Safety Data Sheet
acc. to OSHA HCS

Printing date 05/01/2015 Reviewed on 05/01/2015

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1: Identification

· **1.1 Product identifier**

· **Trade name: KO-17 AEROSOL**

· **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 penetrant “Type 2 Methods “A and C” per AMS-2644/ ASTM E-1417

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
Sherwin Incorporated
5530 Borwick Ave
South Gate, CA 90280
Phone: (562) 861-6324
Fax: (562) 923-8370
https://www.sherwininc.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**
Flammable Aerosol 1 H220
Gases Under Pressure – Compressed Gas
Eye Dam. 1 H318 Causes serious eye damage.
Skin Irrit. 2 H315 Causes skin irritation.
Suspected of damaging fertility or the unborn child.- NOT listed as carcinogenic by IARC, NTP or OSHA-Ca

· **2.2 Label elements**

· **Labeling according to Regulation (EC) No 1272/2008**
The product is classified and labeled according to the CLP regulation.

· **Hazard pictograms**

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Secondary alcohol ethoxylates (3)
Hydrocarbon propellant – Propane and Butane
C.I.Solvent Red 164 (eq)
Solvent naphtha (petroleum), heavy arom

· **Hazard statements**
H220 Flammable aerosol. Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.- NOT listed as carcinogenic by IARC, NTP or OSHA-Ca

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· **Precautionary statements** (Contd. of page 1)

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P280	Wear protective gloves. Wear eye protection / face protection.
P301+P310	If swallowed: Immediately call a doctor.
P331	Do NOT induce vomiting
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.
P403+P410	Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50 ºC/122 ºF

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

Classification system:

· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 4
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 1
Fire = 4
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 74-98-6	Propane	10-30%
CAS 75-28-5	Butane	10-30%
CAS: 68131-40-8	Secondary alcohol ethoxylates (3)	10-20%
CAS: 92257-31-3 EINECS: 296-120-8	C.I.Solvent Red 164 (eq)	1-10%
64742-53-6	Distillates (petroleum), hydrotreated light naphthenic	1-10%

· **Most important ingredients**

CAS: 64742-47-8 EINECS: 265-149-8	Distillates (petroleum), hydrotreated light	30-40%
CAS 74-98-6	Propane	10-30%
CAS 75-28-5	Butane	10-30%

Additional information:
Metabolic studies on some Azo-dyes have detected reduction of azo bonds to aromatic amines. It is prudent to assume that the product could metabolize to o-toluidine, which have been identified as animal carcinogens.

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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. Then 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.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5: Fire-fighting measures

Contents under pressure Bursting hazard if heated.
· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Water haze
Foam
ABC powder
· **For safety reasons unsuitable extinguishing agents:** Water spray
· **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:**
Contain spill and then collect with non-combustible absorbent material.
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).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
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.

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7: Handling and storage

· **7.1 Precautions for safe handling** Keep away from sources of ignition..
· **Information about protection against explosions and fires:**
Keep away from sources of ignition. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid contact with skin and eye, breathing vapor or mist. Do not swallow. Use only outdoors or in a well-ventilated area. When using do not eat, drink or smoke. (See section 8)
Containers may be hazardous when empty since residue may be present.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:** Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50 ºC/122 ºF
· **Requirements to be met by storerooms and receptacles:** See above
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.
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:**

Propane, isobutane	OSHA PEL TWA 1000 ppm

· **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. Do not inhale gases / fumes / aerosols.
· **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.

· **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 cannot 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.

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· **Eye protection:**

Safety glasses

Tightly sealed goggles

· **Body protection:** Use suitable protective clothing.

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9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Spray can under pressure.
Color:	Red
· **Odor:**	Hydrocarbons
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Liquid: -22°C. -7°F
Boiling point/Boiling range:	Liquid: 240 °C (464 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	Not determined
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Not determined.
· **Danger of explosion:**	Can under pressure with a flammable gas.
· **Explosion limits:**	
Lower:	Liquid: 0.5%(V).
Upper:	Liquid: 7.0%(V). Propellant: 9.5% (vol.) Gas in air
· **Vapor pressure:**	Liquid <0.1 mm Hg @ 20°c, 68°F calculation.
· **Density at 20 °C (68 °F):**	Liquid 0.9 g/cm³ (8.2 lbs/gal)
· **Relative density**	Not applicable
· **Vapour density**	Propellant: 1.766
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Negligible
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic at 40 °C (104 °F):	Liquid 26 cSts (ASTM D-445)
· **Solvent content:**	
Organic solvents:	0.0 %
· **9.2 Other information**	No further relevant information available.

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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.(Contd. on page 7)
· **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:** Carbon monoxide, volatile hydrocarbon vapors.

11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:** Information on hazardous ingredients
· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** Strong irritant with the danger of severe eye injury.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
:Carcinogenic Status: Contains an o-Toluidine-based azo dye. Metabolic studies on some Azo-dyes, following prolonged skin or oral cavity contact, have detected reduction of azo bonds to aromatic amines. This product, therefore, could potentially metabolize to o-toluidine and o-aminoazotoluene upon prolongedskin or oral cavity contact. o-Toluidine and o-aminoazotoluene have been identified as animal carcinogens.
:Reproductive effects: May affect reproductive system. Contains: a version of 2-Naphthalenol,1-[[4-(phenylazo)phenyl]azo]-,arheptyl ar',ar''-me derivitives. A reproductive screening study in rats with some versions of 2-Naphthalenol,1-[[4-(phenylazo)phenyl]azo]-,ar-heptyl ar',ar''-me derivitives produced adverse effects on reproduction [ovarian atrophy; reduced litter size; reduced pup weight with no apparent abnormal morphology of the surviving pups] at 20 and 80 mg/kg/day. The relevance of these findings for humans is uncertain, but may be predictive of the potential to cause harm.·
· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
Contains no ingredients listed as a carcinogen
· **NTP (National Toxicology Program)**
None of the ingredients is listed.
· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

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12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:**

68131-40-8 Secondary alcohol ethoxylates (3)	
EC50/ 48 h	3.1 mg/l (daphnia) LC50/ 96 h
LC50/96h	1-10 mg/l (Fish)

12.2 Persistence and degradability No further relevant information available. (Contd. of page 6)
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:**
Secondary alcohol ethoxylates: This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents
· **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.

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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 labeled containers and dispose according to local legislation.

· **Uncleaned packagings:**
· **Recommendation:**
Depressurize can
Waste / used products
Waste products and empty packages dispose of in accordance with local regulations.
Empty containers may contain residue and vapors.
· **Recommended cleansing agent:** Not applicable

14: Transport information

· **14.1 UN-Number**	
· **DOT**	Consumer commodity ORM-D
· **ADR, IMDG, IATA**	UN 1950
· **14.2 UN proper shipping name**	
· **DOT**	Consumer commodity ORM-D ·
ADR, IMDG, IATA	Aerosols, flammable

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14.3 Transport hazard class(es)
· **DOT** ORM-D – no hazard classes

ADR, IMDG, IATA

Aerosols, flammable, 2.1

· **14.4 Packing group**	
· **DOT**	Consumer commodity ORM-D
· **ADR, IMDG, IATA**	None
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	Not applicable
· **14.6 Special precautions for user**	Not applicable.

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· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:** .

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: 75kg (165 lbs)

On cargo aircraft only: 150kg (330 lbs)

· **Remarks:**

· **UN "Model Regulation":** -

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15: Regulatory information

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

· **Sara**

· **Section 302 (extremely hazardous substances):**

None of the ingredient is listed.

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

None of the ingredients is listed.

Section 311/312

Immediate (acute) health hazard, Fire hazard

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

All products 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)**

None of the ingredients is listed.

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· **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.

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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.

· **Contact:** Sherwin Incorporated
· **Date of preparation / last revision** 05/01/2015 / -
· **Abbreviations and acronyms:**
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)
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Asp. Tox. 1: Aspiration hazard, Hazard Category 1
· *** Data compared to the previous version altered.**