



SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

Section 1: Product and Company Identification

Product Name:	NDT Fault Check Nuclear Developer (Aerosol)
Product Identifier:	Nuclear Developer
Product Use:	NDT Developer
Item Code(s):	RW-25000-9
SDS Code:	022
Manufacturer:	KCI, Inc.
Physical Address:	1721 Toal Street Charlotte, N.C. 28206
Mailing Address:	P.O. Box 26614 Charlotte, N.C. 28221
Business Phone:	704-372-8435
Business Fax:	704-333-5955
E-mail Address:	info@kciincorporated.com
Web Address:	www.kciincorporated.com
Emergency Phone:	CHEMTREC (24-Hour) 1-800-424-9300
Date of Preparation:	April 29, 2013 (Revised September 26, 2018)
OSHA Regulatory Status:	Regulated
WHMIS Classification:	A, B-5, D-2B

Section 2: Composition and Information on Ingredients

HAZARDOUS INGREDIENTS	CAS #	OSHA PEL	ACGIH TLV	LD50 (oral, rat)	LC50 (inhal, rat)	%	OTHER
2-Butanone	78-93-3	590 mg/m ³	300 ppm		23500 mg/m ³	70-80	
Propane/Isobutane/N-Butane	68476-86-8	1000 ppm	1000 ppm			20-30	
Zinc Stearate	67762-34-9	15 mg/m ³	10 mg/m ³			6.18783	

The exact percentage (concentration) has been withheld as a trade secret. See Section 16 for Definitions of Terms Used.

Section 3: Hazard Identification

EMERGENCY OVERVIEW

EXTREMELY FLAMMABLE AEROSOL. CONTENTS UNDER PRESSURE. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE GENETIC DEFECTS. MAY CAUSE CANCER. MAY CAUSE DROWSINESS OR DIZZINESS. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING CONTENTS MAY BE HARMFUL OR FATAL.

IF EXPOSED OR CONCERNED: Get medical advice/attention.

EYES: Causes serious eye irritation. 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.

SKIN: Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

INHALATION: Irritating to respiratory system. Avoid breathing vapors or mists. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.

INGESTION: Not an expected route of exposure. Potential for aspiration if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Do NOT induce vomiting. Consult a physician if necessary.

EFFECTS OF ACUTE EXPOSURE: N/A

EFFECTS OF CHRONIC EXPOSURE: Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Chronic hydrocarbon abuse has been associated with irregular heart rhythms and potential cardiac arrest. Prolonged skin contact may defat the skin and produce dermatitis.

SUGGESTED HMIS RATING: Health | 2 | Flammability | 4 | Physical Hazard | 1 | Personal Protection | B |

SUGGESTED NATIONAL FIRE PROTECTION ASSOCIATION: Health | 2 | Flammability | 4 | Stability | 0 |

CLASSIFICATION:

Serious eye damage/eye irritation	Category 2
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3
Flammable aerosols	Category 1

Section 4: First Aid Measures

INHALATION: Move to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.

INGESTION: Do NOT induce vomiting. Call physician if necessary. Risk of product entering the lungs on vomiting after ingestion.

EYE CONTACT: 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.

SKIN CONTACT: Wash off immediately with soap and plenty of water. Prolonged skin contact may defat the skin and produce dermatitis. Remove and wash contaminated clothing before reuse. Get medical attention immediately if symptoms occur.

Section 5: Fire Fighting Measures

CONDITIONS OF FLAMMABILITY: Extremely flammable aerosol.

MEANS OF EXTINCTION: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Foam. Dry chemical. Alcohol-resistant foam. Carbon dioxide (CO₂).

UNSUITABLE EXTINGUISHING MEDIA: Decomposition by contact with water may generate vapors which can be ignited by heat or open flame.

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

UNUSUAL FIRE AND EXPLOSION HAZARDS: Sensitivity to static discharge. Containers can build up pressure if exposed to heat (fire).

FLASH POINT / DETERMINATION: -141 °F / -96.4 °C / Based on propellant.

UPPER FLAMMABLE LIMIT: N/Av

LOWER FLAMMABLE LIMIT: N/Av

AUTO-IGNITION TEMPERATURE: N/Av

HAZARDOUS COMBUSTION PRODUCTS: N/Av

EXPLOSION DATA - SENSITIVITY TO MECHANICAL IMPACT: N/Av

EXPLOSION DATA - SENSITIVITY TO STATIC DISCHARGE: Yes

Section 6: Accidental Release Measures

LEAK / SPILL RESPONSE: Ensure adequate ventilation. For personal protection see section 8. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a properly labeled container for disposal.

SPECIAL INSTRUCTIONS: Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Section 7: Handling and Storage

HANDLING PROCEDURES / EQUIPMENT: Avoid contact with eyes. Avoid breathing vapors or mists. Contents under pressure. Do not puncture or incinerate cans. Do not stick pin or any other sharp object into opening on top of can.

STORAGE REQUIREMENTS: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

INCOMPATIBLE PRODUCTS: None known based on information supplied.

AEROSOL LEVEL: 3

Section 8: Exposure Controls / Personal Protection

EYE PROTECTION: Safety glasses with side-shields.

SKIN PROTECTION: Wear chemical resistant apron and protective gloves.

HYGIENE MEASURES: Do not eat, drink or smoke when using this product. General industrial hygiene practice. Avoid contact with skin, eyes and clothing. Wash hands and face before breaks and immediately after handling the product.

ENGINEERING MEASURES: Showers, Eyewash Stations, Ventilation Systems.

ENGINEERING CONTROLS: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

EXPOSURE GUIDELINE LEVELS:

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2-BUTANONE 78-93-3	STEL: 300 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 590 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 590 mg/m ³ (vacated) STEL: 300 ppm (vacated) STEL: 885 mg/m ³	IDLH: 3000 ppm TWA: 200 ppm TWA: 590 mg/m ³ STEL: 300 ppm STEL: 885 mg/m ³

OTHER EXPOSURE GUIDELINES: Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Section 9: Physical and Chemical Properties

PHYSICAL STATE:	Aerosol
ODOR and APPEARANCE:	Opaque White Liquid Appearance with Solvent Odor
ODOR THRESHOLD:	N/Av
SPECIFIC GRAVITY (H ₂ O=1):	0.794
VAPOR PRESSURE (mm HG):	N/Av
VAPOR DENSITY (AIR=1):	N/Av
EVAPORATION RATE (BA=1):	N/Av
BOILING POINT (°F):	N/Av
FREEZE POINT (°F):	N/Av
pH:	N/Av
COEFFICIENT OF WATER/OIL DISTRIBUTION:	N/Av
DENSITY:	N/Av
SOLUBILITY IN WATER (% by weight):	Practically insoluble
VOC CONTENT (%):	92.25
MIR VALUE	N/Av

Section 10: Stability and Reactivity

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Extremes of temperature and direct sunlight.

MATERIALS TO AVOID (INCOMPATIBILITIES): None known based on information supplied.

CONDITIONS OF REACTIVITY: None under normal processing.

HAZARDOUS DECOMPOSITION BY-PRODUCTS: None known based on information supplied.

HAZARDOUS POLYMERIZATION: None known based on information supplied.

Section 11: Toxicological Information

LC50 (inhalation) = 2-BUTANONE (CAS# 78-93-3) 23500 mg/m³ (Rat) 8h

ROUTES OF ENTRY: There is no data available for this product.

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

TARGET ORGAN EFFECTS: Central nervous system, eyes, respiratory system, skin.

CARCINOGENICITY: There are no known carcinogenic chemicals in this product.

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: 7.75438% of the mixture consists of ingredient(s) of unknown toxicity.

The following values were calculated based on chapter 3.1 of the GHS document: ATEmix (inhalation/dust/mist) 67 mg/L

ECOTOXICITY:

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Daphnia and other Aquatic Invertebrates
2-BUTANONE 78-93-3		3130 - 3320: 96 h Pimephales promelas mg/L LC50 flow-through		520: 48 h Daphnia magna mg/L EC50 5091: 48 h Daphnia magna mg/L EC50 4025 - 6440: 48 h Daphnia magna mg/L EC50 Static

PERSISTENCE AND DEGRADABILITY: No information available.

BIOACCUMULATION: No information available.

Chemical Name	log Pow
2-BUTANONE 78-93-3	0.29
PROPANE/ISOBUTANE/N-BUTANE 68476-86-8	2.8

OTHER ADVERSE EFFECTS: No information available

Section 13: Disposal Considerations

This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations. Do not re-use empty containers.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
2-BUTANONE 78-93-3	U159	Included in waste streams: F005, F039	200.0 mg/L regulatory level	U159

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
2-BUTANONE 78-93-3	Toxic Ignitable

Section 14: Transportation Information

THIS MATERIAL IS **HAZARDOUS** (Per 49 CFR 172.101) BY THE U.S. DEPARTMENT OF TRANSPORTATION.

NON-BULK SHIPMENTS:

PROPER SHIPPING NAME: Aerosol

HAZARD CLASS NUMBER and DESCRIPTION: 2.1

UN IDENTIFICATION NUMBER: UN1950

PACKING GROUP:

DOT LABEL(S) REQUIRED: Consumer Commodity ORM-D or Limited Quantity

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER, 1996:

SHIPMENTS:

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This material is considered as DANGEROUS GOODS. Use the above information for the preparation of Canadian shipments.

Section 15: Regulatory Information

TOXIC SUBSTANCES CONTROL ACT (TSCA): The product on this SDS, or all of its components, is listed under TSCA.

SARA TITLE III, SECTION 313: The following ingredients are subject to the reporting requirements of Section 313 of Title III of the Superfund and Reauthorization Act of 1986 and 40 CFR Part 372: Zinc Stearate (CAS# 67762-34-9), Weight % 6.18783, SARA 313 - Threshold Values 1.0%, Acute Health Hazard & Fire Hazard

CLEAN AIR ACT (CAA): The following ingredients appear on the List of Hazardous Air Pollutants (HAP - 42 USC 7412, Title I, Part A, p112): None

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, and LIABILITY ACT (CERCLA): Reportable Quantity (RQ) of Hazardous Substances for 2-Butanone (CAS# 78-93-3) = 5,000 Lb / 2270 Kg

CLEAN WATER ACT (CWA): The following ingredients appear on the CWA List of Hazardous Substances (40 CFR 116.4): None

CALIFORNIA PROPOSITION 65: Warning: This material may contain trace amounts of chemicals known to the state of California to cause cancer and/or birth defects and/or reproductive harm. The following ingredients appear of the Proposition 65 list(s):

PENNSYLVANIA and NEW JERSEY RIGHT TO KNOW INFORMATION: (5 most predominant ingredients / hazardous & non-hazardous) 2-Butanone CAS# 78-93-3 and Zinc Stearate CAS# 67762-34-9

MASSACHUSETTS RIGHT TO KNOW INFORMATION: (5 most predominant ingredients / hazardous & non-hazardous) 2-Butanone CAS# 78-93-3

CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS): This SDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR. WHMIS CLASS: Aerosol - A, B-5, D-2B

DOMESTIC SUBSTANCES LIST (DSL): The product on this SDS, or all of its components, is included in the DSL.

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, Time Weighted Average
NAERG	North American Emergency Response Guidebook
WHMIS	Workplace Hazardous Materials Information System

This SDS format meets ANSI Z400.1-1998, OSHA 1910.1200 and WHMIS requirements. KCI provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Product use and conditions of use are beyond the control of KCI. Warranty of materials is limited to test results of product performance as detailed in certificates of compliance. Interpretation of test results is the responsibility of end-user. No other warranties, expressed or implied, are made.