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July 2001

**NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION
AND ASSESSMENT SCHEME**

FULL PUBLIC REPORT

TG-551N

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Director

Chemicals Notification and Assessment

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FULL PUBLIC REPORT**TG-551N****1. APPLICANT**

CHT Australia Pty Ltd of 33 Elliot Road Dandenong VIC 3175 (ABN 54 006 849 869) has submitted a limited notification statement in support of their application for an assessment certificate for TG-551N.

2. IDENTITY OF THE CHEMICAL

The chemical name, CAS number, molecular and structural formulae, molecular weight, spectral data and details of the polymer composition have been exempted from publication in the Full Public Report and the Summary Report.

Marketing Name: TG-551N

3. PHYSICAL AND CHEMICAL PROPERTIES

Physico-chemical properties were determined in accordance with OECD Principles of Good Laboratory Practice (1997) and the EC Commission Directive (1999).

Appearance at 20°C & 101.3 kPa: White solid; see comments below

Melting Point: $39.9 \pm 0.1^\circ\text{C}$; see comments below

Specific Gravity/Relative Density: 1.414 g/cm^3 at 20°C

Vapour Pressure: $<9.35 \times 10^{-29} \text{ kPa}$ at 25°C (calculated)

Water Solubility: pH 7: TOC* <1 mg C/L at 20°C,
pH 2 and pH 9: TOC* <1 mg C/L at 37°C

Partition Co-efficient (n-octanol/water): $\log P_{ow} = >20.6$ (calculated); see comments below

Hydrolysis as a Function of pH: Not determined; see comments below

* TOC = Total organic carbon

Adsorption/Desorption:	$\log K_{oc} = 12.6$ (calculated)												
Dissociation Constant:	$pK_a = 16.5$ (calculated)												
Particle size:	<table> <tr> <td><10 μm</td><td>= 0.45% w/w</td></tr> <tr> <td>10 – 20 μm</td><td>= 0.77% w/w</td></tr> <tr> <td>20 – 60 μm</td><td>= 9.4% w/w</td></tr> <tr> <td>20 –125 μm</td><td>= 17.83% w/w</td></tr> <tr> <td>125 – 250 μm</td><td>= 11.64 % w/w</td></tr> <tr> <td>>250 μm</td><td>= 59.95</td></tr> </table>	<10 μm	= 0.45% w/w	10 – 20 μm	= 0.77% w/w	20 – 60 μm	= 9.4% w/w	20 –125 μm	= 17.83% w/w	125 – 250 μm	= 11.64 % w/w	>250 μm	= 59.95
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20 – 60 μm	= 9.4% w/w												
20 –125 μm	= 17.83% w/w												
125 – 250 μm	= 11.64 % w/w												
>250 μm	= 59.95												
Flash Point:	Not determined. The notified polymer is a solid substance with a very low vapour pressure												
Flammability Limits:	Not highly flammable												
Autoignition Temperature:	>350°C												
Explosive Properties:	Not explosive												
Reactivity/Stability:	Not determined. The notified polymer does not have any functional groups associated with oxidising activity, and has not demonstrated such activity under normal handling												

3.1 Comments on Physico-Chemical Properties

The notified polymer is a white solid, but will be imported into Australia as an off white emulsion.

Melting point was determined in accordance with OECD Guideline No. 102 and EEC Directive 92/69, A1, using Differential Scanning Calorimetry (RCC Ltd, 2000a). The first endothermic heat effect corresponding to melting was observed at 41.6°C. A second, small, endothermic heat effect was detected at ~75.9°C. At about 210°C the decomposition of the test item started. After the experiment, the sample had lost about 67% of its mass and was foamy.

Relative density was determined in accordance with OECD Guideline No. 109 and EEC Directive 92/69, A3, using the Gas Comparison Pycnometer Method (RCC Ltd, 2000b).

Vapour pressure was determined in accordance with OECD Guideline No. 104 and EEC Directive 92/69, A4, using the Modified Watson Correlation, (RCC Ltd, 2000c). The boiling point was calculated to be ~774°C using Meissner's method. The vapour pressure was therefore estimated to be very low.

Water solubility was determined in accordance with OECD Guideline No. 120 in combination with OECD Guideline No. 105, using the solution/extraction behaviour of polymers in water method (RCC Ltd, 2000d). The notified polymer is considered to be practically insoluble in water.

Hydrolysis as a function of pH was not determined as the content of the water extractable components of the notified polymer was determined to be <0.1 g/L (RCC Ltd, 2000e). The notified polymer contains ester and amide groups but is not expected to hydrolyse in the environmental pH range.

The partition coefficient was estimated by a model calculation based on the theoretical fragmentation of the molecule into suitable substructures for which reliable log P_{ow} values are known (RCC Ltd, 2000f). The log P_{ow} value for the notified polymer was obtained by summing the fragment values and applying correction factors. Neither the HPLC method (OECD Guideline No. 117) nor the flask-shaking method (OECD Guideline No. 107 and EEC Directive 92/69, A8) were applicable to the determination of the partition coefficient for the notified polymer. The notified polymer is considered to be hydrophobic and will preferentially partition into the organic phase.

The adsorption/desorption was estimated using a regression equation relating the K_{oc} with P_{ow} (RCC Ltd, 2000g). The notified polymer is classified as immobile in soils.

The dissociation constant was estimated by calculations using the Taft method (RCC Ltd, 2000h). The notified polymer contains no groups that are expected to dissociate or protonate within the environmental pH range.

4. PURITY OF THE CHEMICAL

Degree of Purity: high

Maximum Content of Residual Monomers: Chemical identity of residual monomers is exempt information. Concentrations of residual monomers are present at concentrations below the cut off levels for classification as a hazardous substance.

Impurities: The only identified impurities are the residual monomers.

5. USE, VOLUME AND FORMULATION

The notified polymer, TG-551N, will not be manufactured in Australia. It will be imported as an emulsion (Unidyne TG-551N) containing less than 18% notified polymer, and co-solvent, dipropylene monomethyl ether (6.5%) and acetic acid (<0.1%) in sealed tanks or drum containers (1 tonne polyethylene tank, 200 kg polyethylene drum, and 120 kg and 60 kg metal drum with polyethylene inner lining).

The notified polymer will be used as a water and oil repellent in textiles such as carpets, blankets, furnishings and upholstery fabric. The end use product will normally contain less than 1% notified polymer.

The estimated import volume of the notified polymer is up to 20 tonnes/year for the next 5 years.

6. OCCUPATIONAL EXPOSURE

Transport and storage

Following importation, transport workers will deliver the polymer emulsion containing 18% notified polymer by road to the notifier's warehouse for subsequent reformulation prior to distribution to textile coaters. Alternatively, the polymer emulsion can be supplied in the original container to textile mills for manual dilution prior to application to textile. Waterside, transport and warehouse workers (10-15 workers, duration of exposure of 2-3 hours/day, 10-15 days/year) are unlikely to be exposed to the notified polymer unless the packaging is breached.

Reformulation of textile treatment and coating products

The imported emulsion, Unidyne TG-551N, is weighed and added into a 2000 kg open vessel. Other ingredients are added separately to the vessel, and the mixture blended and agitated to form coating products containing less than 1% notified polymer. A small quantity of the coating product is collected for quality testing prior to drumming off. Once approved by the laboratory personnel, the coating product is filled into 20L plastic pails, 200L steel drums or 1000L Schutz tank.

A maximum of 2 – 8 workers will be involved in the reformulation and drumming of diluted coating product. Potential exposure is 2 – 3 hours/day, up to 100 days/year. The main routes of exposure are dermal and ocular exposure during manual weighing and adding of the polymer emulsion (18% notified polymer) into the mixing vessel, and when filling drums and pails with the coating product (1% notified polymer). Cleaning and maintenance personnel will have intermittent exposure to the notified polymer when carrying out their tasks. The polymer emulsion contains solvents, therefore inhalation exposure to solvents is also possible.

One or two laboratory personnel will have intermittent exposure to the notified polymer for up to 200 hours/year when collecting and performing QC tests.

All workers involved in handling the polymer emulsion and the coating product, including laboratory personnel, will wear protective equipment including chemical goggles, overalls,

protective vest, safety shoes, protective gloves, helmets, and respiratory protection, if necessary. The reformulation plant has a high volume of airflow and local exhaust ventilation is fitted to capture dust and vapours from the mixing tank.

Preparation of treatment bath

Some textile treatment sites may prepare their own treatment bath by dilution of the imported polymer emulsion. Similar mixing procedures to the reformulation are employed when preparing the treatment bath. All of the ingredients including the polymer emulsion are manually weighed and added individually into a treatment bath and mixed. It is estimated that a maximum of 20 workers (10 establishments, 2 workers/establishment) will be involved in the preparation of treatment baths. Dermal and ocular exposure can occur when handling polymer emulsion, and from spills and splashes during the preparation of treatment bath. Inhalation exposure to solvents present in the polymer emulsion is also possible. Potential exposure to the polymer emulsion is expected to be 5 – 10 minutes several times/day, for up to 250 days/year. Workers will wear protective equipment including safety glasses with side shields or chemical goggles, overalls, safety shoes, PVC or rubber gloves, and respiratory protection if necessary.

Textile treatment or coating

Diluted polymer emulsion (1% notified polymer) will be applied by cold-pad and thermo fixation method. The material to be treated will run through a paddler, pass through a set of mangle rollers to remove excess liquor from the material, and then through the oven for drying (1-2 minutes at 80 - 100°C) and thermofixation (30 – 60 seconds at 150 – 160°C) of the polymer onto the finished goods. It is possible that dermal exposure to drips and spills, may occur if treated materials become entangled with the rollers during application.

An estimated maximum of 120 workers will be applying formulated products or treatment baths. Potential exposure to the coating product is expected to be 8 hours/day, up to 250 days/year. Workers will wear similar protective equipment to those required when preparing a treatment bath. These include safety glasses with side shields or chemical goggles, overalls, safety shoes, PVC or rubber gloves and if necessary, respiratory protection.

Handling of cured treated materials would not result in exposure to the notified polymer as it will be fixed onto the fibre surface or embedded in a matrix of the other polymers and ingredients, and not separately available for exposure.

7. PUBLIC EXPOSURE

The notified polymer and products containing it are not available for sale to the public. The potential for public exposure to the notified polymer during transport, reformulation or disposal is likely to be negligible. Members of the public will make dermal contact with the dried form of the notified polymer when handling or using treated textiles. However, the notified polymer is not expected to be released from the treated materials.

8. ENVIRONMENTAL EXPOSURE

8.1 Release

Reformulation

It is estimated that a maximum of 10 kg per batch (maximum 100 batches/year) of the reformulated product, containing up to 0.1 kg of the notified polymer, will be released to the wastewater pit. The maximum annual discharge is 10 kg per annum of the notified polymer. This wastewater will be discharged into a licensed treatment site via enclosed tankers. Residual material in the import containers is washed out with water and may be used in blending subsequent batches or collected in the wastewater pit. The empty containers will then be reused or disposed of to landfill by a licensed waste contractor. The aqueous waste will be treated by sedimentation and filtration at the wastewater facility, prior to discharge in the metropolitan sewer system. It is estimated that ~90% of the waste polymer would be separated from the water into the sludge phase, with the sludge being disposed of to landfill by a licensed waste disposal contractor.

Application

The notified polymer will be used industrially as a water and oil repellent in textiles, at concentrations of less than 1%. The formulated product will be used at a number of sites.

Release of the notified polymer from formulated products may occur during the cleaning of coating/padding equipment with water. It is estimated that approximately 500 L of washings, containing less than 0.4 kg of the notified polymer, will be released per week from all sites. Depending on the size of the business, the waste product may be released directly into the sewerage system, or collected in designated containers or wastewater pits for secondary treatment and disposal. Additionally, release may occur from spills at the applicator sites, during transfer of the formulated products from the drums to the coating/padding machine, or through accidental damage of drums. Residues from such spills and empty containers at the applicator sites would be disposed of to landfill by a licensed waste contractor.

Summary of Total Release

Importation and reformulation site:

	Total	Landfill (90%)	Sewer (10%) (Melbourne)
Residues from import containers	50 kg/year	45 kg/year	5 kg/year
Equipment cleaning residues	10 kg/year	9 kg/year	1 kg/year
Spills	10 kg/year	9 kg/year	1 kg/year
Total	70 kg/year	63 kg/yr	7 kg/year

From formulated products:

	Total	Landfill (90%)	Sewer (10%) (Australia)
Residues from reformulation containers	50 kg/year	45 kg/year	5 kg/year
Equipment cleaning residues	20 kg/year	18 kg/year	2 kg/year
Spills	10 kg/year	9 kg/year	1 kg/year
Total	80 kg/year	72 kg/year	8 kg/year

From textile mills using imported product:

	Total	Landfill (90%)	Sewer (10%) (Australia)
Residues from import containers	75 kg/year	67.5 kg/year	7.5 kg/year
Equipment cleaning residues	20 kg/year	18 kg/year	2 kg/year
Spills	30 kg/year	27 kg/year	3 kg/year
Total	125 kg/year	112.5 kg/year	12.5 kg/year
All sources	275 kg/year	247.5 kg/year	27.5 kg/year

8.2 Fate

Due to the negligible water solubility and the unique hydrophobic and oleophobic nature of the notified polymer, any release to the environment is initially unlikely to become associated with either the aqueous or organic phase. Once cleavage of the C-C bond occurs, the hydrocarbon component is likely to become assimilated with soils, sludges and sediments, while the fluorinated moiety is likely to persist in the environment.

The major environmental exposure route of the notified polymer is likely to be from disposal to landfill, incineration, and some minor discharge of wash waters to the sewerage system. On disposal to landfill, the hydrocarbon portion of the polymer will remain bound within the soils and sediments of the landfill to be slowly degraded by biotic and abiotic processes. If incinerated, the polymer would be rapidly destroyed and converted to water vapour and oxides of carbon, nitrogen and hydrogen fluoride. Any polymer entering receiving waters at a sewage treatment plant is initially unlikely to become associated with either the aqueous, or the sludge and sediment compartment. In time, the hydrocarbon moiety will become assimilated with the organic phase, while the fluorinated moiety will rise to the water surface and be subjected to cleavage as a result of exposure to UV radiation. As the polymer has a high molecular weight, it is not expected to cross or react with biological membranes, to bioaccumulate or to be of toxicological concern in the aquatic environment.

No biodegradation data was provided, but it is probable that the hydrocarbon portions of the polymer will ultimately biodegrade and be slowly mineralised to water and oxides of carbon and nitrogen. However, the fluorocarbon portion is unlikely to be susceptible to biodegradation (Remde and Debus, 1996) in view of the electronegativity of fluorine and the great strength of the carbon-fluorine bond. Perfluorocarbons are more thermally stable than their corresponding hydrocarbon analogues. In particular, perfluorocarboxylic acids and perfluoroalkane sulfonic acids are considered the most thermally stable fluorinated surfactants. In addition to thermal stability, perfluorinated hydrocarbons are stable against degradation by acids, bases, oxidants and reductants (Moody, 2000). Fluorinated carboxylic acids can undergo hydrolytic defluorination, reductive defluorination, and decarboxylation. To date, however, significant defluorination has only been observed for hydrolytic attack of

monofluorinated carboxylic acids, and compounds of more than one fluorine atom per carbon atom are generally recalcitrant (Blake, 1997). The notified polymer has a nominal fluorine content of ~34% and studies have shown that fluorinated compounds with a fluoride content in the order of 50% will not biodegrade over a period of 60 days (Remde and Debus, 1996). Further, fluorocarbons have little affinity for either water or organic phases and ultimately will concentrate near the surface of water bodies, for example when released in sewage treatment plant effluent. Here they are likely to be degraded by abiotic cleavage, with assistance from UV radiation, into smaller fluorocarbon species, which will be volatile and partition into the atmosphere. Here further reaction with hydroxyl radicals and action by UV radiation is expected to lead to degradation to hydrogen fluoride (HF) and precipitation to the surface in rain. However, it cannot be ruled out completely that the fluorocarbon species will not take part in the destruction of the ozone layer, as is typical of chlorofluorocarbons.

Although the high molecular weight of the notified chemical would tend to preclude bioaccumulation (Connell, 1990), recent studies have shown evidence of significant accumulation of fluorinated hydrocarbons in the blood of higher trophic level organisms, including humans. The origin of the fluorocarbons is strongly suspected to be anthropogenic, and results from these studies have led major fluorocarbon manufacturer (3M) to cease production of these compounds (C & EN, 2001). Research funded by 3M found fluorinated compounds in human blood and animal tissue in parts of the world where these are not manufactured (Moody and Field, 2000; Environmental Science and Technology/News, 2000). Laboratory toxicity studies in rats and primates has shown that perfluorinated compounds can cause death in adult monkeys and rat offspring. In addition, the US EPA have stated "This widespread presence, persistence and bioaccumulation potential and the reproductive and subchronic toxicity of the chemical raises concerns for potential adverse effects on people and wildlife" (Chemical Regulation Observer, 2000).

9. EVALUATION OF TOXICOLOGICAL DATA

No toxicology data were provided. All residual monomers are present at below the relevant concentration cut offs for classification of the notified polymer as a hazardous substance. A number of potential health effects are listed in the Material Safety Data Sheet for the imported polymer emulsion. These include eye, skin, mucous membrane and respiratory irritation, and central nervous depression which may lead to loss of coordination and impaired judgement. These effects are related to the presence of co-solvents, dipropylene monomethyl ether and acetic acid, rather than effects due to the notified polymer.

10. ASSESSMENT OF ENVIRONMENTAL EFFECTS

No ecotoxicological data were provided for the notified polymer but various perfluorinated hydrocarbons are considered mildly toxic to marine life. Effects are seen at concentrations near 6,000 mg/L in fish, and this represents a considerable safety factor. Realistic toxicity evaluations of fluorocarbon wastewater in the environment are difficult because of the possible synergistic effects between mixture components (Moody, 2000).

11. ASSESSMENT OF ENVIRONMENTAL HAZARD

Ultimately, most of the polymer will be released to landfill or incinerated at the end of the useful life of the treated textiles. Significant leaching from the treated material is not expected because of the negligible water solubility of the notified polymer and its affinity for the textile surfaces to which it is heat cured. The majority of wastes generated from the reformulation and application of the polymer will go to landfill (up to 247.5 kg per annum). The notified polymer is not volatile and little release to the atmosphere is expected. The hydrophobic and oleophobic nature of the polymer suggests that it will initially have little affinity with either organic matter (sediments, soil or sludge) or the aqueous phase. In landfill, the hydrocarbon portions of the polymer will probably be slowly degraded to carbon and nitrogen oxides through abiotic and biotic processes, with the fluorocarbon fraction remaining. If incinerated, the polymer would be rapidly destroyed and converted to water vapour and oxides of carbon, nitrogen and hydrogen fluoride.

The reformulation and application of the notified polymer will generate waste polymer, which will be released to the sewer system (up to 27.5 kg per annum). Within the sewer system, the hydrocarbon moiety is likely to become assimilated with the organic phase (sediments and sludges), while it is possible that the fluorocarbons will partition to surface waters where they will be subject to cleavage by UV radiation with subsequent volatilisation to the atmosphere and abiotic degradation to hydrogen fluoride. As the Werribee sewage treatment plant will be impacted the most from the introduction of the notified polymer, it will be assumed that around one half of the national annual release (ie 14 kg) will go to this plant, and release will occur for 300 days of the year. The Predicted Environmental Concentration (PEC) for this facility is calculated below:

Amount of polymer discharged to sewer/day:	$14 \text{ kg}/300 = 46.7 \text{ g}$
Volume of Dilution Water:	550 ML
PEC:	$0.085 \text{ }\mu\text{g/L}$

Given the available data, the overall environmental risk associated with the introduction of the notified polymer appears to be low. However, there are uncertainties surrounding the behaviour of fluorocarbon compounds in the environment.

12. ASSESSMENT OF PUBLIC AND OCCUPATIONAL HEALTH AND SAFETY EFFECTS

Health Hazard

No toxicological information has been provided for the notified polymer. The MSDS for the imported polymer emulsion lists a number of potential health effects, relating chiefly to the hazards associated with the co-solvents, dipropylene glycol monomethyl ether and acetic acid rather than due to the notified polymer. Dipropylene glycol monomethyl ether and acetic acid are on the NOHSC *List of Designated Hazardous Substances* (NOHSC, 1999a); however, they are present in the imported emulsion at concentrations below the cut of level for classification as a hazardous substance.

The notified polymer has a high NAMW, and absorption across biological membranes and resultant systemic toxicity would be restricted. Therefore, the notified polymer is unlikely to be a hazardous substance according to the NOHSC *Approved Criteria for Classifying Hazardous Substances* (NOHSC, 1999b).

The notified polymer is not a dangerous good for road or rail transport.

Occupational Health and Safety

Occupational exposure to the notified polymer can be divided into exposure to the imported polymer emulsion (containing 18% notified polymer) and the coating product (containing 1% notified polymer). Dermal and ocular exposure to spills, drips and splashes is the most probable hazard for workers involved in the reformulation, drumming of coating product, treatment of textiles and in cleaning equipment. Workers involved in the reformulation and preparation of treatment bath will be exposed to the imported polymer emulsion (18% notified polymer), and exposure for these workers may be high.

The workers involved in drumming of the coating product, treatment of textile and cleaning equipment may be exposed to the diluted polymer solution (1% notified polymer). Exposure is likely to be dermal and ocular exposure to drips and spills.

Dermal exposure to treated textile prior to curing can also occur if treated materials become entangled with the rollers during application and needs to be entangled manually.

Workers involved in handling the polymer emulsion and coating product should wear safety glasses, overalls, safety shoes, protective gloves, and if necessary, respiratory protection. The reformulation plant will need high volume of airflow and local exhaust ventilation to capture dust and vapours from the mixing tank.

Although inhalation exposure to the notified polymer is unlikely, the presence of co-solvents in all the formulations containing the notified polymer will require that adequate precautions be taken to prevent inhalation exposure. The NOHSC exposure standards (NOHSC, 1995) are acetic acid: 10 ppm (TWA*) and 15 ppm (STEL[#]) and dipropylene glycol monomethyl ether: 100 ppm (TWA) and 150 ppm (STEL).

Dipropylene glycol monomethyl ether has a skin notation, indicating that it may be absorbed through the skin, and precautions should also be taken to minimise dermal exposure.

Exposure from the notified polymer during reformulation and preparation of treatment bath (18%), and end-use (1%) is considered minimal as long as engineering controls and recommended personal protective equipment are utilised. Should exposure occur, the risk of health effects from the notified polymer is low due to its expected low toxicity.

Occupational exposure to the notified polymer after the treated material is cured is unlikely since the notified polymer is fixed onto the fibre surface or embedded in a matrix of other polymers and ingredients. In this form, the polymer is not bioavailable, hence no risk to workers is expected.

Exposure to the notified polymer is not expected during transport and storage as long as the packaging is intact. The risk of adverse effects for transport and storage workers is considered to be low.

* TWA = Time-weighted average

[#] STEL = Short term exposure limit

Public Health

The notified polymer and its products are not available for sale to the public. The potential for public exposure to the notified polymer during transport, reformulation or disposal is negligible. Members of the public will make dermal contact with the dried form of the notified polymer when handling treated textiles, however the risk to public health is negligible since the notified polymer is present at low concentrations and is unlikely to be bioavailable.

13. MATERIAL SAFETY DATA SHEET (MSDS) AND LABEL ASSESSMENT

13.1 MSDS

The MSDS for the product containing the notified polymer was provided in a format consistent with the *National Code of Practice for the Preparation of Material Safety Data Sheets* (NOHSC, 1994a).

The MSDS was provided by the applicant as part of the notification statement. It is reproduced here as a matter of public record. The accuracy of this information remains the responsibility of the applicant.

13.2 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, 1994b). The accuracy of the information on the label remains the responsibility of the applicant.

14. RECOMMENDATIONS

Control Measures

Occupational Health and Safety

- Employers should implement the following engineering controls to minimise occupational exposure to the notified polymer in the product, Unidyne TG-551N:
 - exhaust ventilation during reformulation, preparation of treatment bath and application of coating product

- Employers should implement the following safe work practices to minimise occupational exposure during handling of the notified polymer in the product, Unidyne TG-551N:
 - when manually weighing and charging the mixing vessel, prevent splashes and spills
- Employers should ensure that the following personal protective equipment is used by workers to minimise occupational exposure to the notified polymer in the product, Unidyne TG-551N:
 - chemical goggles
 - PVC or rubber gloves
 - safety shoes
 - overalls
 - respiratory protection

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 chemical 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.

Secondary notification

The NICNAS Director must be notified in writing within 28 days by the notifier, or other importer or manufacturer:

- (1) Section 64(1) of the Act:
 - if new information becomes available which may impact on the environmental exposure or fate or ecotoxicity of the notified polymer, particularly in relation to understanding the behaviour of fluorocarbons in the environment.

or

- (2) 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.

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