



Safety Data Sheet acc. to OSHA HCS

Printing date 10/30/2015

Reviewed on 07/06/2015

1: Identification

- **1.1 Product identifier**
- **Trade name: Developer D-70 spraycan**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **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. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.
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**
H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.
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.
P251 Pressurized container: Do not pierce or burn, even after use.
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.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 Dispose of contents/container in accordance with local regulations.

(Contd. on page 2)

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

Printing date 10/30/2015

Reviewed on 07/06/2015

Trade name: Developer D-70 spraycan

(Contd. of page 1)

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

Health = 1
Fire = 4
Reactivity = 3

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

HEALTH 1 Health = 1
FIRE 4 Fire = 4
REACTIVITY 3 Reactivity = 3

- **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	25-50%
CAS: 68476-85-7 EINECS: 270-704-2	Petroleum gases, liquefied	25-50%
CAS: 471-34-1 EINECS: 207-439-9	calcium carbonate	1-10%

- **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.
- **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.

(Contd. on page 3)

US

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

Printing date 10/30/2015

Reviewed on 07/06/2015

Trade name: Developer D-70 spraycan

(Contd. of page 2)

- **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:**
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** Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
Do not spray on a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
Use explosion-proof apparatus / fittings and spark-proof tools.
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.
Observe official regulations on storing packagings with pressurized containers.

(Contd. on page 4)



Safety Data Sheet acc. to OSHA HCS

Printing date 10/30/2015

Reviewed on 07/06/2015

Trade name: Developer D-70 spraycan

(Contd. of page 3)

- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Do not gas tight seal receptacle.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **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/m ³ , 400 ppm
REL	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm BEI
68476-85-7 Petroleum gases, liquefied	
PEL	Long-term value: 1800 mg/m ³ , 1000 ppm
REL	Long-term value: 1800 mg/m ³ , 1000 ppm
TLV	refer to Appendix F in TLVs and BEIs book
471-34-1 calcium carbonate	
PEL	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV	TLV withdrawn

- **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.

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.

(Contd. on page 5)

Safety Data Sheet acc. to OSHA HCS

Printing date 10/30/2015

Reviewed on 07/06/2015

Trade name: Developer D-70 spraycan

(Contd. of page 4)

· **Protection of hands:**



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:** Use protective suit.

9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

· Form:	Aerosol
· Color:	White
· Odor:	Characteristic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	-40 °C (-40 °F)

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

· **Ignition temperature:** 365 °C (689 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

· Lower:	2.0 Vol %
· Upper:	12.0 Vol %

· **Vapor pressure at 20 °C (68 °F):** 43 hPa (32 mm Hg)

(Contd. on page 6)



Safety Data Sheet acc. to OSHA HCS

Printing date 10/30/2015

Reviewed on 07/06/2015

Trade name: Developer D-70 spraycan

(Contd. of page 5)

· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not applicable.
· 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:	48.4 %
VOC content:	48.4 %
	484.0 g/l / 4.04 lb/gl
· 9.2 Other information	No further relevant information available.

10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **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) |
| Inhalative | LC50/4h 0,29 | >20 mg/kg (rat) |
- **Primary irritant effect:**
 - **on the skin:** Based on available data, the classification criteria are not met.
 - **on the eye:**
Causes serious eye irritation.
 - **Sensitization:** Based on available data, the classification criteria are not met.

(Contd. on page 7)



Safety Data Sheet acc. to OSHA HCS

Printing date 10/30/2015

Reviewed on 07/06/2015

Trade name: Developer D-70 spraycan

(Contd. of page 6)

· **Additional toxicological information:**

· **Carcinogenic categories**

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

67-63-0	propan-2-ol	3
14807-96-6	Talc (Mg3H2(SiO3)4)	3

· **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.

· **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.

US

(Contd. on page 8)



Safety Data Sheet acc. to OSHA HCS




Printing date 10/30/2015

Reviewed on 07/06/2015

Trade name: Developer D-70 spraycan

(Contd. of page 7)

14: Transport information

<ul style="list-style-type: none"> • 14.1 UN-Number • DOT, ADR, IMDG, IATA 	UN1950
<ul style="list-style-type: none"> • 14.2 UN proper shipping name • DOT • ADR • IMDG • IATA 	Aerosols, flammable 1950 Aerosols AEROSOLS AEROSOLS, flammable
<ul style="list-style-type: none"> • 14.3 Transport hazard class(es) • DOT 	<ul style="list-style-type: none"> • Class 2.1 • Label 2.1
<ul style="list-style-type: none"> • ADR 	<ul style="list-style-type: none"> • Class 2 5F Gases • Label 2.1
<ul style="list-style-type: none"> • IMDG, IATA 	<ul style="list-style-type: none"> • Class 2.1 • Label 2.1
<ul style="list-style-type: none"> • 14.4 Packing group • DOT, ADR, IMDG, IATA 	not applicable
<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: Gases - F-D,S-U
<ul style="list-style-type: none"> • 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.

(Contd. on page 9)



Safety Data Sheet acc. to OSHA HCS

Printing date 10/30/2015

Reviewed on 07/06/2015

Trade name: Developer D-70 spraycan

(Contd. of page 8)

• **Transport/Additional information:**

• **DOT**

• **Quantity limitations**



On passenger aircraft/rail: 75 kg



On cargo aircraft only: 150 kg

• **ADR**

• **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

• **Remarks:**

Aerosols can be transported under LIMITED QUANTITIES (LQ).

See ADR 3.4 - LQ2. That means no label 2.

• **IMDG**

• **Limited quantities (LQ)**

1L

• **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

• **Remarks:**

Aerosols can be transported under LIMITED QUANTITIES (LQ).

See IMDG 3.4 - LQ2. That means no label 2.

• **IATA**

• **Remarks:**

Quantity Limitation - Passenger Aircraft

75 kg

Quantity Limitation - Cargo Aircraft

150 kg

Quantity Limitation - Limited quantities

30 kg G

Packaging Instruction:

Passenger Aircraft - PI 203

Cargo aircraft - PI 203

Limited quantities - PI Y203

• **UN "Model Regulation":**

UN1950, Aerosols, 2.1

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

(Contd. on page 10)



Safety Data Sheet acc. to OSHA HCS

Printing date 10/30/2015

Reviewed on 07/06/2015

Trade name: Developer D-70 spraycan

(Contd. of page 9)

• TSCA (Toxic Substances Control Act):

All ingredients are listed.

• 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.

• 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.

• 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 10/30/2015 / -

• 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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Aerosol 1: Flammable aerosols, Hazard Category 1

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.