SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture	DUODART CAPSULES
Registration number	-
Synonyms	DUODART CAPSULES 0.5MG/0.4MG * DUTASTERIDE AND TAMSULOSIN HYDROCHLORIDE COMBINATION CAPSULES * 0.5 MG DUTASTERIDE AND 0.4 MG TAMSULOSIN HYDROCHLORIDE CAPSULES * DUTASTERIDE AND TAMSULOSIN HYDROCHLORIDE, FORMULATED PRODUCT
Issue date	11-April-2013
Version number	03
Revision date	11-April-2013

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

Identified uses	Medicinal Product
Uses advised against	No other uses are advised.

1.3. Details of the supplier of the safety data sheet

GlaxoSmithKline UK
980 Great West Road
Brentford, Middlesex TW8 9GS UK
UK General Information (normal business hours): +44-20-8047-5000
Email Address: msds@gsk.com
Website: www.gsk.com

1.4. Emergency telephone number

TRANSPORT EMERGENCIES (by country / geographic region):

Africa / EU / Israel / Middle East (English / European languages):	+44 (0) 1235 239 670
Asia Pacific (except China):	+65 3158 1074
China:	+86 10 5100 3039
Middle East / Africa (Arabic-speaking countries):	+44 (0) 1235 239 671
US:	+1 703 527 3887

available 24 hrs/7 days; multi-language response

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

Classification according to Regulation (EC) No 1272/2008 as amended

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

Supplemental label information Not applicable.

2.3. Other hazards Caution - Pharmaceutical agent.
Occupational exposure to the substance or mixture may cause adverse health effects.
See section 11 for additional information on health hazards.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
MICROCRYSTALLINE CELLULOSE	10 - < 20	9004-34-6 232-674-9	-	-	
Classification: **DSD:** -					
CLP: -					
Talc	1 - < 3	14807-96-6 238-877-9	-	-	
Classification: **DSD:** -					
CLP: -					
Titanium dioxide	0.17 - 0.24	13463-67-7 236-675-5	-	-	
Classification: **DSD:** -					
CLP: -					
DUTASTERIDE	0.06 - 0.12	164656-23-9 -	-	-	
Classification: **DSD:** Repr. Cat. 2;R61, Repr. Cat. 3;R62, R53					
CLP: Repr. 1B;H360Df, Aquatic Chronic 1;H410					
TAMSULOSIN HYDROCHLORIDE	0.05	106463-17-6 -	-	-	
Classification: **DSD:** Xn;R22, R52					
CLP: Acute Tox. 4;H302, Aquatic Chronic 3;H412					
Other components below reportable levels	70 - < 80				

CLP: Regulation No. 1272/2008.
DSD: Directive 67/548/EEC.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General information Not available.

4.1. Description of first aid measures

Inhalation If not breathing, give artificial respiration. If breathing is difficult, trained personnel should give oxygen. Get medical attention immediately.

Skin contact Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Remove and isolate contaminated clothing and shoes. Get medical attention if symptoms occur.

Eye contact In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Get medical attention if irritation develops and persists.

Ingestion If swallowed, rinse mouth with water (only if the person is conscious). Get medical attention if symptoms occur. Call a physician or poison control centre immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconsious person.

4.2. Most important symptoms and effects, both acute and delayed Not available.

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

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media None known.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures In the event of fire, cool tanks with water spray. Water runoff can cause environmental damage.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate personal protective equipment. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the MSDS.

6.2. Environmental precautions Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Stop the flow of material, if this is without risk. Collect spillage. Prevent product from entering drains. Following product recovery, flush area with water.

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 Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains.

7.2. Conditions for safe storage, including any incompatibilities Store in a cool, dry place out of direct sunlight.

7.3. Specific end use(s) Medicinal Product

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

GSK

Components	Type	Value	Note
CAPMUL MCM (CAS 26402-22-2)	OHC	1	
DUTASTERIDE (CAS 164656-23-9)	8 HR TWA	0.3 mcg/m3	
	OHC	5	Reproductive hazard
		5	Skin
	Short Term Excursion	3 mcg/m3	
MICROCRYSTALLINE CELLULOSE (CAS 9004-34-6)	OHC	1	
TAMSULOSIN HYDROCHLORIDE (CAS 106463-17-6)	8 HR TWA	3 mcg/m3	
	OHC	4	

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
GLYCERIN (CAS 56-81-5)	TWA	10 mg/m3	Mist.
MICROCRYSTALLINE CELLULOSE (CAS 9004-34-6)	STEL	20 mg/m3	Inhalable dust.
	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Inhalable dust.

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Talc (CAS 14807-96-6)	TWA	1 mg/m3	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	TWA	4 mg/m3	Respirable.
		10 mg/m3	Inhalable

Recommended monitoring procedures Follow standard monitoring procedures.

Derived No Effect Level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls An Exposure Control Approach (ECA) is established for operations involving this material based upon the OEL/Occupational Hazard Category and the outcome of a site- or operation-specific risk assessment. Refer to the Exposure Control Matrix for more information about how ECA's are assigned and how to interpret them. Open handling should be limited to small quantities. Consider use of enclosures. Local exhaust ventilation (LEV) should be applied at the source to capture contaminants from open or semi-enclosed operations. Entry to the working area should be controlled.

Individual protection measures, such as personal protective equipment

General information Not normally needed.

Eye/face protection Wear approved safety glasses with side shields or cover goggles if eye contact is possible. (eg. EN 166)

Skin protection

- Hand protection Glove selection must take into account any solvents and other hazards present. Care must be exercised if insufficient data are available and further guidance should be sought from your local EHS department. The selection of gloves for a specific activity must be based on the material's properties and on possible permeation and degradation that may occur under the circumstances of use. Potential allergic reactions can occur with certain glove materials (e.g. Latex) and therefore these should be avoided. Select suitable chemical resistant protective gloves (EN 374) with a protective index 6 (>480min permeation time).

- Other Wear appropriate chemical resistant clothing. (EN 14605 for splashes, EN ISO 13982 for dust)

Respiratory protection If respiratory protective equipment (RPE) is used, the type of RPE will depend upon air concentrations present, required protection factor as well as hazards, physical properties and warning properties of substances present. Where breathable aerosols/dust are formed, use suitable combination filter for gases/vapours of organic, inorganic, acid inorganic, alkaline compounds and toxic particles (eg. EN 14387).

Thermal hazards Not available.

Hygiene measures An eye wash station should be available. Wear appropriate clothing to avoid skin contact. Follow all local regulations if personal protective equipment (PPE) is used in the workplace.

Environmental exposure controls

Hazard guidance and control recommendations Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Solid.

Form Capsule.

Colour Not available.

Odour Not available.

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not applicable.

Evaporation rate Not applicable.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidizing properties	Not available.
9.2. Other information	No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidizing agents. Fluorine.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion	May be harmful if swallowed.
Inhalation	Due to lack of data the classification is not possible.
Skin contact	Due to lack of data the classification is not possible.
Eye contact	Due to lack of data the classification is not possible.
Symptoms	Not available.

11.1. Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test results
DUTASTERIDE (CAS 164656-23-9)		
Acute		
Dermal		
MLD	Rabbit	> 2000 mg/kg
Oral		
MLD	Mouse	> 2000 mg/kg
	Rat	> 1500 mg/kg
Subacute		
Oral		
NOAEL	Rat	< 2 mg/kg, 30 days, female
		2 mg/kg, 30 days, male
MICROCRYSTALLINE CELLULOSE (CAS 9004-34-6)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg

Components	Species	Test results
Oral		
LD50	Rat	> 2000 mg/kg
Titanium dioxide (CAS 13463-67-7)		
Acute		
Inhalation		
LC50	Rat	6820 mcg/m3
Oral		
LD50	Rat	> 24 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Due to lack of data the classification is not possible.

Irritation Corrosion - Skin

DUTASTERIDE: Acute dermal irritation, Primary dermal irritation index = 0.1
Result: Slightly irritating
Species: Rabbit

Serious eye damage/eye irritation Due to lack of data the classification is not possible.

Eye

DUTASTERIDE: Acute occular irritation
Result: Slight to moderate conjunctival irritation; some iridial involvement
Species: Rabbit

Respiratory sensitisation Due to lack of data the classification is not possible.

Skin sensitisation Due to lack of data the classification is not possible.

Sensitisation

DUTASTERIDE: Buehler assay
Result: negative
Species: Guinea pig

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Germ cell mutagenicity

Mutagenicity

DUTASTERIDE: Ames Assay, GLP assay
Result: negative
Chromosomal Aberration Assay In Vitro, CHO cells
Result: negative
Micronucleus Test, Maximum dose = 1500 mg/kg
Result: negative
Species: Rat

Carcinogenicity Contains a material (titanium dioxide, talc) classified as a carcinogen by external agencies. Carcinogenic activity was seen in inhalation studies using laboratory animals. High concentrations or doses administered over an extended period of time were required to produce adverse effects.

DUTASTERIDE: 2 year bioassay
Result: negative
Species: Mouse
2 year bioassay, Female
Result: negative
Species: Rat
2 year bioassay, Male
Result: Increase in benign testicular interstitial cell tumours; high dose only (equivalent of 158X human therapeutic dose)
Species: Rat

IARC Monographs. Overall Evaluation of Carcinogenicity

Talc (CAS 14807-96-6): 2B Possibly carcinogenic to humans.
3 Not classifiable as to carcinogenicity to humans.

Titanium dioxide (CAS 13463-67-7): 2B Possibly carcinogenic to humans.

Reproductive toxicity Due to lack of data the classification is not possible. The ingredient dutasteride has caused adverse effects on the development of unborn offspring in animal studies.

Reproductive toxicity

Reproductivity

DUTASTERIDE	Embryo-foetal development - Oral Result: Evidence of feminisation of male foetuses with 0.05 mg/kg/day or more; maternal and foetal toxicity with 2.5 mg/kg/day or more Species: Rat Embryo-foetal development - Oral Result: No maternal toxicity with doses </= 200 mg/kg/day; evidence of feminisation of male foetuses with doses >/= 0.05 mg/kg/day Species: Rabbit Female Fertility / Early Embryonic Development Result: Maternal and foetal toxicity (increased foetal resorptions, decreased foetal weight, feminisation of male foetuses) with doses of 2.5 mg/kg/day or more Species: Rat Fertility, Male Result: Decreased fertility with doses of 0.05 mg/kg/day for up to 31weeks Species: Rat Pre- and Post-natal development Result: Maternal toxicty (reduced weight and lengthened gestation) at 2.5 mg/kg/day or more; no toxic effect dose in male offspring (feminisation) <0.05 mg/kg/day; no toxic effect dose in female offspring = 0.05 mg/kg/day with adverse effects at 2.5 mg/kg/day or Species: Rat

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Not available.

Mixture versus substance information Not available.

Other information Symptoms may be delayed.

SECTION 12: Ecological information

12.1. Toxicity Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Components		Species	Test results
DUTASTERIDE (CAS 164656-23-9)			
Aquatic			
Acute			
Activated Sludge Respiration	IC50	Residential sludge	> 1000 mg/l, 3 hours
Crustacea	EC50	Water flea (Daphnia magna)	> 1 mg/l, 48 hours
	NOEC	Water flea (Daphnia magna)	> 1 mg/l, 48 hours
Chronic			
Fish	Growth test LOEC	Fathead minnow (Juvenile Pimephales promelas)	0.079 mg/l, 101 days, Flow-through test, extended OECD 210
	Growth test NOEC	Fathead minnow (Juvenile Pimephales promelas)	0.021 mg/l, 101 days
Terrestrial			
Acute			
Earthworm	EC50	Manure worm (Eisenia foetida)	1010 mg/kg, 28 days
	NOEC	Manure worm (Eisenia foetida)	1010 mg/kg, 28 days
Talc (CAS 14807-96-6)			
Aquatic			
Acute			
Fish	EC50	Zebra fish (Adult Brachydanio rerio)	> 100 g/l, 24 hours, Static renewal test
TAMSULOSIN HYDROCHLORIDE (CAS 106463-17-6)			
Acute			
	IC50	Activated sludge	> 1000 mg/l

Components		Species	Test results
Crustacea	EC50	Daphnia	37.9 mg/l
Titanium dioxide (CAS 13463-67-7)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours, Static test

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability No data is available on the degradability of this product.

Persistence and degradability

Photolysis

UV/visible spectrum wavelength

DUTASTERIDE	300, pH 2-11

Biodegradability

Percent degradation (Aerobic biodegradation-ready)

DUTASTERIDE	< 1 %, 28 days Modified Sturm test.
TAMSULOSIN HYDROCHLORIDE	4 %, 28 days

Percent degradation (Aerobic biodegradation-soil)

DUTASTERIDE	< 2.3 %, 64 days

Percent degradation (Anaerobic biodegradation)

DUTASTERIDE	12 %, 56 days

12.3. Bioaccumulative potential No data available for this product.

Partition coefficient n-octanol/water (log Kow)

DUTASTERIDE	3.87
TAMSULOSIN HYDROCHLORIDE	2.2 (Calculated).

12.4. Mobility in soil Not available.

Mobility in general

Volatility

Henry's law

DUTASTERIDE	0 atm m^3/mol Calculated, 25 C

12.5. Results of PBT and vPvB assessment Not available.

12.6. Other adverse effects Not available.

12.7. Additional information None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

ADR

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

MARPOL Annex II applies to liquids used in a ship's operation that pose a threat to the marine environment. These materials may not be transported in bulk.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not listed.

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Always applicable.

Directive 94/33/EC on the protection of young people at work

Not regulated.

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations

Not available.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

GSK Hazard Determination

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15	R22 Harmful if swallowed. R52 Harmful to aquatic organisms. R53 May cause long term adverse effects in the aquatic environment. R61 May cause harm to the unborn child. R62 Possible risk of impaired fertility. H302 Harmful if swallowed. H360D May damage the unborn child. H361f Suspected of damaging fertility. H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.
Revision information	Product and Company Identification: Synonyms Composition / Information on Ingredients: Ingredients Exposure Controls / Personal Protection: OELs Physical & Chemical Properties: Transport Information: Agency Name and Packaging Type/Transport Mode Selection GHS: Classification
Training information	Follow training instructions when handling this material.
Disclaimer	The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, express or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose. The information in the sheet was written based on the best knowledge and experience currently available.