



SAFETY DATA SHEET

9101 (Activator 9100 Finishes)

1. Identification of the preparation and of the company

Product name and/or code :
Product use : Andrews Coatings Ltd. Carver Building, Littles Lane
Manufacturer : Wolverhampton, West Midlands, WV1 1JY
 Telephone Number: 01902 429190, Fax Number: 01902 426574
Emergency phone: Email: sales@andrewscoatings.co.uk

2. Composition/information on ingredients

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC.

Chemical name*	CAS no.	%	EC nr.	Classification
United Kingdom (UK)				
Polyamine-epoxy adduct, n.o.s., prepolymer	-	10 - 25		Xi; R41
2,2'-Dimethyl-4,4'-methylene bis(cyclohexylamine)	6864-37-5	10 - 25	229-962-1	T; R23/24 Xn; R22 C; R35 N; R51/53
Isobutylalcohol	78-83-1	10 - 25	201-148-0	R10 Xi; R41, R37/38 R67
Xylene (mixture of isomeres)	1330-20-7	10 - 25	215-535-7	R10 Xn; R20/21 Xi; R38
2-Methyl-1,5-pentanediamine	15520-10-2	2.5 - 5	239-556-6	C; R34
Ethylbenzene	100-41-4	1 - 2.5	202-849-4	F; R11 Xn; R20
See section 16 for the full text of the R-phrases declared above				

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

3. Hazards identification

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

Classification : R10
 Xn; R20/21
 C; R35
 R52/53
Physical/chemical hazards : Flammable.
Human health hazards : Harmful by inhalation and in contact with skin. Causes severe burns.
Environmental hazards : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. First aid measures

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.
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 seek medical advice.
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.
Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.
Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

5. Fire-fighting measures

- Extinguishing media** : Recommended: alcohol-resistant foam, CO₂, powders, water spray.
Not to be used : water jet.
- Recommendations** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to sewers or waterways.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
metal oxide/oxides

6. Accidental release measures

- Personal precautions** : Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8.
- Spill** : 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). Do not allow to enter drains or watercourses. Preferably clean with a detergent. Avoid using solvents. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

7. Handling and storage

- 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 only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Keep container tightly closed. Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

Put on appropriate personal protective equipment (see section 8).

Comply with the health and safety at work laws.

- Storage** : Store in accordance with local regulations. Observe label precautions. Do not store above the following temperature: 35°C (95°F). Store in a cool, well-ventilated area away from incompatible materials and ignition sources.

Keep away from: oxidizing agents, strong alkalis, strong acids.

No smoking. Prevent unauthorized access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Do not empty into drains.

8. Exposure controls/personal protection

- Engineering measures** : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
United Kingdom (UK) Isobutylalcohol	EH40-WEL (United Kingdom (UK), 1/2005). STEL: 231 mg/m ³ , 0 times per shift, 15 minute(s). Form: All forms STEL: 75 ppm, 0 times per shift, 15 minute(s). Form: All forms TWA: 154 mg/m ³ , 0 times per shift, 8 hour(s). Form: All forms TWA: 50 ppm, 0 times per shift, 8 hour(s). Form: All forms
Xylene (mixture of isomeres)	EH40-WEL (United Kingdom (UK), 1/2005). Skin STEL: 441 mg/m ³ 15 minute(s). Form: All forms STEL: 100 ppm 15 minute(s). Form: All forms

8. Exposure controls/personal protection

TWA: 220 mg/m³ 8 hour(s). Form: All forms

TWA: 50 ppm 8 hour(s). Form: All forms

Ethylbenzene

EH40-WEL (United Kingdom (UK), 1/2005). SkinSTEL: 552 mg/m³ 15 minute(s). Form: All forms

STEL: 125 ppm 15 minute(s). Form: All forms

TWA: 441 mg/m³ 8 hour(s). Form: All forms

TWA: 100 ppm 8 hour(s). Form: All forms

Exposure controls

- Occupational exposure controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Recommended: organic vapor filter (Type A) (EN 140) .
- Hand protection** : >8 hours (breakthrough time): gloves, polyvinyl alcohol (PVA) or nitrile rubber (EN 374-1).
- Eye protection** : Recommended: safety glasses with side-shields or face shield (EN 166) .
- Skin protection** : Recommended: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: overall and safety apron .
- Other protection** : Additional body garments should be used to avoid exposed skin surfaces (e.g. sleevelets, apron, disposable suit etc.), based on the task being performed. Consult your supervisor or S.O.P. for special handling instructions.
- 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.

Environmental exposure controls

Do not allow to enter drains or watercourses.

9. Physical and chemical properties

- Physical state** : Liquid. (Thick, oily liquid.)
- Odor** : Hydrocarbon. (Slight.)
- Color** : Grayish-white.
- Flash point** : Closed cup: 42°C (107.6°F). (Setaflash.)
- Boiling point** : >120°C (248°F)
- Explosion limits** : Lower: 2% Upper: 12%
- Vapor pressure** : 0.8 kPa (@ 20°C)
- Vapor density** : >1 (Air = 1)
- Evaporation rate (butyl acetate = 1)** : 0.7 compared with Butyl acetate.
- Volatility %** : 32.5% (v/v), 25% (w/w)
- VOC content w/w** : 277 (g/l).
- Solubility** : Partially soluble in the following materials: acetone.
Insoluble in the following materials: cold water and hot water.
- Relative density** : 1.11 (Water = 1)
- Viscosity** : Dynamic: >6000 cP
- pH** : 10 [Basic.]

10. Stability and reactivity

Stable under recommended storage and handling conditions (see section 7).

Hazardous decomposition products: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

11. Toxicological information

There is no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See sections 2 and 15 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit 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 headache, 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.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2,2'-Dimethyl-4,4'-methylene bis(cyclohexylamine)	LD50 Dermal	Rabbit	200 to 400 mg/kg	-
	LD50 Oral	Rat	320 to 460 mg/kg	-
	LC50 Inhalation Vapor	Rat	0,42 mg/L	4 hours
Isobutylalcohol	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Intraperitoneal	Rat	720 mg/kg	-
	LD50 Intravenous	Rat	340 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
	LCLo Inhalation Vapor	Rat	8000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours
Xylene (mixture of isomeres)	LD50 Dermal	Rabbit	>1700 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
	LC50 Inhalation Vapor	Rat	5000 ppm	4 hours
Ethylbenzene	LD50 Dermal	Rabbit	17800 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
	LC50 Inhalation Vapor	Rat	50000 mg/m ³	2 hours
	LCLo Inhalation Vapor	Rat	4000 ppm	4 hours

12. Ecological information

There is no data available on the preparation itself.
Do not allow to enter drains or watercourses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See sections 2 and 15 for details.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
2,2'-Dimethyl-4,4'-methylene bis(cyclohexylamine)	-	Acute EC50 15,2 mg/L	Daphnia - Daphnia magna	48 hours
	-	Acute EC50 2,1 mg/L	Algae	72 hours
Isobutylalcohol	-	Acute LC50 22 to 46 mg/L	Fish - Golden orfe (leuciscus idus)	96 hours
	Population	Acute EC50 1250 mg/L	Algae - Scenedesmus subspicatus	48 hours
	Intoxication	Acute EC50 1100 mg/L	Daphnia	48 hours
	Population	Acute EC50 230 mg/L	Algae - Scenedesmus subspicatus	48 hours
	Mortality	Acute LC50 1510 mg/L	Fish - Fathead minnow (pimephales promelas)	96 hours
	Mortality	Acute LC50 1430 mg/L	Fish - Fathead minnow (pimephales promelas)	96 hours
Xylene (mixture of isomeres)	Mortality	Acute LC50 1330 mg/L	Fish - Rainbow trout (oncorhynchus mykiss)	96 hours
	Mortality	Acute LC50 13,4 mg/L	Fish - Fathead minnow (pimephales promelas)	96 hours
	Mortality	Acute LC50 12 mg/L	Fish - Bluegill sunfish (lepomis macrochirus)	96 hours
Ethylbenzene	Mortality	Acute LC50 8,2 mg/L	Fish - Rainbow trout (oncorhynchus mykiss)	96 hours
	Population	Acute EC50 7,2 mg/L	Algae - Selenastrum capricornutum	48 hours
	Intoxication	Acute EC50 13,4 mg/L	Daphnia - Daphnia magna	48 hours
	Intoxication	Acute EC50 2,93 mg/L	Daphnia - Daphnia magna	48 hours
	Mortality	Acute LC50 4,2 mg/L	Fish - Rainbow trout (oncorhynchus mykiss)	96 hours
	Mortality	Acute LC50 9,09 mg/L	Fish - Fathead minnow (pimephales promelas)	96 hours
Mortality	Acute LC50 9,6 mg/L	Fish - Guppy (Poecilia reticulata)	96 hours	

Ecological information

Biodegradability

Product/ingredient name	Test	Result	Dose	Inoculum
Xylene (mixture of isomeres)	-	90 % - Readily - 5 days	-	-

Conclusion/Summary : According to EC criteria: Not expected to be readily biodegradable

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene (mixture of isomeres)	-	-	-

12. Ecological information

2,2'-Dimethyl-4,4'-methylene bis(cyclohexylamine)	-	-	Not readily
Xylene (mixture of isomers)	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2,2'-Dimethyl-4,4'-methylene bis(cyclohexylamine)	2.51	-	low
Isobutylalcohol	0.7	-	low
Xylene (mixture of isomers)	3.2	-	high
2-Methyl-1,5-pentanediamine	0.27	-	low
Ethylbenzene	3.2	-	high

13. Disposal considerations

Do not allow to enter drains or watercourses.

Dispose of according to all federal, state and local applicable regulations.



European waste catalogue (EWC) : The European Waste Catalogue classification of this product, when disposed of as waste, is: 08 01 11* waste paint and varnish containing organic solvents or other dangerous substances. If this product is mixed with other wastes, this code may no longer apply. If mixed with other wastes, the appropriate code should be assigned. For further information, contact your local waste authority.

Hazardous waste : Yes.

14. Transport information


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.

International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADR/RID Class	2733	Polyamines, flammable, corrosive, n.o.s. Limited quantity (2,2'-Dimethyl-4,4'methylenebis(cyclohexylamine))	3 (8)	III		<p>Hazard identification number 38</p> <p>Limited quantity LQ7</p> <p>CEFIC Tremcard 30G35</p> <p>Remarks (≤ 5L:) Limited Quantity - ADR/IMDG 3.4.6</p>
IMDG Class	2733	Polyamines, flammable, corrosive, n.o.s. Limited quantity (2,2'-Dimethyl-4,4'methylenebis(cyclohexylamine))	3 (8)	III		<p>Emergency schedules (EmS) F-E, S-C</p> <p>Remarks (≤ 5L:) Limited Quantity - ADR/IMDG 3.4.6</p>
IATA Class	2733	Polyamines, flammable, corrosive, n.o.s. (Xylene, 2,2'-Dimethyl-4,4'-methylene bis(cyclohexylamine))	3 (8)	III	 	<p>Passenger and Cargo AircraftQuantity limitation: 5 L Packaging instructions: 309</p> <p>Cargo Aircraft OnlyQuantity limitation: 60 L Packaging instructions: 310</p> <p>Limited Quantities - Passenger AircraftQuantity limitation: 1 L Packaging instructions: Y309</p>

PG* : Packing group

15. Regulatory information

- EU regulations** : The product is classified and labelled for supply in accordance with the Directive 1999/45/EC as follows:
- Hazard symbol(s)** : 
Corrosive
- Risk phrases** : R10- Flammable.
R20/21- Harmful by inhalation and in contact with skin.
R35- Causes severe burns.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Safety phrases** : S23- Do not breathe vapor.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S51- Use only in well-ventilated areas.
S56- Dispose of this material and its container at hazardous or special waste collection point.
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.
- Contains** : 2,2'-Dimethyl-4,4'-methylene bis(cyclohexylamine)
- Europe inventory** : **Europe inventory:** Not determined.
- Other EU regulations**
- CN code** : 3909 30 00
- National regulations**
- Industrial use** : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

16. Other information

- CEPE Classification** : 1
- Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK)** : R11- Highly flammable.
R10- Flammable.
R23/24- Toxic by inhalation and in contact with skin.
R20- Harmful by inhalation.
R22- Harmful if swallowed.
R20/21- Harmful by inhalation and in contact with skin.
R34- Causes burns.
R35- Causes severe burns.
R41- Risk of serious damage to eyes.
R38- Irritating to skin.
R37/38- Irritating to respiratory system and skin.
R67- Vapors may cause drowsiness and dizziness.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information in this Safety Data Sheet is required pursuant to EU Directive 91/155/EEC and its amendments.

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties. ©Copyright by Rust-Oleum Netherlands B.V. / Martin Mathys B.V.

