

SAFETY DATA SHEET

Product No. 16580 DAG 580 Dry Film Lube

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Section 1: Product and Company Identification

Product Name: DAG 580 Dry Film Lube

Company Name

Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day

CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

Classification of the substance or mixture.

Signal Word: DANGER

GHS Categories:

GHS02 – Flammable Liquid

Highly Flammable Liquid and Vapor:

Category 2

GHS07 – Eye Irritation

Causes Serious Eye Irritation:

Category 2A

GHS08 - Health hazard

Causes Damage to Organs:

Specific target organ toxicity:

Category 1

· single exposure

Label elements

GHS Pictograms:



GHS02



GHS07



GHS08

Hazard Statements

H225

Highly flammable liquid and vapor.

H319

Causes serious eye irritation.

H370

Caused damage to organs.

Precautionary Statements

Prevention:

P210

Keep away from heat, sparks, open flames, hot surfaces - no smoking.

P233

Keep container tightly closed.

P241

Use explosion-proof equipment.

P242

Use non-sparking tools.

P243

Take action to prevent static discharges.

P260

Do not breathe dust/fume/gas/mist/vapors/spray.

P264

Wash effected area thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P273

Avoid release into the environment.

P280

Wear protective gloves, eye protection, and face protection.

Response:

P303+P361	If on skin (or hair): Take off immediately all contaminated clothing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P317	If exposed or concerned: Get emergency medical help.
P337+P317	If eye irritation persists: Get emergency medical help.
P370+P378	In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.
P403+P235	Store in well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Section 3: Composition / Information on Ingredients

Substance/Mixture: Mixture

<u>Hazardous Component(s)</u>	<u>CAS Number</u>	<u>EINECS Number</u>	<u>% w/w *</u>
Ethanol	64-17-5	200-578-6	60-80
Graphite	7782-42-5	231-955-3	10-30
Methanol	67-56-1	200-659-6	1-5
Acetone	67-64-1	200-662-2	1-5

*Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

Section 4: First Aid Measures

Inhalation:	If mist or vapor of this product is inhaled, remove person immediately to fresh air. Seek medical attention if symptoms develop or persist.
Skin Contact:	In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. If irritation persists, repeat flushing and get medical attention. Discard any shoes or clothing items that cannot be decontaminated.
Eye(s) Contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical treatment necessary.
Ingestion:	Immediate medical treatment necessary. Rinse the mouth. Drink 1-2 glasses of water. Do not induce vomiting.
Symptoms:	See Section 11
Note to physician:	Treat symptomatically and supportively.

Section 5: Fire Fighting Measures

Suitable extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide. Avoid using a direct stream of water.
Specific firefighting procedures:	Wear full protective clothing. Wear self-contained breathing apparatus. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	DANGEROUS when exposed to heat and flame. This material can be ignited by flame or spark under normal atmospheric conditions. Vapors may travel considerable distance to source of ignition and flash back.
Hazardous combustion products:	Irritating and toxic gases or fumes may be released during a fire.

Section 6: Accidental Release Measures

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow to enter the ground/soil.

Clean-up methods: Ensure adequate ventilation. Remove all sources of ignition.
Soak up with inert absorbent. Scrape up spilled material and place in a closed container for disposal.

Section 7: Handling and Storage

Handling: Avoid contact with eyes, skin and clothing.
Do not inhale vapors and fumes.
Use only with adequate ventilation.
Wash thoroughly after handling.
Use proper bonding and/or grounding procedures.

Storage: For safe storage, store between 5 - 30°C (41 -86°F).
Outside temperature limits, the product will be irreversibly damaged and no longer usable.
Keep away from heat, spark and flame.
Keep container tightly sealed.
Store in original container until ready to use.
Keep out of reach of children and away from food and drink.

For information on product shelf-life, review labels on container or check the Technical Notes.

Section 8: Exposure Controls / Personal Protection

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and

<u>Hazardous Component(s)</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>AIHA WEEL</u>	<u>OTHER</u>
Ethanol	1,000 ppm STEL	1,000 ppm (1,900 mg/m ³) PEL	None	None
Graphite	2mg/m ³ TWA Respirable fraction	5 mg/m ³ PEL Respirable fraction 15 mg/m ³ PEL Total dust	None	None
Methanol	200 ppm TWA 250 ppm STEL (SKIN)	200 ppm (260 mg/m ³) PEL	None	None
Acetone	250 ppm TWA 500 ppm STEL	1,000 ppm (2,400 mg/m ³) PEL	None	None

Engineering controls: Use explosion-proof mechanical ventilation and local exhaust to control contaminants to within their occupational exposure limits during the use of this product.

Respiratory protection: If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

Eye/face protection: Tight fitting safety goggles.

Skin protection: Wear impervious gloves for prolonged contact. Gloves should be tested to determine suitability for prolonged contact. Recommended gloves include butyl rubber and neoprene. Use of impervious apron and boots are recommended.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Color	Black
Odor	Solvent
Odor threshold	Not available
pH	Not applicable
Vapor pressure	59.5 hPa (20°C (68°F)) 238 hPa (50°C (122°F)) 370 mbar (55°C (131°F))
Boiling point/range	78°C (172.4°F)
Melting point/range	Not applicable
Vapor density	1.59 20°C
Flash point	17°C (62.6°F) no method
Upper explosion/flammability limit	19%
Lower explosion/flammability limit	3.4%
Autoignition temperature	Not available
Flammability	Highly flammable
Evaporation rate	Not available
Solubility in H ₂ O	Partly miscible
Partition coefficient (n-octanol/water)	Not available
Solvent content VOC	Not available
Viscosity	100-250 mPa.s
Decomposition temperature	Not available

Section 10: Stability and Reactivity

Chemical stability:	Stable under recommended storage conditions.
Reactivity:	Not available.
Hazardous decomposition products:	Irritating and toxic gases or fumes may be released during a fire.
Incompatible materials:	Strong oxidizing agents.
Conditions to avoid:	Heat, flames sparks and other sources of ignition. Store away from incompatible materials.

Section 11: Toxicological Information

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms:

- **Inhalation:** Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- **Skin contact:** May cause skin irritation
- **Eye contact:** This product is irritating to the eyes. Contact can cause moderate to severe irritation and possible injury to the eyes.
- **Ingestion:** Harmful: danger of serious damage to health by prolonged exposure if swallowed. Ingestion of this product may result in central nervous system effects including headache, sleepiness, dizziness, slurred speech and blurred vision.

<u>Hazardous Component(s)</u>	<u>LD50s and LC50s</u>	<u>Immediate and Delayed Health Effects</u>
Ethanol	Oral LD50 (rat) = 9.9 g/kg Oral LD50 (rat) = 6.2 g/kg Oral LD50 (rat) = 17.8 g/kg Oral LD50 (rat) = 11.5 g/kg Oral LD50 (mouse) = 3,450 mg/kg Oral LD50 (rat) = 10.6 g/kg Oral LD50 (rat) = 7,060 mg/kg Inhalation LC50 (rat, 4h) = 133.8 mg/l Inhalation LC50 (rat, 4h) = 124.7 mg/l Inhalation LC50 (rat, 4h) = > 115.9 mg/l Inhalation LC50 (rat, 4h) = 130.7 mg/l Inhalation LC50 (rat, 4h) = 128.2 mg/l Inhalation LC50 (rat, 4h) = 116.9 mg/l Inhalation LC50 (mouse, 4h) = 39 mg/l	Central nervous system, Irritant
Graphite	Inhalation LC50 (rat, 4h) = 2,000 mg/m ³ Inhalation LC50 (rat, 4h) = 2,000 mg/m ³	Lung
Methanol	Oral LD50 (rat) = 5,628 mg/kg Oral LD50 (mouse) = 7,300 mg/kg Oral LD50 (rabbit) = 14.4 g/kg Dermal LD50 (rabbit) = 15,800 mg/kg	Eyes, Irritant, Metabolic, Nervous System
Acetone	Oral LD50 (mouse) = 5.2 g/kg Oral LD50 (mouse) = 3,000 mg/kg Oral LD50 (rabbit) = 5,340 mg/kg Oral LD50 (rat) = 5,800 mg/kg Oral LD50 (rat) = 9,800 mg/kg Dermal LD50 (rabbit) = 20,000 mg/kg Inhalation LC50 (rat, 4h) = 76 mg/l Inhalation LC50 (rat, 4h) = 50.1 mg/l	Central nervous system, Irritant

<u>Hazardous Component(s)</u>	<u>NTP Carcinogen</u>	<u>IARC Carcinogen</u>	<u>OSHA Carcinogen</u> (specifically regulated)
Ethanol	No	No	No
Graphite	No	No	No
Methanol	No	No	No
Acetone	No	No	No

Section 12: Ecological Information

Toxicity:

- Aquatic Toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.

Behavior in environmental systems:

- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.

Results of PBT and vPvB assessment:

PBT Not available

vPvB: Not available

Section 13 Disposal Considerations

Recommended disposal of unused product:

- Dispose of according to Federal, State and local governmental regulations.

Section 14: Transportation Information

International Air Transport ICAO/IATA

UN identification number	UN 1263
Proper shipping name	Paint
Class	3
Packing group	II
Labels	Flammable Liquids

Water Transportation IMO/IMDG

UN identification number	UN 1263
Proper shipping name	Paint
Class	3
Packing group	II
Labels	Flammable Liquids

US Department of Transportation Ground 49 CFR

UN identification number	UN 1263
Proper shipping name	Paint
Class	3
Packing group	II
Labels	Flammable Liquids

Special precautions for user

The transport classification(s) provided herein are for information purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet (SDS). Transportation classifications may vary by mode of transportation, package size, and variations in regional or country regulations.

Section 15: Regulatory Information

United States Regulatory Information

TSCA 8(b) Inventory Status:	All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.
TSCA 12(b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Immediate health, Delayed health, Fire
CERCLA/SARA Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372) (Methanol CAS# 67-56-1)
CERCLA Reportable Quantity	Ethanol (CAS# 64-17-5) 100lbs / 45.4Kg
California Proposition 65	This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. (Methanol CAS# 67-56-1) For more information go to www.P65Warnings.ca.gov

Canadian Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

Section 16: Other Information

This Safety Data Sheet (SDS) is intended to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Full text of other abbreviations

ACGIH:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI:	ACGIH - Biological Exposure Indices (BEI)
NIOSH REL:	USA. NIOSH Recommended Exposure Limits
OSHA Z-1:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-2:	USA. Occupational Exposure Limits (OSHA) - Table Z-2
US WEEL:	USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA:	8-hour, time-weighted average
ACGIH / STEL:	Short-term exposure limit
NIOSH REL/TWA:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL/ST:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA:	8-hour time weighted average
OSHA Z-2/TWA:	8-hour time weighted average
OSHA Z-2/CEIL:	Acceptable ceiling concentration
OSHA Z-2/Peak:	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
US WEEL/TWA:	8-hr TWA

AICS - Australian Inventory of Chemical Substances;

AIIC - Australian Inventory of Industrial Chemicals;

ASTM - American Society for the Testing of Materials;

bw - Body weight;

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act;

CMR - Carcinogen, Mutagen or Reproductive Toxicant;

DIN - Standard of the German Institute for Standardization;

DOT - Department of Transportation;

DSL - Domestic Substances List (Canada);

ECx - Concentration associated with x% response;

EHS - Extremely Hazardous Substance;

ELx - Loading rate associated with x% response;

EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan);

ErCx - Concentration associated with x% growth rate response;

ERG - Emergency Response Guide;

GHS - Globally Harmonized System;

GLP - Good Laboratory Practice;

HMIS - Hazardous Materials Identification System;

IARC - International Agency for Research on Cancer;

IATA - International Air Transport Association;

IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;

IC50 - Half maximal inhibitory concentration;

ICAO - International Civil Aviation Organization;

IECSC - Inventory of Existing Chemical Substances in China;

IMDG - International Maritime Dangerous Goods;
IMO - International Maritime Organization;
ISHL - Industrial Safety and Health Law (Japan);
ISO - International Organization for Standardization;
KECI - Korea Existing Chemicals Inventory;
LC50 - Lethal Concentration to 50 % of a test population;
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose);
MARPOL - International Convention for the Prevention of Pollution from Ships;
MSHA - Mine Safety and Health Administration;
n.o.s. - Not Otherwise Specified;
NFPA - National Fire Protection Association;
NO(A)EC - No Observed (Adverse) Effect Concentration;
NO(A)EL - No Observed (Adverse) Effect Level;
NOELR - No Observable Effect Loading Rate;
NTP - National Toxicology Program;
NZIoC - New Zealand Inventory of Chemicals;
OECD - Organization for Economic Co-operation and Development;
OPPTS - Office of Chemical Safety and Pollution Prevention;
PBT - Persistent, Bioaccumulative and Toxic substance;
PICCS - Philippines Inventory of Chemicals and Chemical Substances;
(Q)SAR - (Quantitative) Structure Activity Relationship;
RCRA - Resource Conservation and Recovery Act;
REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals;
RQ - Reportable Quantity;
SADT - Self-Accelerating Decomposition Temperature;
SARA - Superfund Amendments and Reauthorization Act;
SDS - Safety Data Sheet;
TCSI - Taiwan Chemical Substance Inventory;
TSCA - Toxic Substances Control Act (United States);
UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods;
vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.