-Rat) 41,250 mg/kg: female 14 day(s) after conception - 3 day(s) post-birth: Reproductive: Specific Developmental Abnormalities: urogenital system

1-OCTADECENE

Currently, there are no data available for this compound.

CARCINOGENIC POTENTIAL OF INGREDIENTS: The components of this product are listed by agencies tracking potential carcinogenic effects, as follows:

CARBON BLACK: ACGIH-TLV A4 (Not Classifiable as a Human Carcinogen); IARC-2B (Possibly Carcinogenic to Humans) ; MAK-3 (Substances that Cause Concern that They Could Be Carcinogenic for Man but Which Cannot Be Assessed Conclusively Because of Lack of Data); NIOSH-Ca (Potential Occupational Carcinogen with No Further Categorization)

DI-ISONONYL PHTHALATE: On December 20, 2013, the State of California added this chemical to their list of "chemicals known to the State to cause cancer or reproductive toxicity" (Proposition 65 List), because their State's Qualified Experts determined that there was evidence to indicate this chemical can cause cancer.

The remaining components are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA, and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This product may be mildly irritating to contaminated, skin, and moderately to severely irritating to the eyes and mucous membranes.

SENSITIZATION TO THE PRODUCT: Components of this product are suspect human respiratory and skin sensitizers. Subsequent exposure to susceptible individuals may result in allergic respiratory reaction.

REPRODUCTIVE TOXICITY INFORMATION: Currently, there is no information on the potential human mutagenic, embryotoxic, teratogenic or reproductive effects from this product.

BIOLOGICAL EXPOSURES INDICES (BEIs): Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for the components of this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

PERSISTENCE AND BIODEGRADABILITY: This product has not been tested for persistence or biodegradability.

BIO-ACCUMULATION POTENTIAL: This product has not been tested for bio-accumulation potential. The following information is available for the DINP component of this product:

The high log Kow values imply a high potential for bioaccumulation, strong sorption to sewage sludge, soils and sediments and very low mobility in soil (Koc values of 111,000-611,000 l/kg). Bioconcentration factors (whole body values ranging from <14.4 to 4,000) have been reported with certain freshwater organisms.

12. ECOLOGICAL INFORMATION, continued

MOBILITY: This product has not been tested for mobility in soil.

ECOTOXICITY: This product may be harmful to contaminated terrestrial plants and animals. This product may have significant, adverse effects on aquatic plants and animals if accidentally released to an aquatic environment. The following aquatic toxicity data are available for the DINP component of this product:

1,2-BENZENEDICARBOXYLIC ACID, DI-C8-10 BRANCHED ALKYLESTERS, C₉ RICH AND DI-"ISONONYL" PHTHALATE:

NOEC (*Daphnia magna*) 504 hours = > 0.034 mg/L
LC₅₀ (*Cyprindon varegatus*) 96 hours = > 0.52 mg/L
LC₅₀ (*Ictalurus punctatus*) 96 hours = 420 µg/L
LC₅₀ (*Leopomis microlophus*) 96 hours = 4670 µg/L
LC₅₀ (*Onchorhynchus mykiss*) 96 hours = > 0.16 mg/L
LC₅₀ (*Pimphales promelas*) 96 hours = > 0.19 mg/L

1,2-BENZENEDICARBOXYLIC ACID, DI-C8-10 BRANCHED ALKYLESTERS, C₉ RICH AND DI-"ISONONYL" PHTHALATE (continued):

LC₅₀ (*Leopomis microlophus*) 96 hours = > 0.17 mg/L
LC₅₀ (*Pimphales promelas*) 96 hours = > 0.14 mg/L
EC₅₀ (*Daphnia magna*) 48 hours = > 0.086 mg/L
EC₅₀ (*Mysidopsis bahia*) 96 hours = > 0.77 mg/L
EC₅₀ (*Paratanytarus parthenogenica*) 96 hours = > 0.12 mg/L
EC₅₀ (*Selenastrum capricornutum*) 96 hours = > 2.8 mg/L

ENVIRONMENTAL EXPOSURE CONTROLS: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed of. Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Shipment of wastes must be done with appropriately permitted and registered transporters.

DISPOSAL CONTAINERS: Waste materials must be placed in and shipped in appropriate poly or metal waste pails or drums. Permeable cardboard containers are not appropriate and should not be used. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING: Wear proper protective equipment when handling waste materials.

EPA WASTE NUMBER: Not applicable.

14. TRANSPORTATION INFORMATION

THIS PRODUCT NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is NOT classified as dangerous goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): This product is NOT classified as dangerous goods under the criteria of the IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO): This product is NOT classified as dangerous goods under the criteria of the IMO.

MARINE POLLUTANT: The components of this product are not designated by the IMO to be Marine Pollutants.

15. REGULATORY INFORMATION

U.S. STATE AND FEDERAL REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are NOT subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): The "1,2-Benzenedicarboxylic Acid, di-C8-10 Branched Alkylesters, C₉ rich and Diisononyl Phthalate" component, as a phthalate ester is a CERCLA Hazardous Substance although no specific CERCLA RQ has been assigned.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Diisononyl Phthalate, as a phthalate ester is designated as a Toxic pollutant designated pursuant to section 307(a)(1) of the Clean Water Act and is subject to effluent limitations.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):

DI-ISONONYL PHTHALATE: On December 20, 2013, the State of California added this chemical to their list of "chemicals known to the State to cause cancer or reproductive toxicity" (Proposition 65 List), because their State's Qualified Experts determined that there was evidence to indicate this chemical can cause cancer.

15. REGULATORY INFORMATION, continued

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL INVENTORY: The components of this product are listed on the DSL Inventory.

CANADIAN WHMIS IDL DISCLOSURE STATUS: The Carbon Black component of this product has a disclosure requirement level of 1%.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION AGENCY (CEPA) PRIORITY SUBSTANCES LISTS: The components of this product are not on the Priority Substances Lists.

CANADIAN WHMIS SYMBOLS:

Class D2A: Poisonous and Infectious Material, Chronic effects - Respiratory and Skin Sensitizer.

Class D2B: Poisonous and Infectious Material, Acute effects - Central Nervous System Effects



16. OTHER INFORMATION

U.S. ANSI STANDARD LABELING (Z129.1): **CAUTION!** CAN CAUSE ADVERSE EFFECTS ON THE CENTRAL NERVOUS SYSTEM. CAUSES SKIN AND EYE IRRITATION. Keep away from heat, spark or flame. Wash thoroughly after handling. Wear gloves, goggles or eye protection, as appropriate. **FIRST-AID:** In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. If inhaled, remove to fresh air. If ingested, do not induce vomiting and get medical attention. Get medical attention if any adverse reaction occurs. **IN CASE OF FIRE:** Use water fog (for cooling of containers), dry chemical, CO₂, or "alcohol" foam. **IN CASE OF SPILL:** Absorb spill with inert material. Replace residue in suitable container. Consult Material Safety Data Sheet for additional information.

OSHA HAZARD COMMUNICATION (GLOBAL HARMONIZATION) LABELING AND CLASSIFICATION: This product would be classified as follows, per OSHA's Hazard Communication Standard (29CFR §1910.1200). This is a self-classification. It is important to note this substance has not been fully tested.

Classification: Skin Irritant Category 2, Eye Irritant Category 2A

Signal Words: Warning

Hazard Statements: H315: Causes skin irritation. H319: Causes serious eye irritation.

Supplemental Hazard Statements: None.

Prevention Precautionary Statements: P264: Wash thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response Precautionary Statements: P302 + P352: IF ON SKIN: wash with plenty of soap and water. P332 + P313: If skin irritation occurs, get medical attention. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. P337 + P313: If eye irritation persists: get medical advice/attention. P321: Specific treatment (remove from exposure and treat symptoms). P362: Take off all contaminated clothing and wash before reuse.

Storage Precautionary Statements: None.

Disposal Precautionary Statements: None.

Hazard Symbols: GHS07



PREPARED BY:

CHEMICAL SAFETY ASSOCIATES, Inc.

PO Box 1961, Hilo, HI 96721 • (800) 441-3365 • (808) 969-4846

DATE OF PRINTING:

December 16, 2014

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Shat-R-Proof assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Shat-R-Proof assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.