

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 1 of 12

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

SYNONYMS

"Wash Cream for Sensitive Skin, Manufacturer's Code 61390, 61227, 60237"

PRODUCT USE

Liquid hand and skin cleanser.

SUPPLIER

Company: Johnson & Johnson Medical Pty Ltd

Address:

PO Box 134

North Ryde

NSW, 2113

Australia

Company: Johnson & Johnson Medical Pty Ltd

Address:

1- 5 Khartoum Road

North Ryde

NSW, 2113

Australia

Telephone: +61 2 9878 9000

Telephone: 1800 257 210

Emergency Tel: 13 11 26

Emergency Tel: +64 3 474 7000 NZ

Fax: 1800 808 233

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

RISK

•None under normal operating conditions.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
ethoxylated and sulfated alcohol		0-10
fatty acid diethanolamide		0-10
lanolin, ethoxylated	61790-81-6	0-10
cellulose	9004-34-6	0-10
methyl paraben	99-76-3	0-10
propyl paraben	94-13-3	0-10
imidazol derivative		0-10
glycol ester		0-10
aliphatic acid		0-10
organic sodium compound		0-10
fragrance		0-10
water	7732-18-5	>30

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 2 of 12

Section 4 - FIRST AID MEASURES

SWALLOWED

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

EYE

- If this product comes in contact with the eyes:
 - Wash out immediately with fresh running water.
 - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
 - Seek medical attention without delay; if pain persists or recurs seek medical attention.
 - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- No adverse effects anticipated from normal use.

Wash affected areas with warm water and soap.

Discontinue use if irritation occurs.

If irritation continues, seek medical attention.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

- Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

FIRE FIGHTING

- Use water delivered as a fine spray to control fire and cool adjacent area.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

- Non combustible.
- Not considered to be a significant fire risk.
- Expansion or decomposition on heating may lead to violent rupture of containers.
- Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.

Other decomposition products include: carbon dioxide (CO₂) and nitrogen oxides (NO_x).

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 3 of 12

Section 5 - FIRE FIGHTING MEASURES

FIRE INCOMPATIBILITY

- Avoid contamination with strong oxidising agents as ignition may result.

HAZCHEM

None

Personal Protective Equipment

Breathing apparatus.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Slippery when spilt.
Clean up all spills immediately.
Wipe up.
Place in clean drum then flush area with water.

MAJOR SPILLS

- Slippery when spilt.
Minor hazard.
- Clear area of personnel.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact by using protective equipment as required.
- Prevent spillage from entering drains or water ways.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- Wash area and prevent runoff into drains or waterways.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- When handling DO NOT eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Avoid physical damage to containers.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.

SUITABLE CONTAINER

- Plastic container. Polylined drum.

STORAGE INCOMPATIBILITY

- Avoid storage with oxidisers.

STORAGE REQUIREMENTS

- Store in original containers.

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 4 of 12

Section 7 - HANDLING AND STORAGE

- Keep containers securely sealed.
 - Store in a cool, dry, well-ventilated area.
 - Store away from incompatible materials and foodstuff containers.
 - Protect containers against physical damage and check regularly for leaks.
 - Observe manufacturer's storing and handling recommendations.
- Keep cool. Store below 25 deg.C.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA mg/m ³	Notes
Australia Exposure Standards	cellulose (Cellulose (paper fibre) (a))	10	(see Chapter 14)

The following materials had no OELs on our records

- lanolin, ethoxylated: CAS:61790- 81- 6 CAS:8039- 09- 6
- methyl paraben: CAS:99- 76- 3
- propyl paraben: CAS:94- 13- 3
- water: CAS:7732- 18- 5

MATERIAL DATA

LANOLIN, ETHOXYLATED:

METHYL PARABEN:

PROPYL PARABEN:

■ It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

LANOLIN, ETHOXYLATED:

METHYL PARABEN:

PROPYL PARABEN:

■ Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 5 of 12

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

overexposure.

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER:

- None assigned. Refer to individual constituents.

CELLULOSE:

■ Cellulose is considered a nuisance dust which has little adverse effect on lung and does not produce significant organic disease or toxic effects when appropriate controls are applied.

WATER:

- No exposure limits set by NOHSC or ACGIH.

PERSONAL PROTECTION

EYE

■ No special equipment for minor exposure i.e. when handling small quantities.

• OTHERWISE:

• Safety glasses with side shields.

• Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

■ No special equipment needed when handling small quantities.

OTHERWISE: Wear chemical protective gloves, eg. PVC.

OTHER

■ No special equipment needed when handling small quantities

OTHERWISE:

• Overalls

• Eyewash unit.

RESPIRATOR

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

■ None under normal operating conditions.

Provide adequate ventilation in warehouse or closed storage areas.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Milky, viscous liquid with a floral fragrance; dispersible in water.

PHYSICAL PROPERTIES

Liquid.

Mixes with water.

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 6 of 12

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

State	Liquid	Molecular Weight	Not applicable
Melting Range (°C)	Not available	Viscosity	Not Available
Boiling Range (°C)	Not available	Solubility in water (g/L)	Miscible
Flash Point (°C)	Not applicable	pH (1% solution)	Not available
Decomposition Temp (°C)	Not available	pH (as supplied)	5.5
Autoignition Temp (°C)	Not available	Vapour Pressure (kPa)	Not available
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	1.015
Lower Explosive Limit (%)	Not applicable	Relative Vapour Density (air=1)	Not available
Volatile Component (%vol)	Not available	Evaporation Rate	Not available

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

- Ingestion may result in nausea, abdominal irritation, pain and vomiting.

EYE

- The liquid may produce eye discomfort causing smarting, pain and redness.

SKIN

- Not considered an irritant through normal use.

INHALED

- Not normally a hazard due to non-volatile nature of product.

Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.

CHRONIC HEALTH EFFECTS

- Principal hazards are accidental eye contact and cleaner overuse. Overuse or obsessive cleaner use may lead to defatting of the skin and may cause irritation, drying, cracking, leading to dermatitis.

TOXICITY AND IRRITATION

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

WATER:

PROPYL PARABEN:

- No significant acute toxicological data identified in literature search.

METHYL PARABEN:

PROPYL PARABEN:

CELLULOSE:

- Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 7 of 12

Section 11 - TOXICOLOGICAL INFORMATION

be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

PROPYL PARABEN:

METHYL PARABEN:

■ For benzoates:

Benzyl alcohol, benzoic acid and its sodium and potassium salt have a common metabolic and excretion pathway. All but benzyl alcohol are considered to be unharmed and of low acute toxicity. They may cause slight irritation by oral, dermal or inhalation exposure except sodium benzoate which doesn't irritate the skin. Studies showed increased mortality, reduced weight gain, liver and kidney effects at higher doses, also, lesions of the brains, thymus and skeletal muscles may occur with benzyl alcohol. However, they do not cause cancer, genetic or reproductive toxicity. Developmental toxicity may occur but only at maternal toxic level.

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER:

■ Not available. Refer to individual constituents.

LANOLIN, ETHOXYLATED:

TOXICITY

Oral (rat) LD50: >21300 mg/kg *

■ Both laboratory and animal testing has shown that there is no evidence for alcohol ethoxylates (AEs) causing genetic damage, mutations or cancer. No adverse reproductive or developmental effects were observed. Animal testing showed that at levels of greater than 100mg/kg, effects were limited to changes in organ weights, with no pathological changes except for liver hypertrophy. AEs are not contact sensitisers. Neat AEs are irritating to eyes and skin. The irritation potential of aqueous solutions of AEs depends on concentration. Spray cleaner aerosols and laundry powder detergent dust discharge so little airborne AE that there is unlikely to be irritation of the respiratory tract. In summary, the human health risk assessment has demonstrated that the use of AE in household laundry and cleaning detergents is safe and does not cause concern with regard to consumer use.

* [Emery Chemical Co.]

IRRITATION

Skin (rabbit): non-irritating *

Eye (rabbit): non-irritating *

CELLULOSE:

TOXICITY

Oral (rat) LD50: >5000 mg/kg

Dermal (rabbit) LD50: >2000 mg/kg

IRRITATION

Nil Reported

METHYL PARABEN:

TOXICITY

Oral (mouse) LD50: 2100 mg/kg

IRRITATION

Nil Reported [Manufacturer]

Section 12 - ECOLOGICAL INFORMATION

PROPYL PARABEN:

METHYL PARABEN:

■ For benzoates:

The ultimate environmental characteristics for benzoates may be determined by the properties of ions. The description below assumes these to be non-toxic.

Environmental Exposure and Fate

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 8 of 12

Section 12 - ECOLOGICAL INFORMATION

Distribution modelling using Mackay Level III (the EPA default: equal releases (10,000 kg/hr) and equal distribution to all compartments was used) indicates water (34.8-50%) and soil (48.4-64.2%) to be the main compartment for benzyl alcohol, benzoic acid, sodium and potassium benzoates. None are expected to volatilise to the atmosphere (< 1.51%), nor to adsorb to sediment (< 0.09 %).

However physical chemical properties and use patterns indicate water to be the main compartment for these substances.

Based on structure and organic chemistry rules (e.g. bonding in organic molecules, activation energy, reactivity, transformations, addition, substitution, elimination) no hydrolysis is expected at pH ranges of 4 - 11.

The calculated photodegradation for benzyl alcohol and the benzoates are 50% after 1.3 to 3 days, and the measured photodegradation for benzoic acid is 90% after 140 minutes.

Biodegradation and Bioaccumulation:

This family of substances is readily biodegradable (> 90% after 28 days) both aerobically and anaerobically (Benzoic acid is used as positive control in OECD Guideline for ready biodegradability testing).

From the results of numerous removal experiments the main elimination pathway for the chemicals is biotic mineralisation. The octanol/water partition coefficient of all compounds indicates a low potential for bioaccumulation. This is also supported by the rapid biotransformation and/or excretion of these compounds in urine in mammals.

Ecotoxicity:

From the data (fish, daphnia, algae, bacteria) it is obvious that neutralisation of the pH greatly reduces (up to one order of magnitude) the acute toxicity of benzoic acid. This is also supported by the lower toxicity observed with sodium benzoate. Under environmental relevant conditions therefore the acute toxicity of benzoic acid, sodium benzoate and potassium benzoate for all four trophic levels is > 100 mg/l. Under environmental relevant conditions the acute toxicity of benzyl alcohol for fish, daphnia and bacteria is > 100 mg/l. For algae, an EC 50 3 hrs of 95 mg/l is reported. Under environmental relevant conditions, benzoic acid and its salts have very low acute toxicity, whereas benzyl alcohol has low to moderate acute toxicity.

- May cause long-term adverse effects in the aquatic environment.
- Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. Wastes resulting from use of the product must be disposed of on site or at approved waste sites.
- Toxic to aquatic organisms.

METHYL PARABEN:

PROPYL PARABEN:

CELLULOSE:

- DO NOT discharge into sewer or waterways.

LANOLIN, ETHOXYLATED:

- for alcohol ethoxylates

Environmental fate:

Alcohol (alkyl) ethoxylates (AEs) are generally biodegradable and do not persist for any substantial period in the environment. They are not usually present at concentrations which might produce problems. Contamination of natural waters, however, should be avoided.

The biodegradability of the alcohol ethoxylates (AE) is relatively unaffected by the alkyl carbon chain length and the number of EO units. The linear AE are normally easily degraded under aerobic conditions. Only small differences are seen in the time needed for ultimate degradation of linear AE with different alkyl chain lengths. AE with a typical alkyl chain (e.g., C12 to C15) will normally reach more than 60% degradation in standardized tests for "ready" biodegradability. The rate of biodegradation may however be determined by the length of the ethylene oxide (EO) chain. Longer EO chains decrease the bioavailability of the AE (to microorganism) due to increased hydrophilicity and molecular size, which limits the transport of the molecule through the cell wall. The biodegradation of branched AE tends to be slower than biodegradation of linear AE. The biodegradability of AE depends on degree and structure of the branching. The general trend is that the biodegradation decreases considerably with an increasing branching of the carbon chain. The biodegradability of alcohol alkoxyates (AA), similarly, generally decreases with an increasing number of PO units. AA containing 6 PO units did not pass the level required for ready biodegradability whereas the same alcohol containing 2 PO units attained 83% ThOD in the closed bottle test.

The mineralization observed in experiments with ¹⁴C-labelled surfactants suggests that almost complete degradation of linear AE may be expected in anaerobic digesters.

Ecotoxicity:

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 9 of 12

Section 12 - ECOLOGICAL INFORMATION

Available information suggests that alcohol ethoxylates can have acute and chronic toxic effects on aquatic organisms. These effects vary by carbon chain length. Typical alcohol ethoxylate surfactant chain length ranges from 9 to 18 carbons and 3 to 8 ethoxylate groups. Toxicity generally declines as the number of ethoxylates increases

A summary of chronic toxicity data from 60 studies conducted between 1977 and 2004 on fish, aquatic invertebrates, and aquatic plant and algae species states that alcohol ethoxylates' effects on aquatic species include reduced growth rates, impaired reproduction, and reduced survival of neonates, as well as acute mortality. Alcohol ethoxylates may cause diminished growth rates and reduced cell counts in algae species at concentrations as low as 0.03 mg/L .

The concentrations at which alcohol ethoxylates lead to acute mortality in aquatic species are similar to the concentrations at which nonylphenol ethoxylates lead to acute mortality. However, alcohol ethoxylates degrade more quickly in the aquatic environment to relatively non-toxic compounds, whereas nonylphenol ethoxylate degradation typically yields nonylphenol, which is toxic as well as persistent in the aquatic environment. Algae constitute the group of aquatic organisms which appears to be the most sensitive to AE. The acute toxicity of linear and branched AE to algae is in the same range with EC50 values from 0.05 to 50 mg/l. For the linear AE, the toxicity increases with increasing hydrophobe chain length of C13) and decreasing EO chain length. The toxicity of AE to algae tends to decrease with increasing degree of branching.

The acute toxicity of AE to invertebrates varies with EC50 values from 0.1 mg/l to more than 100 mg/l for the linear types and from 0.5 mg/l to 50 mg/l for the branched types. The toxicity is species specific and may vary between 0.29 mg/l to 270 mg/l for the same linear AE. The most commonly used invertebrates for testing are *Daphnia magna* and *Daphnia pulex*, and they are also among the most sensitive invertebrates to AE. Apparently, the toxicity of AE to invertebrates was not related to hydrophobicity as it is the case for algae. Some AE are very toxic to invertebrates, i.e., linear AE of C12-15 EO1-8 and branched AE with a low degree of branching, i.e. < 10-25%. Branching of the alkyl chain reduces the toxicity of AE to invertebrates as also observed for algae.

The acute toxicity of AE to fish varies with LC50 values from 0.4 mg/l to more than 100 mg/l for the linear types and from 0.25 mg/l to 40 mg/l for the branched AE. For linear AE the toxicity increases with decreasing EO units. AE containing 7-11 EO groups are considered to be very toxic to fish (EC/LC50: 1 mg/l).

Of special interest are the aryl alcohol ethoxylates.

A EU Risk Assessment Report (RAR) concluded that octyl- and nonyl- phenol ethoxylates are not readily biodegradable but are inherently biodegradable.

As a group, these materials are generally toxic to fish with LC50s ranging, typically, between 1-6 mg/l.

Of special concern are the following families which are classified as "Environmentally Hazardous Substances" (Dangerous Goods Class 9) by either or both the ADR (Accord Europeen Relatif au Transport International des Marchandises Dangereuses par Route) and the IMDG Code (International Maritime Dangerous Goods Code).

alcohols C 6-17 (secondary) with 3-6 moles of ethoxylation.

alcohols C12-15 with 1-3 moles of ethoxylation (1-6 moles of ethoxylation IMDG)

alcohols C13-15 with 1-6 moles of ethoxylation.

New aquatic data suggests that alcohols C 8-9 branched with 3-10 moles of ethoxylation alcohols C 8-9 branched with > 10 moles of ethoxylation should also be classified as 'harmful to the environment'.

These alcohols may also be found linked to aromatic structures (in nonylphenol ethoxylates for example). The current consensus determines that such entities become Environmental Toxins by association.

For surfactants:

Environmental fate:

Octanol/water partition coefficients cannot easily be determined for surfactants because one part of the molecule is hydrophilic and the other part is hydrophobic. Consequently they tend to accumulate at the interface and are not extracted into one or other of the liquid phases. As a result surfactants are expected to transfer slowly, for example, from water into the flesh of fish. During this process, readily biodegradable surfactants are expected to be metabolised rapidly during the process of bioaccumulation. This was emphasised by the OECD Expert Group stating that chemicals are not to be considered to show bioaccumulation potential if they are readily biodegradable.

Several anionic and nonionic surfactants have been investigated to evaluate their potential to bioconcentrate in fish. BCF values (BCF - bioconcentration factor) ranging from 1 to 350 were found. These are absolute maximum values, resulting from the radiolabelling technique used. In all these studies, substantial oxidative metabolism was found resulting in the highest radioactivity in the gall bladder. This indicates liver transformation of the parent compound and biliary excretion of the metabolised compounds, so that "real" bioconcentration is overstated. After correction it can be expected that "real" parent BCF values are one

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 10 of 12

Section 12 - ECOLOGICAL INFORMATION

order of magnitude less than those indicated above, i.e. "real" BCF is <100. Therefore the usual data used for classification by EU directives to determine whether a substance is "Dangerous to the Environment" has little bearing on whether the use of the surfactant is environmentally acceptable.

Ecotoxicity:

Surfactant should be considered to be toxic (EC50 and LC50 values of < 10 mg/L) to aquatic species under conditions that allow contact of the chemicals with the organisms. The water solubility of the chemicals does not impact the toxicity except as it relates to the ability to conduct tests appropriately to obtain exposure of the test species. The acute aquatic toxicity generally is considered to be related to the effects of the surfactant properties on the organism and not to direct chemical toxicity.

CELLULOSE:

■ Cellulosic products, including cellulose ethers, generally have a low biodegradation rate and are generally of low toxicity to fish.

Sugar-based compounds (saccharides), including polysaccharides are generally easily decomposed by biodegradation. Not all polysaccharides decompose with equal rapidity, and polysaccharides are also synthesised by microorganisms during, for example, the compost maturation phases. Water-insoluble species such as cellulose take longer to decompose and those with a significant degree of branching also take longer.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
cellulose	LOW		LOW	HIGH
methyl paraben	LOW		LOW	MED
propyl paraben	LOW		LOW	MED

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE None

REGULATIONS

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 11 of 12

Section 15 - REGULATORY INFORMATION

Regulations for ingredients

lanolin, ethoxylated (CAS: 61790-81-6,8039-09-6) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)"

cellulose (CAS: 9004-34-6,68442-85-3) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD Representative List of High Production Volume (HPV) Chemicals"

methyl paraben (CAS: 99-76-3) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List"

propyl paraben (CAS: 94-13-3) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "International Fragrance Association (IFRA) Survey: Transparency List"

water (CAS: 7732-18-5) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Johnson & Johnson Medical Microshield Skincare Cleanser (CW: 4706-26)

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
lanolin, ethoxylated	61790- 81- 6, 8039- 09- 6
cellulose	9004- 34- 6, 68442- 85- 3

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.

Issue Date: 10-Feb-2011

Print Date: 10-Feb-2011

continued...

JOHNSON & JOHNSON MEDICAL MICROSIELD SKINCARE CLEANSER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 10-Feb-2011

NC317ECP

CHEMWATCH 4706-26

Version No:4

CD 2011/1 Page 12 of 12

Section 16 - OTHER INFORMATION

This is the end of the MSDS.