Revision Date 30-06-2014

Revision 5

Supersedes date 27-06-2012

SAFETY DATA SHEET
Delta D504 Copper Anti-Seize Spray

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name	Delta D504 Copper Anti-Seize Spray
Product No.	D504
Container size	400ml

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Engineering Anti-Seize Grease

1.3. Details of the supplier of the safety data sheet

Supplier	Delta Adhesives Ltd Units 39-41 Claycliffe Business Park Cannon Way, Barugh Green Barnsley, South Yorkshire S75 1JU Tel: 01226 381 571 Fax: 01226 381722 www.delta-adhesives.co.uk

1.4. Emergency telephone number

National Emergency Telephone Number

Delta Adhesives Ltd +44 (0) 1226 381 571 (Mon-Fri 09:00 - 17:00)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

	Physical and Chemical Hazards	Flam. Aerosol 1 - H222
	Human health	Skin Irrit. 2 - H315;STOT SE 3 - H336
	Environment	Aquatic Chronic 2 - H411
Classification (1999/45/EEC)	Xi;R38. F+;R12. N;R51/53. R67.	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Human health

In high concentrations, vapours and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.

Environment

The product contains a substance which is toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

Physical and Chemical Hazards

Pressurised container: Must not be exposed to temperatures above 50°C. The product is extremely flammable, and explosive vapour/air mixtures may be formed even at normal room temperatures.

2.2. Label elements

Contains Low boiling Point Hydrogen Treated Naphtha- Naphtha (Petroleum) Hydrotreated Light

Label In Accordance With (EC) No. 1272/2008

Signal Word Danger

Hazard Statements

H222	Extremely flammable aerosol.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing vapour/spray.
P314	Get medical advice/attention if you feel unwell.
P410+412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

Supplementary Precautionary Statements

P264	Wash contaminated skin thoroughly after handling.
P321	Specific treatment (see medical advice on this label).
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P332+313	If skin irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P391	Collect spillage.
P403+233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with national regulations.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Low boiling Point Hydrogen Treated Naphtha- Naphtha (Petroleum) Hydrotreated Light		10-30%
CAS-No.: 64742-49-0	EC No.: 265-151-9	Registration Number: 01-2119475133-43

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	Xn;R65.
Skin Irrit. 2 - H315	Xi;R38.
STOT SE 3 - H336	F;R11.
Asp. Tox. 1 - H304	N;R51/53.
Aquatic Chronic 2 - H411	R67.

PROPANE		10-30%
CAS-No.: 74-98-6	EC No.: 200-827-9	Registration Number: 01-2119486944-21

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Gas 1 - H220	F+;R12

BUTANE/ISOBUTANE		10-30%
CAS-No.: 106-97-8	EC No.: 203-448-7	Registration Number: 01-2119474691-32

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Gas 1 - H220	F+;R12.

HEXANE-norm		< 1%
CAS-No.: 110-54-3	EC No.: 203-777-6	Registration Number: 01-2119480412-44-0000

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F;R11
Skin Irrit. 2 - H315	Repr. Cat. 3;R62
Repr. 2 - H361f	Xn;R48/20,R65
STOT SE 3 - H336	Xi;R38
STOT RE 2 - H373	R67
Asp. Tox. 1 - H304	N;R51/53
Aquatic Chronic 2 - H411	

Additin RC7135	< 1%

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 3 - H301	T;R23/24/25.
Acute Tox. 3 - H311	N;R50/53.
Acute Tox. 2 - H330	R33,R52/53.
STOT RE 2 - H373	
Aquatic Acute 1 - H400	
Aquatic Chronic 1 - H410, H412	
Aquatic Chronic 3 - H410, H412	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

Move the exposed person to fresh air at once.

Inhalation

Move the exposed person to fresh air at once. Keep the affected person warm and at rest. Get prompt medical attention.

Ingestion

Rinse mouth thoroughly. Do not induce vomiting. Get medical attention if any discomfort continues.

Skin contact

Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

Eye contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

General information

Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

Inhalation

Coughing, chest tightness, feeling of chest pressure. Vapours may cause headache, fatigue, dizziness and nausea.

Ingestion

Fumes from the stomach contents may be inhaled resulting in the same symptoms as inhalation.

Skin contact

Prolonged skin contact may cause redness and irritation.

Eye contact

Prolonged contact may cause redness and/or tearing.

4.3. Indication of any immediate medical attention and special treatment needed

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing media

Do not use water as an extinguisher.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Unusual Fire & Explosion Hazards

Extremely flammable. Forms explosive mixtures with air. Risk of explosion if heated. May form explosive mixture with air at very high concentration. Vapours may form explosive mixture with air at room temperature. Aerosol cans may explode in a fire.

Specific hazards

Containers can burst violently when heated, due to excess pressure build-up. Vapours may form explosive air mixtures even at room temperature. Aerosol containers can explode when heated, due to excessive pressure build-up.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Be aware of danger of explosion. NOTE! Use air-supplied respirators to protect against gases\fumes. Containers close to fire should be removed or cooled with water.

Protective equipment for fire-fighters

Use air-supplied respirator during fire fighting.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Wear necessary protective equipment. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Read and follow manufacturer's recommendations. Keep away from heat, sparks and open flame. Eliminate all sources of ignition. Always remove grease with soap and water or skin cleaning agent, never use organic solvents. Do not eat, drink or smoke when using the product.

7.2. Conditions for safe storage, including any incompatibilities

Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C. Keep away from heat, sparks and open flame. Store in tightly closed original container in a dry and cool place.

Storage Class

Extremely Flammable Aerosol

7.3. Specific end use(s)

Usage Description

Copper Based Anti-Seize Grease

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
BUTANE/ISOBUTANE	WEL	600 ppm		750 ppm		
HEXANE-norm	WEL	20 ppm	72 mg/m3			
Low boiling Point Hydrogen Treated Naphtha-Naphtha (Petroleum) Hydrotreated Light			1000 mg/m3		1000 mg/m3	
PROPANE	WEL	1000 ppm	1800 mg/m3			

WEL = Workplace Exposure Limit.

Ingredient Comments

WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment

Process conditions

Use engineering controls to reduce air contamination to permissible exposure level.

Engineering measures

No specific ventilation requirements noted, except this product must not be used in a confined space without good ventilation.

Respiratory equipment

No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit. If ventilation is insufficient, suitable respiratory protection must be provided.

Hand protection

Protective gloves should be used if there is a risk of direct contact or splash. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye protection

Wear approved chemical safety goggles where eye exposure is reasonably probable.

Other Protection

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

Wash promptly with soap & water if skin becomes contaminated. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Aerosol container containing a mixture of active ingredients, solvents and propellants
Colour	Bright copper
Odour	Organic solvents.
Solubility	Insoluble in water

Initial boiling point and boiling range (°C)

Not available.

Melting point (°C)

Not available.

Relative density

Not available.

Bulk Density

Not available.

Vapour density (air=1)

Not available.

Vapour pressure

Not available.

Evaporation rate

Not available.

Evaporation Factor

Not available.

pH-Value, Conc. Solution

Not relevant

pH-Value, Diluted Solution

Not relevant

Viscosity

Not relevant

Solubility Value (G/100G H2O@20°C)

Not relevant

Decomposition temperature (°C)

Not relevant

Odour Threshold, Lower

Not available.

Odour Threshold, Upper

Not available.

Flash point (°C)	<-40 Deg.C
Auto Ignition Temperature (°C)	410-580Deg.C
Flammability Limit - Lower(%)	1.8%
Flammability Limit - Upper(%)	9.5%

Partition Coefficient
(N-Octanol/Water)

Not available.

Explosive properties

In use may form flammable /explosive vapour-air mixture.

Comments	A flash point method is not available for aerosols but the major hazardous component, the Propellant has flash point of <-40 C with flammability limits of 9.5% vol. upper and 1.8% vol. lower. Auto ignition temperature is 410/580 C.

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Not known.

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid exposing aerosol containers to high temperatures or direct sunlight.

10.5. Incompatible materials

10.6. Hazardous decomposition products

None under normal conditions. In case of fire, toxic gases (CO, CO2, NOx) may be formed.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

General information

Contains organic solvents

Inhalation

May cause irritation to the respiratory system. Vapours may irritate throat and respiratory system and cause headache, dizziness and dullness.

Ingestion

May cause soreness and redness of mouth and throat.

Skin contact

Irritating to skin. Prolonged and frequent contact may cause redness and irritation.

Eye contact

Spray and vapour in the eyes may cause irritation and smarting.

Health Warnings

Prolonged and repeated contact with solvents over a long period may lead to permanent health problems. Narcotic effect.

Route of entry

Inhalation. Skin absorption.

Target Organs

Central nervous system Respiratory system, lungs

Medical Symptoms

Narcotic effect. Drowsiness. Dizziness. Arrhythmia, (deviation from normal heart beat).

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

The product contains substances which are toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment. Dangerous for the environment if discharged into watercourses. Do not allow to enter drains, sewers or watercourses.

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Degradability

Biodegradable in part only.

12.3. Bioaccumulative potential

Bioaccumulative potential

Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

Partition coefficient

Not available.

12.4. Mobility in soil

Mobility:

The product has poor water-solubility.

12.5. Results of PBT and vPvB assessment

Not determined

12.6. Other adverse effects

Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Do not puncture or incinerate even when empty. Dispose of waste and residues in accordance with local authority requirements.

13.1. Waste treatment methods

Make sure containers are empty before discarding (explosion risk). Ensure container is empty and dispose of in accordance with Local Authority regulations. Do not pierce or incinerate even when container is empty.

Waste Class

Full or Partially Empty Aerosol: 16 05 04, Empty Aerosol: 15 01 10 (Containing hazardous residues). Empty Aerosol: 15 01 04 (No hazardous residues).

SECTION 14: TRANSPORT INFORMATION

General	This product is packed in accordance with the Limited quantity Provisions of CDGCPL2, ADR and IMDG. These provisions allow the transport of aerosols of less than 1 litre packed in cartons of less than 30kg gross weight to be exempt from control providing they are labelled in accordance with the requirements of those regulations to show that they are transported as Limited Quantities. Aerosols not so packed must show the following.

14.1. UN number

UN No. (ADR/RID/ADN)	1950
UN No. (IMDG)	1950
UN No. (ICAO)	1950

14.2. UN proper shipping name

Proper Shipping Name	AEROSOLS

14.3. Transport hazard class(es)

ADR/RID/ADN Class	2, 5F
ADR/RID/ADN Class	Class 2.1: Flammable gases.
ADR Label No.	2.1
IMDG Class	2.1
ICAO Class/Division	2.1
ICAO Subsidiary risk	2.1

Transport Labels

14.4. Packing group

ADR/RID/ADN Packing group	#
IMDG Packing group	#
ICAO Packing group	#

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

EMS	F-D, S-U
Tunnel Restriction Code	(D)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

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

Uk Regulatory References

The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments. Chemicals (Hazard Information & Packaging) Regulations.

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

Guidance Notes

ECHA: Guidance on the Compilation of safety data sheets. (V1.1, December 2011)

EU Legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

National Regulations

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). The Aerosol Dispensers Regulations 2009 (SI 2824) Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. The Aerosol Dispensers (EEC Requirements)(Amendment) Regulations 1996 (S.I 1996 No. 2421).

Authorisations (Title VII Regulation 1907/2006)

No specific authorisations are noted for this product.

Restrictions (Title VIII Regulation 1907/2006)

No specific restrictions of use are noted for this product.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Issued By	Technical Service Manager
Revision Date	30-06-2014
Revision	5
Supersedes date	27-06-2012
SDS No.	11257
Date	30-06-2014

Risk Phrases In Full	
R33	Danger of cumulative effects.
R12	Extremely flammable.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R65	Harmful: may cause lung damage if swallowed.
R11	Highly flammable
R38	Irritating to skin.
R62	Possible risk of impaired fertility.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Hazard Statements In Full	
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H330	Fatal if inhaled.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs <<Organs>> through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.