



# Safety Data Sheet

## D-70(aerosol)

### 1 Product and Company Identification:

Product Name: **D-70 Developer**  
Manufacturer: Met-L-Chek Company  
1639 Euclid Street  
Santa Monica, California, 90404, U.S.A.  
Phone: +1-310-450-1111  
Fax : +1-310-452-4046  
E-mail: info@met-l-chek.com  
Web: www.met-l-chek.com

**Emergency Phone #:** Chemtrec +1-800-424-9300 in U.S.A.; outside U.S.A. 001-703-527-3887

**Recommended Use:** NDT Inspection developer per ASTM E-165 & ASTM E-1417, form d & e.  
**Restrictions on Use:** Flammable, avoid use near open flames or ignition source, avoid concentrated vapors.  
**Prepared by:** Met-L-Chek Company 1/01/2014

### 2 Hazards Identification:

#### GHS: Classification:

Extremely flammable aerosol (category 1)  
Acute toxicity, inhalation (category 4).  
Skin irritation (category 3)  
Eye irritation (category 2A)  
Specific target organ toxicity - single exposure (category 3), Central nervous system.

#### Picograms:



**Signal Word:** **Danger**

**Hazard Statements:**  
**H222:** Extremely flammable aerosol  
**H229:** Pressurized container: may burst if heated.  
**H316:** Causes mild skin irritation.  
**H319:** Causes serious eye irritation.  
**H335:** May cause respiratory irritation.  
**H336:** May cause drowsiness or dizziness.

#### Precautionary statements:

**P102:** Keep out of reach of children.  
**P210:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
**P211:** Do not spray on an open flame or ignition source.  
**P251:** Do not pierce or burn, even after use.  
**P261:** Avoid breathing fumes/gas/mist/vapors/spray.  
**P280:** Wear protective glove/clothing/eye protection/face protection.  
**P284:** In case of inadequate ventilation wear respiratory protection  
**P410:** Protect from sunlight  
**P412:** Do not expose to temperatures exceeding 50°C/122°F.

**OSHA Hazards:** Extremely Flammable Aerosol, Target Organ Effect, Irritant

**HMIS Classification:** Health hazard-2, Flammability-4, Reactivity-0.

**WHMIS (Canada):** A, B5, D2B

**EC:** Xi-Irritant; F-Flammable; R-12(Extremely Flammable); R-36,(Irritating to eyes); R-67(Vapors may cause drowsiness or dizziness).

### 3 Hazardous Ingredients Identification:

Ingredient(s):	CAS #	% by Weight	EC #
2-propanol (Isopropanol)	67-63-0	40-45	200-661-7
Propellant (petroleum gas liquified)	68476-85-7	40-50	270-704-2
Hydrous magnesium silicate (talco)*	14807-96-6	1-5	238-877-9
*contains < 0.1% quartz	14808-60-7	< 0.001	

# Safety Data Sheet

## D-70(aerosol)

Page 2 of 3  
Date Revised 1/10/2014  
Supersedes 4/12

### 4 First Aid Measures:

GHS response statements:

**IF SWALLOWED:** Rinse mouth, Do Not induce vomiting, get medical attention if feeling unwell.

**IF ON SKIN:** Wash with plenty of water. If skin irritation occurs, get medical advice/attention.

**IF INHALED:** Remove person to fresh air and keep comfortable for breathing, get medical advice/attention if you feel unwell.

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easily to do. Continue rinsing, get medical attention.

**IF ON CLOTHING:** Take off contaminated clothing and wash it before reuse.

### 5 Fire-fighting Measures:

**Suitable extinguishing agents:** Alcohol resistant foam, dry powder, carbon dioxide (CO<sub>2</sub>), water haze. For safety reasons water spray is an unsuitable extinguishing agent, but may be used to cool unopened containers.

**Hazardous combustion products:** Carbon monoxide and carbon dioxide.

**Special protective equipment for fire-fighters:** Wear self-contained respiratory protective device. Wear fully protective suit.

**Flash Point:** -60°C(-76°F) propellant      **Explosive Limit:** 1.4% propellant      **Autoignition Temperature:** 365°C (689°F)propellant

### 6 Accidental Release Measures:

**Spill:** Evacuate area. Ventilate area. Remove all sources of ignition. Wear protective gear. Vapors can accumulate in low areas to form explosive concentrations. Collect liquid in an appropriate container or absorb with an inert material such as vermiculite, dry sand, or earth; DO NOT use combustible materials. Place in a chemical waste container. **DO NOT flush to sewer.**

### 7 Handling and Storage:

**Handling:** Avoid contact with skin and eyes. Avoid inhalation of vapors or mist. Use explosion-proof equipment. Keep away from sources of ignition. Protect from build up of static charge, ground containers when transferring product. Containers may be hazardous when empty since residue liquid and vapors may be present.

**Storage:** Store in a cool, dry well-ventilated location, away from areas where fire hazard or ignition sources may exist. Store and use in NO SMOKING area.. Do not expose to temperatures over 50°C/122°F. Keep out of direct sunlight.

### 8 Exposure Controls/Personal Protection:

**Eye Protection:** Chemical splash goggles, face shield.

**Skin Protection:** Wear resistant gloves such as Nitrile Rubber, impervious clothing, apron and boots are suggested as well.

**Ventilation System:** A system of local or general exhaust is recommended to keep employee exposure below the airborne exposure limits. If exposure limit is exceeded use organic vapor respirator (type A), or self contained breathing apparatus.

**Exposure Limits:** 2-Propanol; CAS 67-63-0

TWA 200 ppm ACGIH (TLV)

STEL: 400 ppm ACGIH (TLV)

TWA : 400 ppm /980 mg/m<sup>3</sup> (OSHA Table Z-1 limits for air contaminants)

STEL : 500 ppm /1225 mg/m<sup>3</sup> (OSHA Table Z-1 limits for air contaminants)



For dry powder nuisance exposure use type P96(US) or type Pi(EU EN143 particle respirator. For higher level protection use type OV/AG/P99(US or ABEK-P2(EU EN 143) respirator cartridges.

**Exposure Limits:** Hydrous magnesium silicate; CAS14807-96-6(< 1% quartz) dry powder.

TWA :2 mg/m<sup>3</sup> ACGIH (TLV)

TWA: 2 mg/m<sup>3</sup> OSHA Table Z-1 limits for air contaminants

TWA :2 mg/m<sup>3</sup> NIOSH Recommended exposure limits.



### 9. Physical Properties: (bulk material)

**Form:** milky white suspension in clear liquid.

**Initial Boiling Point:** 82.2°C (180°F) @ 760 mm Hg.

**Vapor Pressure :** 43.2 hPa (32.4 mm Hg) @ 20°C(68° F)  
58.7 hPa (44.0 mm Hg) @ 25°C(77° F)

**Percent Volatile:** 90 %, VOC's-770 g/L

**Explosive Limit:** 2%

**Density:** 0.856 g/cm<sup>3</sup> at 15°C(60°F)

**Flash Point:** 12°C(53.6°F)TCC

**Specific Vapor Density Air=1:** 2.07

**Solubility in water:** 90%

**Autoignition Temperature:** 425°C (797°F)

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## D-70(aerosol)

Page 3 of 3  
Date Revised 1/10/2014  
Supersedes 4/2012

### 10. Stability and Reactivity:

**Thermal decomposition:** Stable under ordinary conditions of use and storage, under fire conditions will form carbon dioxide.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities:** Avoid contact with acetaldehyde, acids, chlorine, ethylene oxide, isocyanate and strong oxidizing agents. Do not use with aluminum equipment at temperatures above 48.8°C(120°F).

### 11 Toxicological Information:

**Acute toxicity:** Oral LD50 - rat 5045 mg/kg; Inhalation LC50 - rat - 8h 16000ppm; Dermal LD50 - rabbit 12800 mg/kg

**Carcinogenicity:** IARC: 3-Group3: not classified as to its carcinogenicity to humans.

NTP: No component present at levels greater than 0.1% is identified as a known carcinogen.

OSHA: No component at levels greater than 0.1% is identified as a carcinogen.

**GHS specific target organ toxicity single exposure:** may cause drowsiness or dizziness.

**GHS specific target organ toxicity repeated exposure:** no data

**Signs and symptoms of exposure:** Central nervous system depression, prolonged or repeated exposure can cause; nausea, headache, vomiting, narcosis, drowsiness. Over exposure may cause mild, reversible liver effects.

### 12 Ecological Information:

**Aquatic toxicity:** EC50/ 24h- 5102 mg/L (daphnia) LC50/ 96h- 9649 mg/L (flathead minnow) EC50/ 24h-1000 mg/L (algae)

**General notes:** Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### 13 Disposal Considerations:

**Recommendation:** Dispose of container and unused contents with a licensed waste facility. Empty containers may contain flammable residue and vapors. Must not be disposed together with household garbage. Do not allow product to reach sewage system. Collect all waste in suitable and labelled containers and dispose according to local legislation. Do not incinerate container.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14. Transportation:

#### USA DOT Information

	Aerosol
Shipping name:	Consumer commodity
Label:	ORM-D
Hazard class:	ORM-D
Identification #:	none
Packing Group:	none
Marine pollutant:	No
Poison Inhalation Hazard	No

#### IATA/IMDG

	Aerosol
Shipping name	Aerosols, flamma-
Label:	Flammable gas
Hazard class:	2.1
Identification #:	UN1950
Packing Group:	na
Marine pollutant:	No



### 15. Regulatory Information:

**OSHA Hazards:** Flammable liquid, Target Organ Effect, Irritant

**SARA 302:** No chemicals in this material are subject to the reporting requirements of SARA Title III Section 302.

**SARA 313:** The following components are subject to the reporting levels established by SARA Title III Section 313.

2-Propanol CAS 67-63-0

**311/312 Hazards:** Fire Hazard, Acute Health Hazard, Chronic Health Hazard.

**California Proposition 65:-** This product contains a chemical known to the State of California to cause cancer, Quartz CAS 14808-60-7

**Massachusetts Right to Know:** 2-Propanol CAS 67-63-0; Hydrous magnesium silicate CAS 14807-96-6; Quartz CAS 14808-60-7.

**New Jersey Right to Know:-** 2-Propanol CAS 67-63-0; Hydrous magnesium silicate CAS 14807-96-6; Quartz CAS 14808-60-7.

**Pennsylvania Right to Know:-** 2-propanol CAS# 67-63-0; Hydrous magnesium silicate CAS 14807-96-6; Quartz CAS 14808-60-7.

### 16. Other Information:

The information accumulated herein is believed to be accurate but does not purport to be all inclusive and shall be used only as a guide. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances with regard to proper safety precautions.

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