



Safety Data Sheet acc. to OSHA HCS



Printing date 04/24/2015

Reviewed on 01/08/2015

1: Identification

- **1.1 Product identifier**
- **Trade name: Developer D-70**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Flammable, avoid use near open flames or ignition source, avoid concentrated vapors
- **Application of the substance / the mixture**
NDT Inspection developer "form d & e" per AMS-2644/ASTM E-1417
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
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
http://www.met-l-chek.com
- **Information department:** Product safety department
- **1.4 Emergency telephone number:** Chemtrec +1-800-424-9300 in U.S.A.; outside U.S.A. 001-703-527-3887

2: Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Flam. Liq. 2 H225 Highly flammable liquid and vapor.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labeled according to the CLP regulation.
- **Hazard pictograms**

GHS02 GHS07
- **Signal word** Danger
- **Hazard-determining components of labeling:**
propan-2-ol
- **Hazard statements**
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
- **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.

(Contd. on page 2)



Safety Data Sheet acc. to OSHA HCS

Printing date 04/24/2015

Reviewed on 01/08/2015

Trade name: Developer D-70

(Contd. of page 1)

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 3
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 3
Reactivity = 0

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3: Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol	50-100%
CAS: 471-34-1 EINECS: 207-439-9	calcium carbonate	2.5-10%

- **Most important ingredients**

CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol	50-100%
CAS: 471-34-1 EINECS: 207-439-9	calcium carbonate	2.5-10%
CAS: 14807-96-6 EINECS: 238-877-9	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	2.5-10%

- **Additional information:** CAS no. :: 67-63-0 / REACH no. :: 01-2119457558-25

4: First-aid measures

- **4.1 Description of first aid measures**
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
Take affected persons into fresh air and keep quiet.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)

**Safety Data Sheet**
acc. to OSHA HCS

Printing date 04/24/2015

Reviewed on 01/08/2015

Trade name: Developer D-70

(Contd. of page 2)

- **After swallowing:**
Do not induce vomiting; immediately call for medical help.
A person vomiting while lying on their back should be turned onto their side.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5: Fire-fighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, sand, extinguishing powder. Do not use water.
Water haze
Foam
ABC powder
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
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.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7: Handling and storage

- **7.1 Precautions for safe handling**
Store in cool, dry place in tightly closed receptacles.
Work only in fume cabinet.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Use explosion-proof apparatus / fittings and spark-proof tools.

(Contd. on page 4)



Safety Data Sheet acc. to OSHA HCS

Printing date 04/24/2015

Reviewed on 01/08/2015

Trade name: Developer D-70

(Contd. of page 3)

Containers may be hazardous when empty since residue liquid and vapors may be present

• **7.2 Conditions for safe storage, including any incompatibilities**

• **Storage:**

• **Requirements to be met by storerooms and receptacles:** Store in a cool location.

• **Information about storage in one common storage facility:** Not required.

• **Further information about storage conditions:**

Store receptacle in fume compartment.

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

• **7.3 Specific end use(s)** No further relevant information available.

8: Exposure controls/personal protection

• **Additional information about design of technical systems:** No further data; see item 7.

• **8.1 Control parameters**

• **Components with limit values that require monitoring at the workplace:**

67-63-0 propan-2-ol

PEL Long-term value: 980 mg/m³, 400 ppm

REL Short-term value: 1225 mg/m³, 500 ppm

Long-term value: 980 mg/m³, 400 ppm

TLV Short-term value: 984 mg/m³, 400 ppm

Long-term value: 492 mg/m³, 200 ppm

BEI

471-34-1 calcium carbonate

PEL Long-term value: 15* 5** mg/m³

*total dust **respirable fraction

REL Long-term value: 10* 5** mg/m³

*total dust **respirable fraction

TLV TLV withdrawn

• **Ingredients with biological limit values:**

67-63-0 propan-2-ol

BEI 40 mg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: Acetone (background, nonspecific)

• **Additional information:** The lists that were valid during the creation were used as basis.

• **8.2 Exposure controls**

• **Personal protective equipment:**

• **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

(Contd. on page 5)

Safety Data Sheet acc. to OSHA HCS

Printing date 04/24/2015

Reviewed on 01/08/2015

Trade name: Developer D-70

(Contd. of page 4)

• **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.



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. 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.

• **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

• **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• **Eye protection:**



Safety glasses

Tightly sealed goggles

• **Body protection:**

Protective work clothing
Use protective suit.

9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Appearance:**

Form:	Liquid
Color:	White
Odor:	Characteristic
Odour threshold:	Not determined.

• **pH-value:** Not determined.

• **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	> 82 °C (> 180 °F)
Flash point:	13 °C (55 °F) (ASTM D-93)

• **Flammability (solid, gaseous):** Not applicable.

(Contd. on page 6)

**Safety Data Sheet**
acc. to OSHA HCS

Printing date 04/24/2015

Reviewed on 01/08/2015

Trade name: Developer D-70

(Contd. of page 5)

· Ignition temperature:	425 °C (797 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Explosion limits:	
Lower:	2.0 Vol %
Upper:	12.0 Vol %
· Vapor pressure at 20 °C (68 °F):	43 hPa (32 mm Hg)
· Density at 20 °C (68 °F):	0.856 g/cm ³ (7.143 lbs/gal) (ASTM D-1298)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	88.0 %
VOC content:	88.0 %
	753.3 g/l / 6.29 lb/gl
· 9.2 Other information	No further relevant information available.

10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Avoid contact with acetaldehyde, acids, chlorine, ethylene oxide, isocyanate and strong oxidizing agents
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Information on hazardous ingredients
- **LD/LC50 values that are relevant for classification:**

67-63-0 propan-2-ol

Dermal	LD50	12800 mg/kg (rabbit)
--------	------	----------------------

(Contd. on page 7)

USA



Safety Data Sheet acc. to OSHA HCS

Printing date 04/24/2015

Reviewed on 01/08/2015

Trade name: Developer D-70

(Contd. of page 6)

Inhalative	LC50/4h	0,29	>20 mg/kg (rat)
------------	---------	------	-----------------

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** Irritating effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

67-63-0	propan-2-ol	3
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	2B

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

Information on hazardous ingredients

67-63-0 propan-2-ol

EC50/ 48 h	>100 mg/l (daphnia)
LC50/ 96 h	>100 mg/l (Fish)

- **12.2 Persistence and degradability** No further relevant information available.

- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

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

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Waste/ unused products

Collect all waste in suitable and labelled containers and dispose according to local legislation.

(Contd. on page 8)

USA



Safety Data Sheet acc. to OSHA HCS

Printing date 04/24/2015



Reviewed on 01/08/2015

Trade name: Developer D-70

(Contd. of page 7)

- **Uncleaned packagings:**
- **Recommendation:**
Waste / used products
Waste products and empty packages dispose of in accordance with local regulations.
Empty containers may contain flammable residue and vapors.

14: Transport information

<ul style="list-style-type: none"> · 14.1 UN-Number · DOT, ADR, IMDG, IATA 	UN1219
<ul style="list-style-type: none"> · 14.2 UN proper shipping name · DOT · ADR · IMDG, IATA 	Isopropanol (Isopropyl alcohol), mixture 1219 Isopropanol (Isopropyl alcohol), mixture ISOPROPANOL (ISOPROPYL ALCOHOL), mixture
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · DOT 	3 Flammable liquids
<ul style="list-style-type: none"> · Class · Label 	3 3
<ul style="list-style-type: none"> · ADR, IMDG, IATA 	3 Flammable liquids
<ul style="list-style-type: none"> · Class · Label 	3 3
<ul style="list-style-type: none"> · 14.4 Packing group · DOT, ADR, IMDG, IATA 	II
<ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: 	Warning: Flammable liquids 33 F-E,S-D
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations 	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L

(Contd. on page 9)



Safety Data Sheet acc. to OSHA HCS

Printing date 04/24/2015

Reviewed on 01/08/2015

Trade name: Developer D-70

(Contd. of page 8)

- **ADR**
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

- **IMDG**
- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

- **IATA**
- **Remarks:** Quantity Limitation - Passenger Aircraft
5 L
Quantity Limitation - Cargo Aircraft
60 L
Quantity Limitation - Limited quantities
1 L
Packaging Instruction:
Passenger Aircraft - PI 353
Cargo aircraft - PI 364
Limited quantities - PI Y341

- **UN "Model Regulation":** UN1219, Isopropanol (Isopropyl alcohol), mixture, 3, II

15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

• **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

• **Section 313 (Specific toxic chemical listings):**

67-63-0 | propan-2-ol

• **TSCA (Toxic Substances Control Act):**

67-63-0 | propan-2-ol

471-34-1 | calcium carbonate

14807-96-6 | Talc (Mg3H2(SiO3)4)

21645-51-2 | aluminium hydroxide

• **Proposition 65**

• **Chemicals known to cause cancer:**

None of the ingredients is listed.

• **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

• **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

• **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

(Contd. on page 10)

**Safety Data Sheet**
acc. to OSHA HCS

Printing date 04/24/2015

Reviewed on 01/08/2015

Trade name: Developer D-70

(Contd. of page 9)

· Cancerogenity categories**· EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

67-63-0	propan-2-ol	A4
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· Other regulations, limitations and prohibitive regulations

California Proposition 65. Chemicals known to cause cancer: yes
Massachusetts Right to Know law: yes
New Jersey Right to Know law: yes
Pennsylvania Right to Know law: yes

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Product safety department**· Contact:** Met-L-Chek Company**· Date of preparation / last revision** 04/24/2015 / -**· Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· * Data compared to the previous version altered.

USA