

SAFETY DATA SHEET



Date Issued : 11/28/2012
MSDS No : FGP-1BULK Aerosol
Date Revised : 11/28/2012
Revision No : 2

MIRACLE 15-114 Aerosol Adhesive

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MIRACLE 15-114 Aerosol Adhesive

MANUFACTURER

ITW TACC
 56 Air Station Industrial Park
 Rockland, MA 02370
Emergency Phone: (781) 878-7015
Service Number: (800) 503-6991

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (US Transportation): (800) 424-9300

COMMENTS: MIRACLE is a registered trademark of Illinois Tool Works, Inc.

2. HAZARDS IDENTIFICATION

HAZARD DESIGNATION

"F+" - Extremely flammable
 "N" - Dangerous for the environment
 "Xn" - Harmful

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Clear

IMMEDIATE CONCERNS: DANGER! Extremely flammable liquid and vapor. Vapor may cause flash fire and explosion. Contents under pressure. Harmful or fatal if swallowed. Harmful if absorbed through the skin. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage. High vapor concentrations may cause drowsiness. Can cause eye, skin and respiratory tract irritation.

POTENTIAL HEALTH EFFECTS

EYES: Can cause severe eye irritation and corneal damage.

SKIN: Causes defatting and skin irritation. Can cause dermatitis.

SKIN ABSORPTION: May be absorbed through the skin in harmful amounts.

INGESTION: Can cause gastrointestinal irritation, nausea and vomiting. Aspiration of material into the lungs may cause chemical pneumonitis, which can be fatal. Harmful or fatal if swallowed.

INHALATION: May cause nose or throat irritation. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness).

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Liquid and vapor can severely irritate the eyes depending on type of exposure (splash, vapor) and exposure time.

SKIN: Mild to moderate skin irritant.

SKIN ABSORPTION: May be absorbed through the skin and can contribute to overall exposure. Effects are similar to CNS depression.

INGESTION: May result in central nervous system (CNS) depression with symptoms such as headaches, nausea, vomiting, diarrhea, dizziness, incoordination and unconsciousness. Aspiration of material into lungs may cause chemical pneumonitis which can be fatal.

INHALATION: High vapor concentrations may cause CNS depression with symptoms including light headedness, giddiness, nausea, drowsiness, headache, nose, throat and respiratory tract irritation, reduced appetite, confusion, and unconsciousness.

ACUTE TOXICITY: High vapor concentrations may cause central nervous system (CNS) depression with

SAFETY DATA SHEET



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MIRACLE 15-114 Aerosol Adhesive

symptoms including light headedness, giddiness, nausea, drowsiness, headache, nose, throat and respiratory tract irritation, reduced appetite, confusion and unconsciousness.

CHRONIC EFFECTS: Damage to the nervous system of the extremities, peripheral neuropathy, with symptoms including numbness, tingling and weakness in the toes and fingers, sensory impairment to touch, pain, vibration and temperature, muscular weakness, blurred vision, coldness of extremities, loss of body weight and reflexes, and even paralysis. Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis).

ROUTES OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, and Skin Contact

TARGET ORGAN STATEMENT: Central Nervous System (CNS)

IRRITANCY: Eyes, nose, throat, respiratory tract, and skin irritation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS	EINECS	Classification
Dimethyl Ether	20 - 40	115-10-6	204-065-8	F+; R12
Acetone	15 - 40	67-64-1	200-662-2	F; R11
n-Hexane	3 - 10	110-54-3	203-777-6	F,Xn,N; R11, R48/20, R62, R65, R67, R51/53
Low Boiling Point Naphtha - Solvent Naphtha (petroleum), Light Aliph.	3 - 10	64742-89-8	265-192-2	Xn; R65
n-Heptane	1 - 5	142-82-5	265-192-2	F,Xi,N; R11, R38, R50/53, R65, R67
Cyclohexane	1 - 5	110-82-7	203-806-2	F; R11
Toluene	1 - 5	108-88-3	203-625-9	F, Xn; R11, R20

(Full text of R-Phrases can be found under heading 16)

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of tempered water (at least 15-20 minutes) lifting upper and lower eye lids occasionally. Get immediate medical attention.

SKIN: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash or dispose of clothing before reuse.

INGESTION: Do not induce vomiting, keep person warm, quiet and get medical attention immediately. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Aspiration of this material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: -51°C (-59.8°F)

FLAMMABLE LIMITS: 1.0 to 18.0

SAFETY DATA SHEET



Date Issued : 11/28/2012
MSDS No : FGP-1BULK Aerosol
Date Revised : 11/28/2012
Revision No : 2

MIRACLE 15-114 Aerosol Adhesive

AUTOIGNITION TEMPERATURE: (437°F) to (997°F)

FLAMMABLE CLASS: Class IA

GENERAL HAZARD: Flammable liquid and vapor.

EXTINGUISHING MEDIA: Foam, dry chemical, carbon dioxide, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS: Carbon Monoxide, Carbon Dioxide, Aldehydes

EXPLOSION HAZARDS: Avoid fire, sparks, static electricity and hot surfaces. Liquid readily evaporates at room/ambient temperature. Vapors are invisible, flammable, heavier than air, and may accumulate in low areas and spread long distances. Distant ignition and flashback are possible.

FIRE FIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus with pressure-demand, full face piece SCBA (MSHA/NIOSH approved or equivalent) and full protective gear.

SENSITIVE TO STATIC DISCHARGE: Likely to catch fire from near-by spark. Static charge may accumulate by flow or agitation. Grounding and bonding of containers is required.

SENSITIVITY TO IMPACT: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide and Carbon Dioxide may form when heated to decomposition.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on absorbent, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including ignitable vapors, have been removed, thoroughly wet vacuum the area. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth and gravel, etc. as necessary and place in closed containers for disposal. Only those persons who are adequately trained, authorized, and wearing the required personal protective equipment (PPE) should participate in spill response and clean-up.

LARGE SPILL: Keep spectators away. Only those persons who are adequately trained, authorized and wearing the required personal protective equipment (PPE) should participate in spill response and clean-up. Ventilate the area by natural means or by explosion proof mechanical means (i.e. fans). Know and prepare for spill response before using or handling this product. Eliminate all ignition sources (flames, hot surfaces, portable heaters and sources of electrical, static, or frictional sparks). Dike and contain spill with inert material (e.g. sand, earth). Transfer liquids to covered and labeled metal containers for recovery or disposal, or remove with inert absorbent. Use only non-sparking tools and appropriate PPE. Place absorbent diking materials in covered metal containers for disposal. Prevent contamination of sewers, streams, and groundwater with spilled material or used absorbent.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: For professional or industrial use only. Follow label instructions. Keep out of the reach of children. Not for consumption. No smoking. Do not breathe vapors. Avoid contact with body. Turn off all pilot lights, flames, stoves, heaters, electric motors, welding equipment and other sources of ignition. Empty containers must not be washed and re-used for any purpose. Contact lens wearers must wear protective eye wear around chemical vapors and liquid. Wash hands thoroughly after handling. Flammable vapors may cause flash fire or ignite explosively. To prevent build-up of vapors, use adequate natural and/or mechanical ventilation (e.g. open all windows and doors to achieve cross ventilation). Containers may be hazardous when empty. Never use welding or cutting torch on or near container. Do not cut, drill, grind, or expose containers to heat, sparks, static electricity or other source of ignition. Explosion may occur causing injury or death.

HANDLING: Use adequate ventilation and appropriate respiratory protection to avoid breathing vapors when cover is removed. Ground and bond all equipment when handling flammable solvent-borne material.

SAFETY DATA SHEET



Date Issued : 11/28/2012
MSDS No : FGP-1BULK Aerosol
Date Revised : 11/28/2012
Revision No : 2

MIRACLE 15-114 Aerosol Adhesive

STORAGE: Keep container closed when not in use. Store in a dry well ventilated area, out of the sun and away from ignition sources. Do not remove or deface label. Prevent water or moist air from entering container.

STORAGE TEMPERATURE: 15.5°C (60°F) Minimum to 35°C (95°F) Maximum

SHELF LIFE: 1 year from manufacture date

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)					
		EXPOSURE LIMITS			
		OSHA PEL		ACGIH TLV	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³
Dimethyl Ether	TWA	NL [1]	NL [1]	NL [1]	NL [1]
	STEL	NL [1]	NL [1]	NL [1]	NL [1]
Acetone	TWA	1000 ppm	2400 mg/m ³	500 ppm	1187 mg/m ³
	STEL	NL [1]	NL [1]	750 ppm	1780 mg/m ³
n-Hexane	TWA	500 ppm [2]	1800 mg/m ³ [2]	50 ppm	176 mg/m ³
	STEL	NL [1]	NL [1]	NL [1]	NL [1]
Low Boiling Point Naphtha - Solvent Naphtha (petroleum), Light Aliph.	TWA	400 ppm	NL	400 ppm	NL
	STEL	NL [1]	NL [1]	NL [1]	NL [1]
n-Heptane	TWA	500 ppm [2]	2000 mg/m ³ [2]	400 ppm	1640 mg/m ³
	STEL	NL [1]	NL [1]	500 ppm	2050 mg/m ³
Cyclohexane	TWA	300 ppm [2]	1050 mg/m ³ [2]	100 ppm	334 mg/m ³
	STEL	NL [1]	NL [1]	NL [1]	NL [1]
Toluene	TWA	200 ppm	NL	20 ppm	NL
	STEL	300 ppm [3]	NL [3]	NL [1]	NL [1]

Footnotes:

- NL = Not Listed
- OSHA limits per 29 CFR 1910.1000 Table Z-1 & Z-2
- C = Ceiling

ENGINEERING CONTROLS: Provide sufficient explosion proof mechanical (general and/or local exhaust) ventilation to maintain exposure below the occupational exposure limit and exposure concentration.

SAFETY DATA SHEET



Date Issued : 11/28/2012
MSDS No : FGP-1BULK Aerosol
Date Revised : 11/28/2012
Revision No : 2

MIRACLE 15-114 Aerosol Adhesive

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with side shields (or goggles) or a full face respirator.

SKIN: Wear chemical protective clothing & boots to prevent repeated or prolonged skin contact.

RESPIRATORY: NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

PROTECTIVE CLOTHING: Wear chemical resistant gloves, such as nitrile rubber.

WORK HYGIENIC PRACTICES: Wash hands thoroughly after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Aerosol

ODOR: Solvent-like

COLOR: Amber

pH: Not Determined

PERCENT VOLATILE: 79.6

Notes: by weight

VAPOR PRESSURE: Not Determined

VAPOR DENSITY: Not Determined

BOILING POINT: -25°C (-13°F)

FREEZING POINT: Not Determined

MELTING POINT: Not Determined

POUR POINT: Not Determined

FLASHPOINT AND METHOD: -51°C (-59.8°F)

SOLUBILITY IN WATER: Slight

EVAPORATION RATE: > 1.0 (n-Butyl Acetate=1)

DENSITY: 6.30 lbs/gal

PARTICLE SIZE: Not Determined

SPECIFIC GRAVITY: 0.756

VISCOSITY: Not Determined

MOLECULAR WEIGHT: Not Determined

(VOC): 541.700 gr/L EPA Method 24 VOC

Notes: Photochemically Reactive Only VOC: 410.4 gr/L

COEFF. OIL/WATER: Not Determined

ODOR THRESHOLD: Not Determined

OXIDIZING PROPERTIES: Not Determined

COMMENTS: 0.60 lb VHAP/lb Solid
12.3% by weight HAP

10. STABILITY AND REACTIVITY

SAFETY DATA SHEET



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MSDS No : FGP-1BULK Aerosol
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Revision No : 2

MIRACLE 15-114 Aerosol Adhesive

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

STABILITY: Stable.

POLYMERIZATION: Product will not undergo polymerization.

CONDITIONS TO AVOID: Avoid fire, sparks, static electricity and hot surfaces.

POSSIBILITY OF HAZARDOUS REACTIONS: None Expected.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and carbon dioxide may form when heated to decomposition.

INCOMPATIBLE MATERIALS: Strong oxidizing agents, strong acids and strong bases.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
Dimethyl Ether	No data	No data	164000 ppm (4-hr dose)
Acetone	5800 mg/kg	20000 mg/kg	50100 mg/cub m (8- hr dose)
n-Hexane	25000 mg/kg	No data	48000 ppm (4-hr dose)
Low Boiling Point Naphtha - Solvent Naphtha (petroleum), Light Aliph.	> 2000 mg/kg	> 2000 mg/kg	> 5000 ppm (1-hr dose)
n-Heptane	> 15000 mg/kg	> 2001 mg/kg	103000 mg/cub m (4- hr dose)
Cyclohexane	29820 mg/kg	No data	No data
Toluene	2600 to 7500 mg/kg	12124 mg/kg	8000 ppm (4-hr dose)

CARCINOGENICITY

Chemical Name	IARC Status
Toluene	3

IRRITATION: Eyes, nose, throat, respiratory tract irritation.

SYNERGISTIC MATERIALS: The neurotoxic effects of n-hexane vapor can be enhanced in rats by both methyl ethyl ketone (MEK) and lead acetate, but are decreased by toluene. Toluene and xylene prevent testicular atrophy by n-hexane.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: This product contains components that will normally float on water. These components may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment.

SAFETY DATA SHEET



Date Issued : 11/28/2012
MSDS No : FGP-1BULK Aerosol
Date Revised : 11/28/2012
Revision No : 2

MIRACLE 15-114 Aerosol Adhesive

ECOTOXICOLOGICAL INFORMATION: Contains components that are potentially toxic to freshwater and saltwater ecosystems.

BIOACCUMULATION/ACCUMULATION: Contains components with the potential to bio-accumulate.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with all local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Limited Quantity (Ltd Qty)

NAERG: 115

MARINE POLLUTANT #1: None

15. REGULATORY INFORMATION

UNITED STATES

DOT LABEL SYMBOL AND HAZARD CLASSIFICATION

Limited Quantity (Ltd Qty)

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

FIRE: Yes **PRESSURE GENERATING:** Yes **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** Yes

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt.%	CAS
n-Hexane	3 - 10	110-54-3
Cyclohexane	1 - 5	110-82-7
Toluene	1 - 5	108-88-3

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	Wt.%	CERCLA RQ
Acetone	15 - 40	5,000 lbs.
n-Hexane	3 - 10	5,000 lbs.
Cyclohexane	1 - 5	1,000 lbs.
Toluene	1 - 5	1,000 lbs.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

SAFETY DATA SHEET



Date Issued : 11/28/2012
MSDS No : FGP-1BULK Aerosol
Date Revised : 11/28/2012
Revision No : 2

MIRACLE 15-114 Aerosol Adhesive

Chemical Name	CAS	TSCA SECTION
Dimethyl Ether	115-10-6	
Acetone	67-64-1	12b,
n-Hexane	110-54-3	
Low Boiling Point Naphtha - Solvent Naphtha (petroleum), Light Aliph.	64742-89-8	
n-Heptane	142-82-5	12b,
Cyclohexane	110-82-7	
Toluene	108-88-3	

CLEAN AIR ACT

Chemical Name	Wt.%	CAS
n-Hexane	3 - 10	110-54-3
Toluene	1 - 5	108-88-3

STATES WITH SPECIAL REQUIREMENTS

Chemical Name	Requirements
Dimethyl Ether	New Jersey Right to Know List
Acetone	New Jersey Right to Know List Pennsylvania Right to Know List Massachusetts Toxic Use Reduction Act (TURA) Reportable Chemical
n-Hexane	New Jersey Right to Know List Pennsylvania Right to Know List Massachusetts Toxic Use Reduction Act (TURA) Reportable Chemical
Low Boiling Point Naphtha - Solvent Naphtha (petroleum), Light Aliph.	Pennsylvania Right to Know List
n-Heptane	New Jersey Right to Know List Pennsylvania Right to Know List
Cyclohexane	New Jersey Right to Know List Pennsylvania Right to Know List Massachusetts Toxic Use Reduction Act (TURA) Reportable Chemical
Toluene	New Jersey Right to Know List Pennsylvania Right to Know List Massachusetts Toxic Use Reduction Act (TURA) Reportable Chemical

CALIFORNIA PROPOSITION 65: This product contains toluene, a chemical known to the state of California to cause birth defects or other reproductive harm.

Chemical Name	Wt.%	Listed
Toluene	1 - 5	• Developmental Toxicity

SAFETY DATA SHEET



Date Issued : 11/28/2012
MSDS No : FGP-1BULK Aerosol
Date Revised : 11/28/2012
Revision No : 2

MIRACLE 15-114 Aerosol Adhesive

CANADA

WHMIS HAZARD SYMBOL AND CLASSIFICATION



Flammable Gas



Compressed Gas



Toxic

EUROPEAN COMMUNITY

EEC LABEL SYMBOL AND CLASSIFICATION



"F+" - Extremely flammable



"N" - Dangerous for the environment



"Xn" - Harmful

16. OTHER INFORMATION

RELEVANT R-PHRASES:R12: Extremely flammable.

R11: Highly flammable.

R48/20: Harmful : danger of serious damage to health by prolonged exposure through inhalation.

R62: Possible risk of impaired fertility.

R65: Harmful: may cause lung damage if swallowed.

R67: Vapors may cause drowsiness and dizziness.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R38: Irritating to skin.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R20: Harmful by inhalation.

INFORMATION CONTACT: (781) 878-7015

REVISION SUMMARY: This MSDS replaces the 11/12/2009 MSDS. Revised: **Section 1:** COMMENTS, Date Issued. **Section 2:** MUTAGENICITY. **Section 3:** Wt.%. **Section 9:** COEFF. OIL/WATER, FREEZING POINT, MELTING POINT, MOLECULAR WEIGHT, ODOR THRESHOLD, OXIDIZING PROPERTIES, PARTICLE SIZE, pH, POUR POINT, SPECIFIC VOLUME, VAPOR DENSITY, VAPOR PRESSURE, VISCOSITY. **Section 11:** NEUROTOXICITY, SENSITIZATION, CORROSIVITY, GENETIC EFFECTS. **Section 14:** DOT (DEPARTMENT OF TRANSPORTATION) - PROPER SHIPPING NAME. **Section 16:** GENERAL STATEMENTS.

SAFETY DATA SHEET



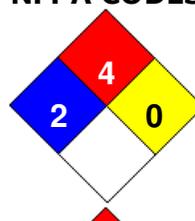
Date Issued : 11/28/2012
MSDS No : FGP-1BULK Aerosol
Date Revised : 11/28/2012
Revision No : 2

MIRACLE 15-114 Aerosol Adhesive

HMIS RATING

HEALTH	*	2
FLAMMABILITY		4
PHYSICAL HAZARD		0
PERSONAL PROTECTION		B

NFPA CODES



GENERAL STATEMENTS: Keep out of reach of children
 For professional or industrial use only

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