



SECTION 1 - IDENTIFICATION

Table with 2 columns: Manufacturer information (Black Swan Mfg. Co., Chicago, IL) and Recommended Use (For connecting PVC pipe and fittings).

SECTION 2 – HAZARD(S) IDENTIFICATION

Complex hazard identification section including Labels (Health Hazard, Flammable, Irritant), Signal Word (Danger), HMIS (Health 2, Flammability 3, Reactivity 0), NFPA diamond (Health 3, Fire 3, Reactivity 0), GHS Classification (Acute Toxicity Cat. 4, Skin Irritation Cat. 3, Eye Irritation Cat. 2B, Skin Sensitization NO), and Hazardous/Precautionary Statements.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Table with 5 columns: Hazardous Chemicals, CAS#, EINECS#, REACH Pre-registration Number, and Approx %. Lists ingredients like Tetrahydrofuran, Methyl Ethyl Ketone, Cyclohexanone, and Acetone.

SECTION 4 – FIRST-AID MEASURES

First-aid measures for Inhalation, Skin, Eyes, and Ingestion. Includes instructions like 'Move into fresh air' and 'DO NOT INDUCE VOMITING'.

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SECTION 5 – FIRE-FIGHTING MEASURES

Fire Hazard: Highly flammable liquid and vapor. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back.

Combustion Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Extinguishing Media: Carbon Dioxide Gas, Dry Chemical Powder, Foam.

Unsuitable Extinguishing Media: Water Spray, Water Stream.

Protective Equipment: Self-contained breathing apparatus {(SCBA), MSHA/NIOSH}. Full protective gear.

Special Fire Fighting Procedures: Evacuate enclosed areas, stay upwind. Closed or confined quarters require self-contained breathing apparatus, positive pressure hose masks or airline masks. Use water spray to cool containers, to flush spills from sources of ignition and to disperse vapors.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions: Prevent contact with skin or eyes. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.

Protective Equipment: Wear suitable respiratory protective equipment.

Emergency Procedures: Remove all sources of ignition and ventilate area. For leaks, stop leak if it can be done safely. Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.

Environmental Precautions: Avoid runoff into storm sewers, ditches and waterways.

Methods for Cleaning Up: Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Transfer absorbent material to a covered, labeled, metal container. Do not use plastic or aluminum containers.

SECTION 7 – HANDLING AND STORAGE

Handling

Avoid contact with eyes, skin and clothing. Avoid prolonged breathing of vapor and mist. Use with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep products away from heat, sparks, flames and all other sources of ignition. Keep containers closed when not in use.

Storage

Store in a cool, dry, well-ventilated area away from incompatible materials. Store in shade between 40°F – 110°F. Keep container closed when not in use. Keep away from heat, sparks, open flame and other sources of ignition. **Incompatible Materials:** caustics, ammonia, inorganic acids, chlorinated compounds, amines, strong oxidizers and isocyanates.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

<u>Hazardous Chemicals</u>	<u>ACGIH-TLV</u>	<u>ACGIH-STEL</u>	<u>OSHA-PEL</u>
TETRAHYDROFURAN	50 ppm	100 ppm	200 ppm
METHYL ETHYL KETONE	200 ppm	300 ppm	200 ppm
CYCLOHEXANONE	20 ppm	50 ppm	50 ppm
ACETONE	500 ppm	750 ppm	1000 ppm

Engineering Controls: A source of running water to flush or wash the eyes and skin in case of contact. Use local exhaust as needed.

Ventilation: Local ventilation is adequate. Use only explosion proof ventilation equipment.

Personal Protective Equipment – Respiratory: Atmospheric levels should be maintained below established exposure limits. If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator with full face-piece is recommended. The effectiveness of an air purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus.

Personal Protective Equipment – Skin: Prevent contact with skin. Butyl rubber gloves should be used.

Personal Protective Equipment – Eyes: Use glasses with side shield or splash proof goggles.

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Clear Liquid	Flash Point:	14°F – 23°F	Vapor Pressure:	143mm Hg @20°C
Odor:	Ketone	Specific Gravity:	0.95 ± 0.02 @ 20°C	Flammability:	Category 2
pH:	Not Established	Solubility (H2O):	Solvent-Complete, Resin-Precipitates	Flammability Limits:	LEL - 1.8%
Melting Point:	Not Established	Evaporation Rate:	8 (BUAC=1)		UEL – 11.8%
Freezing Point:	Not Established	Vapor Density:	>2.00 (AIR=1)		
Boiling Point:	151°F (66°C)	VOC:	510 g/l		

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SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable

Hazardous polymerization: Will not occur

Conditions to avoid: Keep away from heat, sparks, open flame and other sources of ignition.

Incompatible materials: Caustics, ammonia, inorganic acids, chlorinated compounds, amines, strong oxidizers and isocyanates.

Hazardous decomposition products: When forced to burn, this product gives out carbon monoxide, carbon dioxide, hydrogen chloride and smoke.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Chemicals</u>	<u>Toxicity</u>	
	<u>LD₅₀</u>	<u>LC₅₀</u>
TETRAHYDROFURAN	Oral: 2842 mg/kg (rat)	Inhalation: 3 hrs., 21000 mg/m ³ (rat)
METHYL ETHYL KETONE	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation: 8 hrs., 23500 mg/m ³ (rat)
CYCLOHEXANONE	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation: 4 hrs., 8000 ppm (rat)
ACETONE	Oral: 5800 mg/kg (rat)	Inhalation: 50100 mg/m ³ (rat)

Likely Routes of Exposure: Inhalation, Skin Contact and Eye Contact

Symptoms and Effect - Inhalation: Severe overexposure may result in nausea, dizziness, and headaches. Can cause drowsiness, irritation of eyes and nasal passages. **Skin Contact:** Liquid contact may remove natural skin oils resulting in irritation. Dermatitis may occur with prolonged contact. **Eye Contact:** Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid. **Ingestion:** May cause nausea, vomiting, diarrhea and mental sluggishness.

Long-Term Effect: None known.

Pre-Existing Conditions: Individuals with pre-existing diseases of the eyes, skin or respiratory system may have increased susceptibility to the toxicity of excessive exposure.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: None known

Persistence & Degradability: Biodegradable

Bioaccumulative Potential: None known

Mobility in soil: In normal use, emission of Volatile Organic Compounds (VOC's) to the air takes place, typically at a rate of ≤ 510 g/l.

SECTION 13 – DISPOSAL CONSIDERATION

Dispose of product or container in accordance with federal, state or local regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Shipping Information

Shipping Name: Adhesives, Containing a Flammable Liquid

Hazardous Class: 3

I.D. Number: UN1133

Packing Group: II

Label Required: Flammable Liquid

Marine Pollutant: No

Exception to the rule: If the package that contains the hazardous material is in a small consumer size (Less than 1L), then the rules that apply to shipping hazardous materials do not apply. This is called an "Exception".

This is classified as Consumer Commodity ORM-D.

SECTION 15 – REGULATORY INFORMATION

Precautionary Label Information: Highly Flammable, Irritant and Health Hazard

Risk Phrases: **R11**-Highly Flammable. **R36/37**-Irritant to eyes and respiratory system. **R66**-Repeated exposure may cause skin dryness or cracking. **R67**-Vapors may cause drowsiness and dizziness.

Safety Phrases: **S2**-Keep out of reach of children. **S9**-Keep container in a well-ventilated place. **S16**-Keep away from sources of ignition-No smoking. **S25**-Avoid contact with eyes. **S26**-In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. **S33**-Take precautionary measures against static discharges.

SECTION 16 – OTHER INFORMATION

Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act and shall not be used for any other purpose. Black Swan Mfg. Co. urges the customers receiving this Material Safety Data Sheet to study it carefully to become aware of the hazards, if any, of the product involved. In the interest of safety, you should notify your employees, agents and contractors of the information on the sheets.

DATE: 01/01/2014