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14 June 2012

Mr Alan Bright
A/Director, Metropolitan and Regional Projects South
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Mr Bright

White Bay Berth 6 - Modification 3 (06_0037 MOD 3) - Response to Submissions

I refer to your letter, dated 4 June 2012, in which you requested a response to the submissions received on the abovementioned modification request, as well as specific matters identified by the Department of Planning and Infrastructure (the Department) as part of its preliminary assessment.

A response to the Department's specific matters can be found below. Responses to and the issues raised in the submissions can be found in Attachment 1 and Attachment 2.

It is recommended that the Department consider the submissions, and the below responses, within the context of the approved activities and scale of operations at the site. The approved site provides an integrated marine service facility for Sydney Harbour, providing multiple services for vessels at one location such as marine refuelling and supply services, grey water and sullage removal, and other vessel services.

As opposed to providing full renovations, refits or major maintenance services, the approved operations for vessel services only cover pre-deliveries, warranty and service activities for vessels, and minor maintenance and repair of vessels. The Environmental Assessment (EA) and Preferred Project Report (PPR) described the pre-delivery, minor repair and maintenance activities to include use of the travel lift, water blasting, hand held polishing, sanding and grinding machinery. Further, the approved facility would predominately be catering as a 'service centre' for fibreglass vessels (rather than steel, aluminium or concrete) and would not be a traditional 'boat yard'.

The approval is not directly comparable to the scale of operations sites nearby – specifically, Sydney City Marine at Rozelle. The proposed modification does not seek to intensify the scale of activities at the site, but rather to provide an additional service within the scale of the approved activities. This is discussed further within the context of the response to submissions.

1. The active ingredients in the anti-fouling paint, particularly whether there will be any use of tributyltin.

Examples of types of anti-fouling paint that would be used are provided in the attached material safety data sheets (Attachment 3). The Proponent proposes to use paints that emit low levels of Volatile Organic Compounds (VOCs). The examples of paint to be used on site are silicone based, biocide free, and in most cases, copper free.

The Proponent does not propose to use tributyltin, nor does it intend to haul or maintain any vessel that is known to be anti-fouled with tributyltin. As discussed in the modification assessment report, it would be assumed that any paint removed from old vessels (more than 10 years old) could contain tributyltin (unless tests prove otherwise) and the paint residue would be disposed of at a facility that is licensed to accept this type of waste.

2. The status of any negotiations with Sydney Water regarding the disposal of remaining waste water.

Preliminary negotiations relating to the proposed anti-fouling activities have commenced with Sydney Water. As per the existing conditions of approval, the Proponent would need to enter into an agreement with Sydney Water prior to the issue of a construction certificate. In the event that discharge cannot be agreed to, alternative arrangements would be arranged involving off-site treatment and disposal via a licensed contractor.

Given the anti-fouling activity does not involve the construction of any element in order to commence operations (and therefore would not trigger the need for a construction certificate), the Proponent commits to entering into an agreement with Sydney Water for the anti-fouling activities prior to any discharge of wastewater associated with antifouling activities to the sewer system.

3. Contingency measures in the event of anti-fouling paint contaminating the waterway

The measures to minimise the risk to water quality have been outlined in Section 5.1 of the modification assessment report. To clarify these procedures further, the following would be undertaken (which built upon the existing measures identified in the assessment report):

- Vessels would be removed from the water-land interface prior to the application of anti-fouling paint. Vessels would be placed at least 10 metres away from the water's edge. Drain covers would be used to minimise accidental spills reaching the drainage system on site.
- Paint would be stored within a covered and bunded area.
- Paint would typically be supplied in a container no larger than 20 litres, with the container placed in a containment tray for staff to pour smaller amounts into a paint tray for application.
- The paint tray (used for application) would contain around two litres of paint and would be placed in a plastic container to contain any spills. The tray would be placed in the immediate area of the paint application to minimise the potential for spillage.
- Spill kits are already provided at the site and deployable booms at the water's edge, as part of current operations. These would be used in the event of a spill on the hardstand to contain (through the use of general purpose booms) and absorb the spill. The paint and absorbent material would then be disposed of appropriately. Spill kits would be housed in a transportable wheelie bin, enabling the easy transport of the kit to the spill location.

Essentially, the Proponent would minimise the risk of a spill reaching the waterway by controlling the volume of spill and the distance between the waterway and areas where anti-fouling paint would be applied. Spill kits would be used in the event that a spill does occur.

It is also noted that the existing operations at the site have spill response equipment and procedures in place as part of Stage 1 operations and have been operating without incident to date. This includes deployable booms, spill kits adjacent to the waters edge, and immediate response procedures including staff and customer training.

4. The extent of noise impact resulting from anti-fouling equipment.

The noise impact assessment that supported the Environmental Assessment for the project assessed the operational noise impacts of the project. This included noise generated by truck, car and forklift movements and manoeuvring, movements of boats and barges, material handling impacts, electric power tools, high pressure water spray guns, refrigeration and air conditioning units, fuel, sewage and sullage pumps and travel lifts. The impact assessment was based on a worst-case scenario where there is some contribution from all likely noise sources within a 15-minute period.

It is noted that the letter from the Environment Protection Authority (EPA) refers to the assessment provided in the EA. The PPR (and addendum) prepared for the project in response to submissions updated the noise impact assessment to reflect other noise-generating activities.

Equipment used for anti-fouling activities would include the travel lift, forklift, high pressure water spray guns, a vacuum sander and potentially an airless spray gun. No grit or soda blasting would be undertaken, as suggested in one submission received during the exhibition period for the modification. The noise assessment identified the use of the high pressure water spray gun, travel lifts, forklifts and electric power tools. Specifically, as a representation of electric power tools, the noise assessment assumed the use of a polisher in all areas of the site with a sound power level of 90 dB(A). The use of a sander and grinder were identified in the PPR as an approved activity. Other hand tools to be used at the site were identified in the noise assessment as producing levels at

least 10 dB(A) below the key noise sources identified in the original assessment, and as such did not require separate assessment as part of the original project application. Sanders have been predicted to have a sound power level ranging from around 90-97 dB(A). The lower range would be comparable to the use of the polisher as assessed. Therefore, the Proponent would commit to selecting sanding equipment that would emit levels at the lower range, as much as possible.

Yours sincerely

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Attachment 1 – Response to Submissions

Issue	Raised by	Response
Proposed activity and justification		
Justification/need for a maintenance facility within Sydney Harbour	Sydney City Marine	The site has an approval to undertake minor boat maintenance and repair activities. The proposed anti-fouling activities would form part of these activities and would provide a competitive service (and price) for boat owners requiring this level of service. It is not anticipated that the site would compete with the larger operators within Sydney Harbour, given the site is for minor maintenance and repair services.
Mooring limit - justification	Sydney City Marine. Redacted submission. Leichhardt City Council	As stated in section 2.2 of the modification assessment report, an increase in the mooring limit for short-term stays is proposed to improve the flexibility of the operations to respond to different repair and service needs, equipment deliveries and repair scheduling. It would also eliminate the need to consider alternative storage solutions if repair and maintenance services cannot be achieved within a seven day limit. As stated in the report, the commitment remains to maintain these as short-term moorings. Sydney Ports Authority and Roads and Maritime Services (RMS) have granted landowner's consent, and RMS (former NSW Maritime) has not objected to the proposed mooring limit or altered mooring configuration.
Conflict with White Bay Cruise Ship Terminal (traffic and water-based conflict)	Ritchie. Leichhardt City Council	The increase from three to eight berths is not anticipated to significantly increase the number of vessels approaching or departing the site. It is also noted that RMS and Sydney Ports have not objected to the increase in berths. As discussed in section 5.8 of the modification assessment report in terms of traffic access to the site during construction of the passenger cruise terminal, discussions have occurred between the Proponent and the contractor for the passenger cruise terminal. This includes temporary access along the water-side of the existing structure until site access is reinstated. This would be used for current operational activities (such as fuel deliveries), and future construction works.

Issue	Raised by	Response
		The increase in berths is associated with repair and maintenance activities and would not be used as permanent berths. Therefore, the increase is not anticipated to generate significant demand for travel to and from the site, as originally assessed. Further, the assessment and approval of the passenger cruise terminal considered the cumulative impact of the combined operations of this site and the passenger cruise terminal.
Planning process	Leichhardt City Council	Condition F19 of the approval did not specify what type of approval was required to undertake antifouling activities at the site. The site has been approved to undertake minor boat maintenance and repair activities, and the proposed anti-fouling activities would form part of these services. A modification pathway is considered to satisfy this condition and the requirements of the *Environmental Planning and Assessment Act 1979*. The use of the mooring area would remain consistent with the approved operations and would not provide permanent berths. The berthing area would be contained within the existing footprint. As such, a modification pathway is considered to be appropriate for these proposed minor amendments to the project.
Bays Precinct Taskforce	Leichhardt City Council	The site has been approved to undertake minor boat maintenance and repair activities, with an associated berthing area. The proposed modifications would remain within the scope of the overall approved uses and footprint, or would fall within the category of 'boat maintenance and repair'. The facility has a lease until 2020 and is operational.
Anti-fouling activities description for preparation of boats and application of anti-foul paint.	EPA Sydney City Marine	The approval for the site enables minor boat maintenance and repair, as opposed to the larger scale activities undertaken at Sydney City Marine. The application of anti-fouling paint at the site would predominantly involve the application of a new coat of paint, as opposed to the complete stripping of vessels prior to applying the anti-fouling paint that would require the use of grit or soda blasting or the application of chemicals).

Issue	Raised by	Response
		Around three vessels would be anti-fouled per day during peak periods. Only one vessel can be cleaned at any one time. A description of the steps that would be undertaken for anti-fouling activities is provided below. • Vessels would first be lifted from the water and placed into the bunded wash down bay. • Marine growth would be scraped off the hull within the wash down bay. No grit or soda blasting would be undertaken. No chemicals would be applied to the vessel. • Paint chips may be removed during this process, or the marine growth may contain paint chips. Marine growth and other waste would be then collected and disposed of (as detailed in the modification assessment). It is anticipated that around five to ten litres of growth would be removed per vessel. The waste would not be hosed down, however, some waste produce may be discharged into the settlement tank. • The vessel would then be hosed within the wash down bay, and transported to the hardstand (located approximately 10 metres from the land-water interface). Figure A provides an indicative location for the hardstand area, which is located around 80 metres from the nearest sensitive receiver. • Sanding (if required) would be limited to parts of the hull that require smoothing of the existing surface, prior to application of the new anti-fouling coating. It would not be undertaken in the wash down bay. This minor sanding activity would be undertaken using vacuum sanders to capture dust emissions. • Paint would then be applied, predominately by roller or by brush. Spray painting would be required where a vessel has a stern drive (inboard outboard). This area can only be spray-painted. The remainder of this type of vessel would be hand painted. Approximately one third of vessels serviced at the site would have this type of propulsion. • Sweeping hardstand areas daily and/or following the completion of the activity (whichever is the sooner) would also be undertaken to minimise the accumulation of dust and/or paint chips (with all paint chips collected for appropriate disposal). These areas would not be hosed. More substantial anti-fouling activities and spray-painting activities, as described in Sydney City Marine, would not be undertaken at the site.

Issue	Raised by	Response
Water Quality		
Requirement for a dedicated enclosed and bunded wash down bay for water blasting activities	EPA	The wash down bay has been approved for water blasting activities, and the enclosure of this was not a requirement of the original assessment and approval. There would not be any soda or grit blasting at the site, or the use of chemicals within the water spray. The area has been bunded with water captured by a 35,000L holding tank which would contain all runoff, first flush and wash down water from the wash down bay. The 32,000 litre tank has around 13,000 litres for the settlement of wash down water, 14,000 litres for first flush and 5,000 litres for contingency. The holding tank uses settlement and filtration processes to remove pollutants – consisting of a cartridge filter (similar to a pool filter) to capture organic matter and a sand filter to capture particles. Finer particles would settle at the bottom of the tank, which would be removed approximately every six months by a licensed contractor, or sooner if required. Filters would be maintained and replaced periodically. It is proposed that water from the wash down bay would initially be discharged to sewer (subject to Sydney Water approval). Opportunities for re-use within the site from the wash down bay would be explored, based on water quality once operational and would require the testing of water. It is also clarified that water from the wash down bay would not be processed by the existing water treatment facility.
Stormwater management – • No water harvesting or recycling of water • Extent of treatment required for wash down water and disposal arrangements • Disposal for other liquid wastes	Sydney City Marine	See the response to the above comment from the EPA. The original approval also envisioned the harvesting of rainwater from buildings. As these structures have not been built, harvesting at the site is not currently in action. Liquid wastes generated elsewhere on the site would be classified, appropriately stored and disposed of via a licensed contractor.
Chemical / Paint Storage	EPA	Paints and paint thinners would be stored on a as needs basis, and large-scale storage is not proposed. It is anticipated that this would consist of five 10 litre containers of thinners and five 20 litre containers of paint. The storage area would consist of a temporary structure (similar to a shipping container). Bunding within this container would be provided to meet the EPA's bunding requirements

Issue	Raised by	Response
		(being 25 per cent of the total volume stored). A dangerous goods licence has been obtained for current operations.
Air Quality		
General air quality/Management of VOCs	Multiple submissions	The application of anti-fouling paint would be predominately undertaken using rollers and brushes. Spray painting (using airless spray guns) would be restricted to areas where roller or brush application is not possible or appropriate, being vessels with stern drive propulsion and limited to 10 minutes of activity per boat (or up to three 10 minute intervals in a worst case scenario). Activities would also be undertaken around 80 metres away from the nearest sensitive receiver. Further, to minimise the risk of odour emissions from the site, the Proponent would not be undertaking spray painting with high VOC-emitting paints. The Proponent acknowledges that large-scale spray painting that emits high levels of VOCs should be undertaken in purpose built-facilities. An activity of this scale is not proposed for this site.
Assessment of air quality and odour	EPA	The EPA submission requested that an assessment of the anti-fouling activity be provided, with a justification of the level of assessment to be based on risk. A detailed modelling assessment is not considered necessary based on the scale of operations and mitigation strategies. A detailed response is provided in **Attachment 2**.
Lack of air quality modelling and peer review	Sydney City Marine	Air quality modelling and peer review is not proposed. The assessment undertaken is considered appropriate for the purposes of the proposed scale of operations.
Noise		
Exclusion of other noise sources, such as hammering of metal hulls, engine testing, grit and soda blasting	Sydney City Marine EPA	The approval for the site does not allow the hammering of metal hulls, grit blasting or soda blasting. The modification does not propose to include these activities. Minor engine servicing is permitted to be undertaken at the site under the existing approval.
Impact of noise from increased mooring limit, use of travel lift and use of the high pressure hose and use of travel lift. What will happen if	Multiple submissions	The use of the travel lift and water blasting at the site were assessed as part of the approved operations. The frequency of use is not anticipated to change as a result of the proposed anti-fouling activities, as it would form one aspect of the

Issue	Raised by	Response
noise levels are exceeded.		maintenance and repair processes at the site. In response to the EPA submission, it is noted that reference was made to the EA assessment. This assessment was updated as part of the PPR and includes the high pressure water hose. Noise from vessels at the site was also included in the original noise assessment for the approved operations. This assumed boat engine noise for 10 minutes of the assessed 15 minute interval. The increase in mooring limits is not anticipated to alter this assumption. The conditions of approval set noise limits for the proposed operations, which the Proponent is required to comply with. In the event that an exceedance occurs, the Proponent is required consider all reasonable and feasible noise mitigation.
Increased hours of operation	Dodd Murray	The modification does not seek to increase the hours of operation.
Sanding activities	EPA	Sanding was identified in the PPR. To clarify, sanding would have limited shielding opportunities at the site until future stages of the project. However, as noted within the covering letter, the sanding equipment is anticipated to have a similar noise emission value to the polishing equipment considered in the noise impact assessment, and low-noise emitting equipment would be targeted to further reduce potential noise contributions.

Attachment 2 – Air Quality and Odour (EPA)

EPA Submission:

Justify the level of assessment undertaken on the basis of risk factors, demonstrate the ability to comply with the relevant regulatory framework and detail emission control techniques / practices to be employed by the proposal.

Response:

Existing Approval

As outlined in the cover letter and attachment, the approved operations cover pre-deliveries, warranty and service activities for boats, and minor maintenance and repair of boats. Sanding, polishing, grinding have been approved at the site. Use of a high pressure water spray gun has been approved at the site.

As opposed to providing full renovations, refits or major maintenance services, the approved operations only cover pre-deliveries, warranty and service activities for boats, and minor maintenance and repair of boats. The Environmental Assessment (EA) and Preferred Project Report (PPR) described the pre-delivery, minor repair and maintenance activities to include use of the travel lift, water blasting, hand held polishing, sanding and grinding machinery. Further, the approved facility would predominately be catering as a 'service centre' for fibreglass vessels (rather than steel, aluminium or concrete) and would not be a traditional 'boat yard'.

The approval is not directly comparable to the scale of operations sites nearby – specifically, Sydney City Marine at Rozelle.

Scale and nature of proposed activity

The Proponent anticipates that the anti-fouling activities would operate at the same scale as the approved operations (that is, minor repair and maintenance). A description of the scale of activity is provided below:

- During peak periods, approximately three vessels per day would be anti-fouled. Only one vessel can be cleaned in the bunded wash down bay.
- On average, it would take one hour to clean a vessel and one hour to paint a vessel.
- No grit or sand blasting would be undertaken at the site.
- No chemicals would be used to remove anti-fouling paint.
- Anti-fouling activities would consist of a re-application of paint, as opposed to the complete stripping and re-application of paint.
- On average per vessel, sanding would have an approximate coverage of 1 m^2 of light sanding (with a vacuum sander), and 50 m^2 coverage for painting (this represents a 40 foot vessel).
- In a worst case scenario, sanding would have an approximate coverage of 4 m^2 of light sanding (with a vacuum sander), and 100 m^2 coverage for painting (this represents a 65 foot vessel). This is anticipated to only occur around twice a year and no spray painting would be used on these vessels.
- Spray painting is only required for vessels with a stern drive propulsion system and would be restricted to the stern. The application of paint at this location, on average, would occur for up to 10 minutes per day. In a worst case scenario, up to three 10 minute intervals of spray painting would be required.
- Spray painting would be undertaken using an airless spray gun to limit overspray and the release of VOCs and odour.

Location of the site and activity

The site is located at Berth No. 6, White Bay, in Balmain. Surrounding land uses include:

- **North** – Residential areas (including Grafton Street), Ewenton Park and Sydney Water Police wharves and offices with residential areas continuing beyond the Sydney Water Police site.
- **East** – Sydney Harbour, with Millers Point located around 800 metres across the harbour.
- **South** – Sydney Harbour, with residential properties located around 300 metres across the harbour.

- **West** – White Bay Berth No. 5 (the future location of the approved Cruise Passenger Terminal operated by Sydney Ports Corporation), and the remaining areas of White Bay wharves under the control of Sydney Ports Corporation.

The nearest residential receivers are located at Grafton Street, located to the north and north-west of the site. The hardstand area that would be used for anti-fouling activities would be located around 80 metres to the closest property boundary. Activities would be carried out entirely on hardstand in the open air.

Characteristics of the receiving environment

Climatic characteristics

Reference is made to the air quality impact assessment presented in the EA for the project (Heggies Australia Pty Ltd, 2006), which provided the climatic characteristics of the site based on the nearest Bureau of Meteorology (BOM) Automatic Weather Station at Observatory Hill located approximately 1.2 km to the east. Results from the Bureau of Meteorology (BOM) Automatic Weather Station at Fort Denison were also used for wind direction and speed, as the Observatory Hill station does not record these parameters. The Automatic Weather Station at Fort Denison is located approximately 3.2 km to the east of the site. This approach is consistent with the assessment undertaken more recently at the White Bay Passenger Terminal site.

A summary of the climatic characteristics are provided below from the air quality impact assessment presented in the EA for the project (Heggies Australia Pty Ltd, 2006), which are considered to remain relevant to the site.

- Air Temperature

Temperature at the Observatory Hill AWS has been described as mid to warm overall. Air temperatures during the day tend to be mild to warm, varying from 16 ºC to 18 ºC in winter and 25 ºC to 26 ºC in summer. During the night time, temperatures are considered to be cool to mild, ranging from 8 ºC to 9 ºC in winter and 18 ºC -19 ºC in summer.

- Rainfall

Rainfall at the Observatory Hill AWS was described as being moderate, receiving on average around 1174mm per year. It was described as being relatively uniform during the first six months of the year, decreasing during winter months and beyond.

- Relative Humidity

The relative humidity at the Observatory Hill AWS has been described as moderate.

- Wind

The 2004 annual wind behaviour for the Fort Denison AWS was presented in air quality impact assessment presented in the EA for the project (Heggies Australia Pty Ltd, 2006). The summary of this is as follows:

- The annual wind rose indicates that light to moderate (1.5 m/s to 8 m/s) westerly winds are predominate (approximately 25 per cent).
- In spring, light to fresh winds (between 1.5m/s and 10.5m/s) are experienced from the west.
- In summer, light to fresh winds are experienced from the eastern quadrant.
- In autumn, light to moderate winds are experienced predominately from the west (approximately 25 per cent).
- In winter, light to fresh winds are experienced predominately from the west (approximately 45 per cent).

- Atmospheric Stability

The air quality impact assessment (Heggies Australia Pty Ltd, 2006) described the stability class for the year 2004. It stated that the results predicted a high frequency of conditions typical to Stability Class “D” which is indicative of neutral conditions, which will neither enhance nor impede atmospheric pollutant dispersion.

Existing background air quality

There are no known background data for odour in East Balmain. Air emissions (odour) from current activities were considered as part of the original application, in which modelling for the operational phase was not required.

The EPA's Rozelle air quality monitoring station, located approximately 3 km west-southwest of the proposed site, is the closest station to the site. This monitors PM_{10}, ozone, nitrogen oxides, sulfur dioxide and carbon monoxide. Of these, the key pollutant for this modification is dust and in this context the PM_{10} annual average for 2011 was 16.6 $\mu g/m^3$, which is below the air quality goal of 30 $\mu g/m^3$ (as established in *Methods for Modelling and Assessment of Air Pollutants in New South Wales*, DEC 2005). The maximum PM_{10} daily average for 2011 was recorded on 23 September 2011 and was 39.4 $\mu g/m^3$ which is below the goal of 50 $\mu g/m^3$.

The Rozelle site does not monitor dust deposition.

Air emissions from the proposed activity

The proposed anti-fouling activities would have the following fugitive emissions:

- Dust emissions from sanding activities, potentially containing paint particles that could contain heavy metals such as copper and zinc.
- VOC emissions.

Paints proposed to be used on site would predominately consist of paints with low VOC content ranging from 248g/L to 270 g/L and comprising VOCs such as xylene and ethyl-benzene. Glossy paints and other paints with higher VOC content would not be used on site.

The quantity of the emissions cannot be predicted without detailed modelling. However, it is considered that the need for modelling is not justified and air emissions from the site minimised based on:

- the scale of operations and duration of the activity (as detailed above). In particular, the Proponent does not propose to undertake large scale sanding, paint spraying, grit blasting or soda blasting.
- the distance and location to the nearest sensitive receiver, which is located approximately 80 metres to the north-west of the hardstand area that would be used for anti-fouling activities.
- The prevailing weather conditions, which indicate that the predominant wind direction is from the west.
- The use of mitigation and management measures to reduce emissions. This includes:
    - The use of paints containing low level VOCs.
    - Exclusion of grit and soda blasting.
    - Limited use of spray painting, and the use of airless spray guns to further minimise the release of VOCs/odours.
    - Use of vacuum sanders to capture dust emissions when mechanical sanding is required (noting that sanding is an approved activity at the site under the existing approval).
    - Behavioural responses to respond to environmental conditions – such as re-scheduling activities during windy weather or use of a temporary structure (tarpaulins) to prevent emissions.
    - General house maintenance to minimise the accumulation of dust or paint chips.

Attachment 3 – Examples of Material Safety Data Sheets for anti-foul paint

HEMPASIL X3 87509

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II. - Australia

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

1.1 Product identifier

Product name :	HEMPASIL X3 87509
Product identity :	8750959151
Product type :	antifouling paint (base for multi-component product)

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

Field of application :	ships and shipyards.
Ready-for-use mixture :	87500 = 87509 17.8 vol. / 98950 2.2 vol.
Identified uses :	Professional applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details :

Hempel (Australia) Pty Ltd
12 Fitzgerald Road
Laverton North, VIC 3026
Tel: (03) 8369 4900
Fax: (03) 9360 0894
Email: sales.au@hempel.com

Emergency telephone number (with hours of operation)

Poisons Information Centre.
Tel.: 13 11 26 (24 hour)

Date of issue :	20 April 2011
Date of previous issue :	No previous validation.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification :	R10 Xn; R20/21 Xi; R38 R43
Physical/chemical hazards :	Flammable.
Human health hazards :	Harmful by inhalation and in contact with skin. Irritating to skin. May cause sensitization by skin contact.

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

2.2 Label elements

Hazard symbol or symbols :

Indication of danger :	Harmful
Risk phrases :	R10- Flammable. R20/21- Harmful by inhalation and in contact with skin. R38- Irritating to skin. R43- May cause sensitization by skin contact.
Safety phrases :	S23- Do not breathe vapor or spray. S36/37- Wear suitable protective clothing and gloves. S51- Use only in well-ventilated areas.
Hazardous ingredients :	xylene diamide wax mixture

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	
			67/548/EEC	GHS Classification
xylene	EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	20-25	R10 Xn; R20/21 Xi; R38	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY: SKIN - Category 4 ACUTE TOXICITY: INHALATION - Category 4 SKIN CORROSION/IRRITATION - Category 2
ethylbenzene	EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	3-7	F; R11 Xn; R20	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY: INHALATION - Category 4
diamide wax mixture	-	0.25-2.5	R43 N; R51/53	SKIN SENSITIZATION - Category 1 AQUATIC TOXICITY (CHRONIC) - Category 2
			See Section 16 for the full text of the R-phrases declared above.	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. In all cases of doubt, or when symptoms persist, seek medical attention.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : May cause eye irritation.

Inhalation : Harmful by inhalation.

Skin contact : Harmful in contact with skin. Irritating to skin. May cause sensitization by skin contact.

Ingestion : Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Not applicable.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media :	Recommended: alcohol resistant foam, CO_2, powders, water spray. Not to be used: waterjet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :	Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
Hazardous combustion products :	Decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used.
Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations for flammable liquids. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Product/ingredient name	Exposure limit values
xylene	**Safe Work Australia (Australia, 8/2005).** STEL: 655 mg/m³ 15 minute(s). STEL: 150 ppm 15 minute(s). TWA: 350 mg/m³ 8 hour(s). TWA: 80 ppm 8 hour(s).
ethylbenzene	**Safe Work Australia (Australia, 8/2005).** STEL: 543 mg/m³ 15 minute(s). STEL: 125 ppm 15 minute(s). TWA: 434 mg/m³ 8 hour(s). TWA: 100 ppm 8 hour(s).

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived effect levels

No DELs available.

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures

General :	Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.
Hygiene measures :	Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
Eye/face protection :	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Hand protection :	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances. Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice: Recommended: Silver Shield / 4H gloves, polyvinyl alcohol (PVA), Viton® Not recommended: nitrile rubber, neoprene rubber, butyl rubber, natural rubber (latex), polyvinyl chloride (PVC)
Body protection :	Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product. Wear suitable protective clothing. Always wear protective clothing when spraying.
Respiratory protection :	If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. When the product is applied by spraying and for continuous or prolonged work always wear an air-fed respirator e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter. Be sure to use an approved/certified respirator or equivalent.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Color :	Red.
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	Testing not relevant or not possible due to nature of the product.
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 28°C (82.4°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Upper/lower flammability or explosive limits :	0.8 - 7 vol %
Vapor pressure :	Testing not relevant or not possible due to nature of the product.
Vapor density :	Testing not relevant or not possible due to nature of the product.
Relative density :	1 g/cm^3
Solubility(ies) :	Very slightly soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Testing not relevant or not possible due to nature of the product.
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Testing not relevant or not possible due to nature of the product.
Explosive properties :	Highly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight :	Weighted average: 25 %
Water % by weight :	Weighted average: 0 %
VOC content :	Weighted average: 248 g/l (Calculated value for the mixture)
TOC Content :	Weighted average: 225 g/l
Solvent Gas :	Weighted average: 0.056 m^3/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Highly reactive or incompatible with the following materials: oxidizing materials.
Reactive or incompatible with the following materials: reducing materials.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

SECTION 10: Stability and reactivity

Decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Dermal	Rabbit	>1700 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Acute toxicity estimates

Route	ATE value
Dermal	9184.4 mg/kg
Inhalation (gases)	22101.6 ppm
Inhalation (vapors)	246.1 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rat	-	-	-
	Skin - Moderate irritant	Rabbit	-	-	-
ethylbenzene	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitization : Contains diamide wax mixture. May produce an allergic reaction.

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses.

Product/ingredient name	Result	Species	Exposure
xylene	Acute LC50 8500 ug/L Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 8200 - 10032 ug/L Fresh water	Fish - Oncorhynchus mykiss - 0.6 g	96 hours
ethylbenzene	Acute EC50 2930 - 4400 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <=24 hours	48 hours
	Acute LC50 >5200 ug/L Marine water	Crustaceans - Americamysis bahia - <24 hours	48 hours
	Acute LC50 11900 ug/L Fresh water	Fish - Pimephales promelas - 30 days - 0.079 g	96 hours
	Chronic NOEC 6800 ug/L Fresh water	Daphnia - Daphnia magna - <=24 hours	48 hours
	Chronic NOEC 3300 ug/L Marine water	Fish - Menidia menidia	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene	-	>70 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ethylbenzene	-	-	Readily

SECTION 12: Ecological information

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
xylene	-	6 - 23.4	low
ethylbenzene	3.15	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : No known data avaliable in our database.

Mobility : No known data avaliable in our database.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible.
Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations.
Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

Packaging

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea, IATA for transport by air.
Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
ADR/RID Class	UN1263	PAINT	3 	III	No.	**Special provisions** 640 (E) **Tunnel code** (E) **Remarks** H-14
IMDG Class	UN1263	PAINT	3 	III	No.	-
IATA Class	UN1263	PAINT	3 	III	No.	-

PG* : Packing group
Env.* : Environmental hazards

14.6 Special precautions for user

Not available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

International regulations

IMO Anti-fouling System Convention Compliant (AFS/CONF/26)

This product does not contain organotin compounds acting as biocides and complies with the International Convention on the Control of Harmful Anti-fouling Systems on Ships as adopted by IMO October 2001 (IMO document AFS/CONF/26)

Product type :	antifouling paint (base for multi-component product)
Manufacturer :	Hempel A/S
Product name and/or code :	HEMPASIL X3 87509
	8750959151
Colour :	Red.

Note: This name is shown on the product container. All products in HEMPEL's containers carrying this name comply with the IMO Convention (AFS/CONF/26).

Active ingredient(s) :

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :	ATE = Acute Toxicity Estimate GHS = Globally Harmonized System of Classification and Labelling of Chemicals DNEL = Derived No Effect Level PNEC = Predicted No Effect Concentration RRN = REACH Registration Number
Full text of abbreviated R phrases :	R11- Highly flammable. R10- Flammable. R20- Harmful by inhalation. R20/21- Harmful by inhalation and in contact with skin. R38- Irritating to skin. R43- May cause sensitization by skin contact. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications [DSD/DPD] :	F - Highly flammable Xn - Harmful Xi - Irritant N - Dangerous for the environment

GHS Classification

Hazard pictograms :

Signal word :	Warning
Hazard statements :	Flammable liquid and vapor. Causes skin irritation. May cause an allergic skin reaction.

Classification	Justification
FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1	On basis of test data Calculation method Calculation method

Notice to reader

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical preformance or suitability for particular applications.
It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.

HEMPASIL SP-EED 77009

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II. - Australia

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

1.1 Product identifier

Product name :	HEMPASIL SP-EED 77009
Product identity :	7700959151
Product type :	Fouling Release coating

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

Field of application :	metal industry, ships and shipyards.
Ready-for-use mixture :	7 Ltr 77509 / 1 Ltr 97080
Identified uses :	Industrial applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details :

Hempel (Australia) Pty Ltd
12 Fitzgerald Road
Laverton North, VIC 3026
Tel: (03) 8369 4900
Fax: (03) 9360 0894
Email: sales.au@hempel.com

Emergency telephone number (with hours of operation)

Poisons Information Centre.
Tel.: 13 11 26 (24 hour)

Date of issue :	19 April 2011
Date of previous issue :	No previous validation.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification :	R10 Xn; R20/21 Xi; R38
Physical/chemical hazards :	Flammable.
Human health hazards :	Harmful by inhalation and in contact with skin. Irritating to skin.

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

2.2 Label elements

Hazard symbol or symbols :

Indication of danger :	Harmful
Risk phrases :	R10- Flammable. R20/21- Harmful by inhalation and in contact with skin. R38- Irritating to skin.
Safety phrases :	S23- Do not breathe vapor or spray. S36/37- Wear suitable protective clothing and gloves. S51- Use only in well-ventilated areas.
Supplemental label elements :	Contains diamide wax mixture. May produce an allergic reaction.
Hazardous ingredients :	xylene

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	
			67/548/EEC	GHS Classification
xylene	EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	20-25	R10 Xn; R20/21 Xi; R38	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY: SKIN - Category 4 ACUTE TOXICITY: INHALATION - Category 4 SKIN CORROSION/IRRITATION - Category 2
ethylbenzene	EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	3-7	F; R11 Xn; R20	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY: INHALATION - Category 4
diamide wax mixture	-	0.25-2.5	R43 N; R51/53	SKIN SENSITIZATION - Category 1 AQUATIC TOXICITY (CHRONIC) - Category 2
			See Section 16 for the full text of the R-phrases declared above.	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. In all cases of doubt, or when symptoms persist, seek medical attention.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : May cause eye irritation.

Inhalation : Harmful by inhalation.

Skin contact : Harmful in contact with skin. Irritating to skin.

Ingestion : Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Not applicable.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media :	Recommended: alcohol resistant foam, CO_2, powders, water spray. Not to be used: waterjet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :	Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
Hazardous combustion products :	Decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used.
Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations for flammable liquids. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

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Derived effect levels

No DELs available.

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures

General :	Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.
Hygiene measures :	Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
Eye/face protection :	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Hand protection :	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances. Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice: Recommended: Silver Shield / 4H gloves, polyvinyl alcohol (PVA), Viton® Not recommended: nitrile rubber, neoprene rubber, butyl rubber, natural rubber (latex), polyvinyl chloride (PVC)
Body protection :	Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product. Wear suitable protective clothing. Always wear protective clothing when spraying.
Respiratory protection :	If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. When the product is applied by spraying and for continuous or prolonged work always wear an air-fed respirator e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter. Be sure to use an approved/certified respirator or equivalent.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

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Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	Testing not relevant or not possible due to nature of the product.
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 30°C (86°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Upper/lower flammability or explosive limits :	0.8 - 7 vol %
Vapor pressure :	Testing not relevant or not possible due to nature of the product.
Vapor density :	Testing not relevant or not possible due to nature of the product.
Relative density :	1 g/cm^3
Solubility(ies) :	Very slightly soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Testing not relevant or not possible due to nature of the product.
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Testing not relevant or not possible due to nature of the product.
Explosive properties :	Highly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight :	Weighted average: 25 %
Water % by weight :	Weighted average: 0 %
VOC content :	Weighted average: 254 g/l (Calculated value for the mixture)
TOC Content :	Weighted average: 230 g/l
Solvent Gas :	Weighted average: 0.057 m^3/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Highly reactive or incompatible with the following materials: oxidizing materials.
Reactive or incompatible with the following materials: reducing materials.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

SECTION 10: Stability and reactivity

Decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Dermal	Rabbit	>1700 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Acute toxicity estimates

Route	ATE value
Dermal	8978.3 mg/kg
Inhalation (gases)	21605.5 ppm
Inhalation (vapors)	240.6 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rat	-	-	-
	Skin - Moderate irritant	Rabbit	-	-	-
ethylbenzene	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitization : Contains diamide wax mixture. May produce an allergic reaction.

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses.

Product/ingredient name	Result	Species	Exposure
xylene	Acute LC50 8500 ug/L Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 8200 - 10032 ug/L Fresh water	Fish - Oncorhynchus mykiss - 0.6 g	96 hours
ethylbenzene	Acute EC50 2930 - 4400 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <=24 hours	48 hours
	Acute LC50 >5200 ug/L Marine water	Crustaceans - Americamysis bahia - <24 hours	48 hours
	Acute LC50 11900 ug/L Fresh water	Fish - Pimephales promelas - 30 days - 0.079 g	96 hours
	Chronic NOEC 6800 ug/L Fresh water	Daphnia - Daphnia magna - <=24 hours	48 hours
	Chronic NOEC 3300 ug/L Marine water	Fish - Menidia menidia	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene	-	>70 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ethylbenzene	-	-	Readily

SECTION 12: Ecological information

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
xylene	-	6 - 23.4	low
ethylbenzene	3.15	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : No known data avaliable in our database.

Mobility : No known data avaliable in our database.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible.
Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations.
Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

Packaging

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea, IATA for transport by air.
Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
ADR/RID Class	UN1263	PAINT	3 	III	No.	**Special provisions** 640 (E) **Tunnel code** (D/E) **Remarks** H-14
IMDG Class	UN1263	PAINT	3 	III	No.	**Emergency schedules (EmS)** F-E,S-E
IATA Class	UN1263	PAINT	3 	III	No.	-

PG* : Packing group
Env.* : Environmental hazards

14.6 Special precautions for user

Not available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Full text of abbreviated R phrases : R11- Highly flammable.
R10- Flammable.
R20- Harmful by inhalation.
R20/21- Harmful by inhalation and in contact with skin.
R38- Irritating to skin.
R43- May cause sensitization by skin contact.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD] : F - Highly flammable
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment

GHS Classification

Hazard pictograms :

Signal word : Warning

Hazard statements : Flammable liquid and vapor.
Causes skin irritation.

Classification	Justification
FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2	On basis of test data Calculation method

Notice to reader

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical preformance or suitability for particular applications.
It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.