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NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

FULL PUBLIC REPORT

Polymer in Disperbyk 2050

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FULL PUBLIC REPORT

Polymer in Disperbyk-2050

1. APPLICANT AND NOTIFICATION DETAILS

APPLICANTS Nuplex Industries (Aust) Pty Ltd 49-61 Stephen Road Botany NSW 2019

ABN: 25 000 045 572

NOTIFICATION CATEGORY

Limited: Polymer with NAMW ≥1000 (greater than 1 tonne per year).

EXEMPT INFORMATION (SECTION 75 OF THE ACT)

Data items and details claimed exempt from publication:

Chemical name, CAS number, Molecular and Structural formulae, Molecular weight, Spectral data, Purity, Hazardous and Non-hazardous Impurities, Additives/Adjuvants, Identity and Composition of the chemical, Manufacture and Import volume.

VARIATION OF DATA REQUIREMENTS (SECTION 24 OF THE ACT) No variation to the schedule of data requirements is claimed.

PREVIOUS NOTIFICATION IN AUSTRALIA BY APPLICANT(S) None.

NOTIFICATION IN OTHER COUNTRIES None

2. IDENTITY OF CHEMICAL

OTHER NAME BYK-LP N 7053

MARKETING NAME Disperbyk-2050

3. COMPOSITION

DEGREE OF PURITY High

HAZARDOUS IMPURITIES/RESIDUAL MONOMERS

None are present at above the relevant cut off level for classification of the notified polymer as a hazardous substance

DEGRADATION PRODUCTS

The polymer crosslinks with other paint components to form a very high molecular weight and stable paint film that firmly adheres to the primer layer to which it is applied. Under extreme heat conditions, for example, fire, the paint film containing the polymer would burn emitting noxious fumes including oxides of carbon and nitrogen.

LOSS OF MONOMERS, OTHER REACTANTS, ADDITIVES, IMPURITIES

There is no loss of monomers, additives or impurities during the life of the coated product.

4. INTRODUCTION AND USE INFORMATION

Mode of Introduction of Notified Chemical Over Next 5 Years

The notified polymer will not be manufactured in Australia, but will be imported from Germany as a component in Disperbyk-2050 at a concentration of <70%.

MAXIMUM INTRODUCTION VOLUME OF NOTIFIED CHEMICAL OVER NEXT 5 YEARS

Year	1	2	3	4	5
Tonnes	10-30	10-30	10-30	10-30	10-30

USE

Disperbyk-2050, containing the notified polymer, is a wetting and dispersing additive for solvent-based coatings and pigment concentrates. It will be used at <5% in automotive and industrial paint formulations.

5. PROCESS AND RELEASE INFORMATION

5.1. Distribution, transport and storage

PORT OF ENTRY Sydney and Melbourne

TRANSPORTATION AND PACKAGING

The notified polymer will be imported as a component of a Disperbyk-2050 wetting agent in 200 L approved steel drums. The product will be stored in the warehouse. Coatings (paint) will be manufactured by a variety of companies located throughout Australia. The formulated coating will be stored and transported in 20L steel pails or 200L steel drums. Transport will be by road.

5.2. Operation description

The polymer will be used as an ingredient of automotive and industrial paints.

For the manufacture of paints, the polymer solution will be blended with other ingredients to make the final paint product. Workers will connect a vacuum hose line to the drums from which the polymer solution is emptied into a blending vessel. Other ingredients are then added to the vessel. Blending generally occurs in a closed automated system with dedicated transfer lines to minimise the potential for occupational exposure.

Occasionally, coatings manufacture may occur in batch mixers where addition of polymer solution is semi-automated. Blending equipment is fitted with exhaust ventilation systems and there is a regular maintenance programme in place to control airflow levels at regular intervals.

The blended product is sampled for laboratory analysis. The finished product will be packaged into 20L steel pails or 200L steel drums and distributed through wholesalers to spray painting/smash repair businesses, who are the main end-users. Filtration, drum and pail filling are automated processes and worker intervention is not required unless the filling line requires adjustment.

Industrial paint application involves the use of spray, roller coatings or dipping equipment in an environment with an effective filtered exhaust system.

After the coating is complete, the spray gun and lines will be emptied and any residual paint will be placed into "paint waste" drums for recycling. The spray gun is then cleaned at an earthed recycled solvent wash station. The spray equipment is then cleaned and ready for the next job.

5.3. Occupational Exposure

Number and Category of Workers

Category of Worker	Number	Exposure Duration	Exposure Frequency per Yr
Transport and warehousing	10	1 hours/day	200 days/year
Paint Manufacture			
High speed dispersing	40	4 hours/day	30 days/year
Make-up	40	2 hours/day	30 days/year
Quality Control	10	8 hours/day	30 days/year
Filling into containers	40	8 hours/day	30 days/year
Paint Application			
Addition to coater trays	10	8 hours/day	200 days/year
Spray painting	200	8 hours/day	200 days/year
Cleaning of spray equipment	30	2 hours/day	200 days/year

Exposure Details

Transport and storage

Exposure to the notified polymer is not expected during the importation, warehousing or transportation of the notified polymer solution or the paint product except in cases where the packaging is accidentally breached.

Paint Manufacture (Blending)

The notifier has not provided an estimate of the number of reformulation sites at which paint will be manufactured.

For pigment dispersion, the notified polymer solution is either metered directly to the mixer (solvent, resin) under local exhaust ventilation, or is manually added from drums or pails. There is potential for dermal exposure to drips and spills of the polymer solution during mixing/blending. Workers involved in this process are expected to wear overalls, impervious gloves and goggles.

For paint manufacture, workers will connect a vacuum hose line to the drums from which the polymer solution is pumped to the blender. Skin contact with splashes, drips and spills may occur as vacuum lines are connected or disconnected. The notifier states that all operations involving transfer are carried out under exhaust ventilation.

Blending of the polymer solution to finished coatings generally occurs in a closed automated system with dedicated transfer lines, thereby minimising the potential for occupational exposure. Occasionally coatings manufacture may occur in batch mixers where addition of the polymer solution is semi-automated, with likely potential for skin contact when adding to and emptying mixing vessels. The blending equipment is normally fitted with exhaust ventilation systems and there is a regular maintenance programme in place to control airflow levels at regular intervals. Filtration, drum and pail filling are automated and metered processes and worker intervention is not required unless the filling line requires adjustment. The automated and enclosed nature of the process and the presence of exhaust ventilation would reduce worker exposure during normal use and likely exposure will only be due to spillage that may occur during batch adjustment.

The blended product will be sampled for laboratory analysis and incidental skin contact may occur during sampling and analytical procedures.

Paint Application

Prior to application, the paint will be stirred and pumped into sprayers and trays. Coatings will be applied by spray, roller or dipping into trays in the presence of a filtered exhaust system. Mixing and spraying is conducted in spray booths where the overspray is collected within the spray booth by its filtering system or on masking materials eg kraft and newspaper. Exposure to significant amounts of the notified polymer will be limited due to the engineering controls and personal protective equipment

worn by workers. The spray-painters will be equipped with respiratory protection, eye protection, hand protection conforming to AS and NZ standards. The product is sprayed in booths with an exhaust/filter system, and workers wear air respirator or mask fitted with organic vapour cartridge, faceshield, gloves and protective suit.

Workers may also be exposed to the polymer via the dermal and ocular routes while cleaning and rinsing spray equipment using recirculated solvent.

5.4. Release

RELEASE OF CHEMICAL AT SITE

Concentrate formulation

The notifier has estimated that approximately 1400 kg per year of the notified polymer may be disposed of as waste, resulting from the cleaning of process equipment, containers and spills. This estimate includes washing of mixing pots, milling and filling equipment. It is likely that this will be recovered for use in subsequent batches, which would reduce the waste generated by approximately half. A licensed waste disposal contractor will collect this material and dispose of it in line with state requirements. Generally this is likely to be to landfill but may include incineration.

Paint manufacture

Estimates by the notifier indicate that due to the cleaning of process equipment, containers and spills, approximately 850 kg per year of the notified polymer will end up as waste. A licensed waste disposal contractor will collect this material and dispose of it in line with state requirements. Generally this is likely to be to landfill but may include incineration.

RELEASE OF CHEMICAL FROM USE

Paint Application

It should be noted that out of the proposed application methods, spray painting has the highest loss rate. The transfer efficiency for spraying is approximately 60-80%. The remaining 20-40% will be captured as overspray in the spray booth. The other application methods will have a loss rate less than this but all loss will be contained in the application booths. The waste material generated by application will be disposed of by licensed waste disposal contractors, generally to landfill. The notifier estimates that approximately 7 tonnes per year of the notified polymer will be disposed of across Australia due to application, assuming as a worst case that 100% is applied by spraying.

A small amount of the paint will remain in the empty containers (< 2%). These will either be disposed of to landfill or collected by licensed drum recyclers who will clean them via incineration. It is estimated that approximately 400 kg of the notified polymer will be lost in this way.

5.5. Disposal

Approximately 2250 kg of waste notified polymer will be generated annually during the manufacture of the paint. This is likely to be to disposed of to landfill but may be incinerated.

Due to the application of paint, up to 7 tonnes of notified polymer will go to landfill across Australia. Residues in paint containers will account for up to a further 400 kg, which will either be disposed of to landfill or incinerated in container recycling.

5.6. Public exposure

Public exposure to the notified polymer is only likely after the paint applied to car bodies and other substrates has fully cured. Although there may be dermal contact, there is negligible potential for exposure of the public to the notified polymer since it is strongly bound in cured films.

6. PHYSICAL AND CHEMICAL PROPERTIES

Appearance at 20°C and 101.3 kPa

Yellow solid

Boiling Point Data not available

Relative Density 1020 kg/m³ at 20°C (Disperbyk-2050)

METHOD DINEN ISO 2811-3 Remarks Test facility not stated.

Vapour Pressure Not determined

Remarks The polymer in Disperbyk-2050 is a high molecular weight polymer and as such is

not expected to be volatile. A vapour pressure of 0.4 kPa at 20°C is calculated for

Disperbyk-2050 (based on solvents).

Water Solubility Not determined

Remarks The notified polymer is expected to be insoluble in water given the large

hydrocarbon chain moieties present. Although it contains some water-soluble

functional groups, they are attached to large hydrocarbon chains.

Hydrolysis as a Function of pH Not determined

Remarks No hydrolysis data is available for the polymer. The polymer contains groups

which may hydrolyse under extreme conditions such as elevated temperatures, and in the presence of acid or base catalysts. Nevertheless, in the absence of a catalyst, and under ambient temperatures and in pH conditions found in the environment

(pH 4-9), no hydrolysis of the notified polymer is anticipated.

Partition Coefficient (n-octanol/water) Not determined

Remarks Due to its hydrophobic nature, the notified polymer is likely to partition to fat

rather than water.

Adsorption/Desorption Not determined

Remarks No data available. As the carrier solvent evaporates, the polymer solution will

become more viscous and sticky, thus binding to soil and sediments, which will be

helped by protonation of functional groups within the polymer.

Dissociation ConstantNot determined

Remarks No data available. Based on its structure, the polymer is expected to display

typical basicity.

Particle Size Not determined

Remarks Not applicable as polymer is not isolated

Flash Point 29°C (for Disperbyk-2050)

Method DIN51755

Remarks Test facility not stated.

Flammability Limits Not determined.

Remarks Disperbyk-2050 has a lower explosion limit of 1.5% and an upper explosion limit

of 7.0% (based on solvents).

Autoignition Temperature Not determined

Remarks Not applicable to the notified polymer.

Explosive Properties Not determined

Remarks Not expected to be explosive based on structure.

Reactivity The notified polymer is stable under conditions of use.

7. TOXICOLOGICAL INVESTIGATIONS

Endpoint and Result	Assessment Conclusion		
Rat, acute oral LD50 >2000 mg/kg bw	low toxicity		
Rabbit, skin irritation	non-irritating		
Rabbit, eye irritation	non-irritating		

7.1. Acute toxicity – oral

TEST SUBSTANCE Notified polymer

METHOD OECD TG 401 Acute Oral Toxicity.

Species/Strain Rat/Wistar Vehicle Olive oil

Remarks - Method Oral gavage; a non-flexible stomach tube was used to facilitate dosing.

The notified polymer was dosed as a 10% suspension of fine fibres.

RESULTS

Group	Number and Sex	Dose	Mortality	
	of Animals	mg/kg bw		
1	5 males/5 females	2000	None	
2	5 males/5 females	4000	None	

 LD_{50} >4000 mg/kg bw

Signs of Toxicity Apathy for 4 hours in the 4000 mg/kg bw group.

Effects in Organs None

Remarks - Results There was no test-dependent deviation in weight gain, nor any clear

pathologic findings. Apathy was attributed to the high dose volume.

CONCLUSION The notified polymer is of low toxicity via the oral route.

TEST FACILITY PHARMATOX; Germany (1999a)

7.4. Irritation – skin

TEST SUBSTANCE Notified polymer

METHOD OECD TG 404 Acute Dermal Irritation/Corrosion.

Species/Strain Rabbit/New Zealand White

Number of Animals 3 Vehicle None Observation Period 72 hours

Type of Dressing Semi-occlusive (gauze).

Remarks - Method Prior to application, the solid mass was warmed till it became a viscous

fluid, and then allowed to solidify on a gauze patch.

RESULTS

Lesion		Mean Score* Animal No.		Maximum Value	Maximum Duration of Any Effect	Maximum Value at End of Observation Period
	1	2	3			
Erythema/Eschar	0	0	0	0	<1 hour	0
Oedema	0	0	0	0	<1 hour	0

^{*}Calculated on the basis of the scores at 24, 48, and 72 hours for EACH animal.

Remarks - Results No deviations from normal findings were observed.

CONCLUSION The notified polymer is non-irritating to skin.

TEST FACILITY PHARMATOX; Germany (1999b)

7.5. Irritation – eye

TEST SUBSTANCE Notified polymer

METHOD OECD TG 405 Acute Eye Irritation/Corrosion.

Species/Strain Rabbit/New Zealand White

Number of Animals

Observation Period 72 hours

Remarks - Method The notified polymer was instilled as short lengths of fine fibres.

RESULTS

Lesion	Mean Score* Animal No.			Maximum Value	Maximum Duration of Any Effect	Maximum Value at End of Observation Period	
	1	2	3		- VV		
Conjunctiva: redness	0	0	0	1	4 h	0	
Conjunctiva: chemosis	0	0	0	0	-	0	
Conjunctiva: discharge	0	0	0	1	4 h	0	
Corneal opacity	0	0	0	0	-	0	
Iridial inflammation	0	0	0	0	-	0	

^{*}Calculated on the basis of the scores at 24, 48, and 72 hours for EACH animal.

Remarks - Results Conjunctival irritations with very slight redness and very little increased

secretion for 4 hours.

CONCLUSION The notified polymer is minimally irritating to the eye.

TEST FACILITY PHARMATOX; Germany (1999c)

8. ENVIRONMENT

8.1. Environmental fate

No environmental fate data were submitted.

8.2. Ecotoxicological investigations

9. RISK ASSESSMENT

9.1. Environment

9.1.1. Environment – exposure assessment

None of the notified polymer will be released directly to water bodies. Up to 9.25 tonnes of waste notified polymer will be generated each year due to the formulation and use of paints containing the notified polymer. Most of this will go to landfill sites across Australia, with a small proportion (<400 kg) incinerated during container recycling. The majority of the waste notified polymer would have reacted with the other components to form an inert matrix before reaching landfill. In landfills, the notified polymer is not likely to be mobile.

The majority of the notified polymer will be combined with other paint components to form a very high molecular weight and stable paint film. As the coating degrades over time, any fragments, chips and flakes of the lacquer will be of little concern as they are expected to be inert. The surfaces coated with the polymer are likely to be either recycled for metal reclamation or be placed into landfill at the end of their useful life (5-20 years). When recycled the polymer would be destroyed in furnaces and converted to water vapour and oxides of carbon and nitrogen.

The polymer is not expected to cross biological membranes, due to its high molecular weight and expected low water solubility, and as such should not bioaccumulate (Connell 1990).

9.1.2. Environment – effects assessment

No ecotoxicological data were submitted; therefore a PNEC cannot be determined. The notified polymer does contain a number of functional groups that may be protonated in the environment. Cationic polymers that are water-soluble are known to be toxic to aquatic organisms (Nabholz, 1993). Therefore, the notified polymer may be expected to exhibit some aquatic toxicity. However, with the low water solubility of the notified polymer, limited exposure to the aquatic compartment and wide dispersal the overall environmental hazard should be low.

9.1.3. Environment – risk characterisation

No aquatic exposure is anticipated during manufacture and normal use of the polymer. During manufacture and application of paint, up to 9.25 tonnes/annum of the notified polymer wastes could be generated. It is expected that the majority of this waste will be disposed of in approved landfills as inert solid waste, with a small proportion being incinerated. In landfill, the solid wastes should be contained and not pose a significant hazard to the environment.

The majority of the notified polymer will be incorporated into paints that will be applied to surfaces and cured in an inert matrix. The polymer will share the fate of the surfaces to which it has been applied at the end of their useful life (5-20 years). Hence, it will either be disposed of to landfill or destroyed by incineration during recycling of metal surfaces.

9.2. Human health

9.2.1. Occupational health and safety – exposure assessment

During transport and storage, workers are unlikely to be exposed to the notified polymer unless packaging is breached. In the event of an accident, spills will be removed in accord with the MSDS and government regulations.

The main potential for occupational exposure is during blending operation leading to the preparation of end use products at the customer manufacturing facilities. Minimal exposure is

expected at this stage, as blending/packaging operations will be closed systems except for QC testing.

Workers may be exposed to the notified polymer from drips and spills during the processes of preparation, cleaning, and maintenance and during product changeover. Dermal exposure would be the predominant route of occupational exposure to workers during these activities. Workers handling connections or equipment will be properly protected with PPE as recommended in the MSDS. Filtration, drum and pail filling are automated and metered processes and worker intervention is not required unless the filling line requires adjustment. The automated and enclosed nature of the process and the presence of exhaust ventilation would reduce worker exposure during normal use and likely exposure will only be due to spillage that may occur during batch adjustment.

Exposure can also occur during industrial application of the finished products. Coatings will be applied by spray, roller or dipping into trays in the presence of a filtered exhaust system. Mixing and spraying is conducted in spray booths. However, exposure to significant amounts of the notified polymer will be limited due to the engineering controls and personal protective equipment worn by workers. The spray-painters will be equipped with respiratory protection, eye protection, hand protection conforming to AS and NZ standards. Furthermore, the notified polymer will be present at a very low concentration in finished product at this stage.

Workers may also be exposed to the notified polymer via the dermal and ocular routes while cleaning and rinsing spray equipment using recirculated solvent.

9.2.2. Public health – exposure assessment

The notified polymer will not be available for sale to the public. It will be blended with resins and other components of the paint formulations and used in paints for car body parts. As a component bound in the resin substrate, routine exposure of the general public is expected to be minimal.

During the transport and handling of the notified polymer, the public will only be exposed if there is an accident resulting in spillage. Therefore, the overall public exposure to the notified polymer will be low.

9.2.3. Human health - effects assessment

The notified polymer was shown to be of low acute toxicity via the oral route in rats. It was not a skin or eye irritant.

Repeat dose toxicity studies for the notified polymer were not provided.

Based on the available data, the notified polymer is not classified as a hazardous substance in accordance with the NOHSC *Approved Criteria for Classifying Hazardous Substances* (NOHSC, 2002).

9.2.4. Occupational health and safety – risk characterisation

Worker exposure during transport, storage and distribution of the notified polymer and its products is unlikely, except in the event of an accidental spill. Exposure after a spill should be controlled by the recommended practices for cleaning up of spills stated in the MSDS.

At the paint formulation sites, occupational exposure to the notified polymer is expected during the blending operations leading to the preparation of end use products at the customer manufacturing facilities. However, for these workers, the risk of exposure is expected to be low, as blending/packaging operations will be closed systems except for QC testing.

Workers handling hose connections or equipment will be properly protected with PPE as recommended in the MSDS. In addition, areas where containers are opened and connected to the blending vessels would be under the control of exhaust ventilation to deal with the hazards associated with other ingredients such as pigments and solvents. Eye contact is only likely in the

case of accidental splashes and is controlled by the use of safety glasses or goggles.

Application of paints containing the notified polymer is carried out in spray booths, which significantly reduces the risk of exposure to the notified polymer.

Overall, the occupational risk is low for handlers of the notified polymer, as it is expected to have low hazard at the concentration used. The occupational risk due to the notified polymer would be further reduced due to measures taken to control exposure to other components of the formulation, such as the use of enclosed systems for blending/packaging, and the wearing of protective clothing during product changeover and equipment maintenance.

9.2.5. Public health – risk characterisation

The notified polymer is to be used as a component of paint on motor vehicles and other substrates. The fully cured finished topcoat will come in contact with the general public. However, at that stage the polymer will be fully cured and adhered to the vehicles outer surface forming a continuous totally insoluble molecule of infinite size and is consequently rendered non-hazardous and immobile. The notified polymer will not pose a significant risk to public health when used in the proposed manner.

10. CONCLUSIONS – ASSESSMENT LEVEL OF CONCERN FOR THE ENVIRONMENT AND HUMANS

10.1. Hazard classification

Based on the available data the notified polymer is not classified as hazardous under the NOHSC *Approved Criteria for Classifying Hazardous Substances*.

10.2. Environmental risk assessment

The chemical is not considered to pose a risk to the environment based on its reported use pattern.

10.3. Human health risk assessment

10.3.1. Occupational health and safety

There is Low Concern to occupational health and safety under the conditions of the occupational settings described.

10.3.2. Public health

There is Negligible Concern to public health when used as described in the notification.

11. MATERIAL SAFETY DATA SHEET

11.1. Material Safety Data Sheet

The MSDS of the product containing the notified polymer provided by the notifier was in accordance with the NOHSC *National Code of Practice for the Preparation of Material Safety Data Sheets* (NOHSC, 2003). It is published here as a matter of public record. The accuracy of the information on the MSDS remains the responsibility of the applicant.

11.2. Label

The label for the product containing the notified polymer provided by the notifier was in accordance with the NOHSC *National Code of Practice for the Labelling of Workplace Substances* (NOHSC, 1994). The accuracy of the information on the label remains the responsibility of the applicant.

12. RECOMMENDATIONS

CONTROL MEASURES Occupational Health and Safety

- Employers should implement the following engineering controls to minimise occupational exposure to the notified polymer:
 - Enclosed spray paint application system for industrial use.
- Employers should ensure that the following personal protective equipment is used by workers to minimise occupational exposure to the notified polymer as introduced and as diluted for use in the products:
 - Protective gloves,
 - safety glasses or goggles,
 - half-facepiece respirator during spray application and
 - industrial clothing

Guidance in selection of personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.

- A copy of the MSDS should be easily accessible to employees.
- If products and mixtures containing the notified polymer are classified as hazardous to health in accordance with the NOHSC *Approved Criteria for Classifying Hazardous Substances*, workplace practices and control procedures consistent with provisions of State and Territory hazardous substances legislation must be in operation.

Environment

- The following control measures should be implemented by end users to minimise environmental exposure during use of the notified chemical:
 - Do not allow material or contaminated packaging to enter drains, sewers or watercourses.

Disposal

Wastes generated during industrial application should be disposed of through a licensed
waste contractor. Empty paint containers should be left open in a well-ventilated area to
dry out. When dry, recycle steel containers via steel can recycling programs. Disposal
of empty paint containers via domestic recycling programs may differ between local
authorities and this should be checked with the local council first.

Emergency procedures

• Spills/release of the notified chemical should be handled by containment with absorbent material, collection and storage in sealable, labelled container.

12.1. Secondary notification

The Director of Chemicals Notification and Assessment must be notified in writing within 28 days by the notifier, other importer or manufacturer:

- (1) Under Section 64(2) of the Act:
 - if any of the circumstances listed in the subsection arise.

The Director will then decide whether secondary notification is required.

No additional secondary notification conditions are stipulated.

13. BIBLIOGRAPHY

- Connell, D.W. (1990). General Characteristics of Organic Compounds Which Exhibit Bioaccumulation. In: Bioaccumulation of Xenobiotic Compounds. CRC Press, Boca Raton, USA, pp. 47-57.
- Nabholz, J.V., Miller, P. and Zeeman, M., (1993) "Environmental Risk Assessment of New Chemicals Under the Toxic Substances Control Act (TSCA) Section Five," Environmental Toxicology and Risk Assessment, American Society for Testing and Materials, ASTM STP 1179, Landis, W.G., Hughes, J.S. and. Lewis, M.A., Eds. Philadelphia, pp 40-55.
- NOHSC (1994) National Code of Practice for the Labelling of Workplace Substances [NOHSC: 2012(1994)]. National Occupational Health and Safety Commission, Canberra, Australian Government Publishing Service.
- NOHSC (2002) Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2002)]. National Occupational Health and Safety Commission, Canberra, AusInfo.
- NOHSC (2003) National Code of Practice for the Preparation of Material Safety Data Sheets, 2nd edn [NOHSC:2011(2003)]. National Occupational Health and Safety Commission, Canberra, Australian Government Publishing Service.
- PHARMATOX (1999a). Acute Toxicological Study of BYK-LP N 7053 After One Oral Application to the Rat LD₅₀ Approximately. Project Number: 4-13-99, September 1999). Pharmatox Beratung und Forschung Gmbh, Hannover (Unpublished data submitted by Nuplex Industries).
- PHARMATOX (1999b). Irritant Effects of BYK-LP N 7053 on Rabbit Skin According to Draize. Project Number: 3-14-99, September 1999). Pharmatox Beratung und Forschung Gmbh, Hannover (Unpublished data submitted by Nuplex Industries).
- PHARMATOX (1999c). Irritant Effects of BYK-LP N 7053 on Rabbit Eye According to Draize. Project Number: 3-15-99, September 1999). Pharmatox Beratung und Forschung Gmbh, Hannover (Unpublished data submitted by Nuplex Industries).