

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : RADNOR® DEVELOPER NUCLEAR GRADE
 PRODUCT USE : INSPECTION DEVELOPER
 ITEM CODE(S) : 64000206
 ADDRESS : RADNOR PRODUCTS
 259 N. RADNOR-CHESTER ROAD SUITE 100
 RADNOR, PA 19087-5283
 EMERGENCY TELEPHONE : 866-734-3438
 PREPARATION DATE : DECEMBER 01, 2007
 OSHA REGULATORY STATUS : REGULATED

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

ID	HAZARDOUS INGREDIENTS	CAS	OSHA PEL		ACGIH TLV		LD50 SPECIES/ROUTE	LC50 SPECIES/ROUTE	%WT
1	ACETONE	000067-64-1	1000	ppm	500	ppm	>20 g/kg rabbit/dermal	16000 ppm/4h (rat)	40-70%
2	LIQUIFIED PETROLEUM GAS	068476-85-7	1000	ppm	1000	ppm	N/Av	57.42% v/v (mice)	30-60%
3	MAGNESIUM SILICATE HYDRATE	MIXTURE	20	mppcf	2	mg/m ³	N/Av	N/Av	5-10%
4	AMORPHOUS FUMED SILICA	112945-52-5	15	mg/m ³	10	mg/m ³	>5 g/kg rat/dermal	>0.139 mg/4h (rat)	1-5%

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CONTENTS EXTREMELY FLAMMABLE AND UNDER PRESSURE. STORE BELOW 120°F (49°C), OUT OF SUNLIGHT AND AWAY FROM HEAT SOURCES. DO NOT PUNCTURE OR INCINERATE. AVOID CONTACT WITH SKIN AND EYES. VAPOR HARMFUL. EYE IRRITANT. HARMFUL OR FATAL IF SWALLOWED. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

EYE: Liquid or vapors may cause redness, burning, tearing, swelling and/or pain.

SKIN: Frequent or prolonged contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

INGESTION: Due to being an aerosol, product does not lend itself to ingestion. Should ingestion occur, it may cause irritation to membranes of the mouth, throat and gastrointestinal tract, resulting in vomiting and/or cramps.

INHALATION: Prolonged or repeated overexposure is anesthetic. May cause irritation of the respiratory tract, or acute nervous system depression characterized by headache, dizziness, staggering gait, or confusion.

EFFECTS OF ACUTE EXPOSURE: N/Av

EFFECTS OF CHRONIC EXPOSURE: N/ Av

OTHER IMPORTANT HAZARDS: N/Av



SECTION 4. FIRST AID MEASURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist or if unconscious.

INGESTION: Unlikely due to being in aerosol form. Should actual ingestion occur, do not induce vomiting! Drink a glass of water or milk to dilute. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

EYE CONTACT: Immediately flush with plenty of clear water for at least 15 minutes. Make sure to flush under the eyelids. Consult a physician for definitive treatment.

SKIN CONTACT: Remove with soap and water. Continue flushing with water for several minutes. Use skin cream to counter resulting dryness. Consult a physician if irritation continues or if large skin area is affected.

SECTION 5. FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY: Heat, sparks, flame, red hot metal.

MEANS OF EXTINCTION: For warehouse and storage conditions, use NFPA Class B extinguishers (CO₂, dry chemical or universal aqueous film forming foam).

SPECIAL FIRE FIGHTING PROCEDURES: Use water spray to cool fire exposed aerosol containers for containers can rupture violently from heat developed pressure.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Contents extremely flammable and under pressure. In addition, when liquid or vapor comes into contact with flames or red hot metal, products of combustion will be created. Firemen should wear self-contained breathing apparatus.

FLASH POINT / DETERMINATION: Propellant < 0°F (<-18°C)

UPPER FLAMMABLE LIMIT: 9.5%

LOWER FLAMMABLE LIMIT: 1.8%

AUTO-IGNITION TEMPERATURE: 869°F (465°C)

HAZARDOUS COMBUSTION PRODUCTS: N/Av

EXPLOSION DATA - SENSITIVITY TO MECHANICAL IMPACT: N/Av

EXPLOSION DATA - SENSITIVITY TO STATIC DISCHARGE: N/Av

SECTION 6. ACCIDENTAL RELEASE MEASURES

LEAK / SPILL RESPONSE: Product is an aerosol, therefore spills and leaks are unlikely. In case of rupture, released content should be contained as any other solvent spill. Spills from aerosol cans are unlikely and are generally of small volume. Large spills are therefore not normally considered a problem. In case of actual rupture, avoid breathing vapors and ventilate area well. Remove all sources of ignition and use non-sparking equipment. Soak up material with inert absorbent and place in safety containers for proper disposal.

SPECIAL INSTRUCTIONS: Aerosol products represent a limited hazard and will not spill or leak unless ruptured. In case of rupture contents are generally evacuated from the can rapidly. Area should be ventilated immediately and continuous ventilation provided until all fumes and vapors have been removed. Aerosol cans should never be incinerated or burned. See Section 13 for disposal considerations.

SECTION 7. HANDLING AND STORAGE

HANDLING PROCEDURES / EQUIPMENT: Avoid prolonged or repeated skin contact. Avoid breathing vapors.

STORAGE REQUIREMENTS: Store in area below 120°F (49°C). Do not incinerate (burn) containers. Assure can is in a secure place to prevent knocking over and accidental rupture. Always replace overcap when not in use. For store of pallet quantities, compliance with ANSI/NFPA 30B is recommended.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION: Safety glasses with side shields are recommended as a minimum for any type of industrial chemical handling. Where eye contact could occur, chemical splash proof goggles are recommended.

SKIN PROTECTION: For brief contact, no precautions other than clean body-covering clothing should be needed. When prolonged or repeated contact could occur, use protective clothing such as Sol-Vex® gloves or other clothing impervious to the ingredient listed in Section 2.

ENGINEERING CONTROLS: General ventilation (typically 10 air changes for hour) should be used. Ventilation rates should be matched to conditions. Local exhaust ventilation or an enclosed handling system, may be needed to control air contamination below that of the lowest TLV/PEL rated ingredient from Section 2.

EXPOSURE GUIDELINE LEVELS: Since this product is a mixture, an OSHA or ACGIH exposure value is not available. In determination of any exposure procedures, protection or testing use the lowest rated ingredient in Section 2.



SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	> 133 F (56.1 C)	Melting/Freezing Point	> -140 F (-95.3 C)
Flash Point, Liquid Content	> 1 F (-17 C)	Flash Point, Propellant	-156 F (-104.4)
Explosive Limits	2.50% to 13.00%	Autoignition Temperature	869 F (465 C)
Flammability	Extremely Flammable Aerosol	Specific Gravity (H ₂ O = 1)	0.715 g/cc
Molecular Weight	Not Available	Weight	5.965 lbs/gal
Vapor Pressure	218.52 mm Hg (Liquid)	pH	Not Available
Vapor Density	2.00 g/cc Maximum	Evaporation Rate	> 5.7 (n-Butyl Acetate = 1.0)
Physical State	Liquid Under Pressure	Partition Coefficient	Not Available
Viscosity	Not Available	Refractive Index	Not Available
Percent Volatile	91% Wt (98% Vol) Max	VOC Content	2.169 lbs/gal (259.944 g/l)
Percent VOC	37% Wt (49% Vol) Max	HAP Content	None
Odor Threshold	Not Available	MIR Value	0.588 g O ₃ /g
Odor	Mild	Water Solubility	Not Available
Appearance	Clear liquid	Heat of Combustion	31.592 MJ/kg

SECTION 10. STABILITY AND REACTIVITY

STABILITY: Stable.
CONDITIONS TO AVOID: Heat, sparks, flame, red hot metal.
MATERIALS TO AVOID (INCOMPATIBILITIES): Strong oxidizing materials.
CONDITIONS OF REACTIVITY: N/Av
HAZARDOUS DECOMPOSITION BYPRODUCTS: Oxides of carbon.
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11.TOXICOLOGICAL INFORMATION

ID	ORAL LD50	DERMAL LD50	INHALATION LC50
1	5800 mg/kg, rat	20 g/kg, rabbit	75 mg/m3 /4 hr, rat
2	Not Available	Not Available	57.42% v/v, mice
3	Not Available	Not Available	Not Available
4	22.5 g/kg, rat	Not Available	Not Available

ROUTES OF ENTRY: INHALATION[Y] EYE CONTACT[Y] SKIN CONTACT[Y] SKIN ABSORPTION[Y] INGESTION[N]
EXPOSURE LIMITS: Since this product is a mixture, an OSHA or ACGIH exposure value is not available. In determination of any exposure procedures, protection or testing use the lowest rated ingredient in Section 2.
IRRITANCY OF PRODUCT: N/Av
SENSITIZATION TO PRODUCT / MEDICAL CONDITIONS AGGRAVATED: N/Av
CARCINOGENICITY: None of the ingredients in this product are listed with IARC, NTP or OSHA as being carcinogenic.
TERATOGENICITY / MUTAGENICITY / REPRODUCTIVE TOXICITY: N/Av
TOXICOLOGICAL DATA: N/Av

SECTION 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS: This product has not been tested for environmental effects.
IMPORTANT ENVIRONMENTAL CHARACTERISTICS: N/Av
AQUATIC TOXICITY: N/Av

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Characteristics and waste stream classification can change with product use and location. It is the responsibility of the user to determine the proper storage, transportation, treatment, and/or disposal methodologies for spent materials and residues at the time of disposition. All waste must be disposed of in compliance with the respective national, federal, state, and/or local regulations.

WASTE DISPOSAL OF PACKAGING: In the United States, an aerosol container that does not contain a significant amount of liquid would meet the definition of scrap metal (40 CFR 261.1(c)(6)), and would be exempt from RCRA regulation under 40 CFR 261.6(a)(3)(iv) if it is to be recycled. If containers are to be disposed of (not recycled) it must be managed under all applicable RCRA and state regulations.

LANDFILL PRECAUTIONS: Not Available

INCINERATION PRECAUTIONS: ** DO NOT INCINERATE ** CONTENTS UNDER PRESSURE **

SECTION 14. TRANSPORTATION INFORMATION

DOT HM-181 SHIPPING INFORMATION

PROPER SHIPPING NAME : Consumer Commodity
HAZARD CLASS OR DIVISION : ORM-D
UN NUMBER : 1950
PACKAGING GROUP : none
LABEL(S) REQUIRED : none
LEVEL : 1



SECTION 15. REGULATORY INFORMATION

UNITED STATES - FEDERAL:

ID	TSCA INVENTORY	SARA 302 EHS	RCRA	CERCLA	SARA 313	FIRE	REACTIVITY	SARA 311/312 ACUTE	CHRONIC	PRESSURE	CLEAN AIR ACT	CLEAN WATER ACT
1	✓	—	U002	5000#	—	✓	—	✓	—	—	—	—
2	✓	—	—	—	—	✓	—	✓	—	✓	—	—
3	✓	—	—	—	—	—	—	—	—	—	—	—
4	✓	—	—	—	—	—	—	—	—	—	—	—

UNITED STATES - STATES:

ID	CALIFORNIA	DELAWARE	FLORIDA	MASSACHUSETTS	PENNSYLVANIA	MINNESOTA	NEW JERSEY	NEW YORK	WASHINGTON
1	—	✓	✓	2,4,5,6 F8 F9	E	ANO	✓	✓	✓
2	—	—	—	—	—	—	—	—	—
3	—	—	✓	2,4 F5	—	AO	—	—	✓
4	—	—	—	—	—	—	—	—	—

SECTION 16. OTHER INFORMATION

N/E Not Established
N/Av Not Available
N/Ap Not Applicable
IARC International Agency for Research on Cancer
ACGIH American Conference of Governmental Industrial Hygienists
NIOSH National Institute for Occupational Health and Safety
TLV-TWA Threshold Limit Values, Time Weighted Average
NAERG North American Emergency Response Guidebook

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