



SAFETY DATA SHEET

9601 Activator for 9600 Rust-O-Thane

1. Identification of the preparation and of the company

Product name and/or code : 9601 Activator for 9600 Rust-O-Thane
Product use : Andrews Coatings Ltd. Carver Building, Littles Lane
Chemical product name : Wolverhampton, West Midlands, WV1 1JY
Manufacturer : 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)				
Hexamethylene-di-isocyanate prepolymer	28182-81-2	50 - 100	500-060-2	R43
2-Methoxy-1-methylethyl acetate	108-65-6	10 - 25	203-603-9	R10 Xi; R36
Xylene (mixture of isomeres)	1330-20-7	5 - 10	215-535-7	R10 Xn; R20/21 Xi; R38
Ethylbenzene	100-41-4	1 - 2.5	202-849-4	F; R11 Xn; R20
Hexamethylene-di-isocyanate	822-06-0	0 - 1	212-485-8	T; R23 Xi; R36/37/38 R42/43
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
Xi; R36
R43

Physical/chemical hazards : Flammable.

Human health hazards : Irritating to eyes. May cause sensitization by skin contact.

Additional warning phrases : Contains isocyanates. See information supplied by the manufacturer. This information is provided by the current Safety Data Sheet.

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 or mist.
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

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). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. 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

Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

- 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. Precautions should be taken to minimize exposure to atmospheric humidity or water. CO₂ will be formed, which, in closed containers, could result in pressurization. Care should be taken when re-opening partly-used containers. 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 heat and direct sunlight.

Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water.
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

Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Engineering measures : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn. (See Personal Protection.)

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
United Kingdom (UK)	
2-Methoxy-1-methylethyl acetate	EH40-WEL (United Kingdom (UK), 1/2005). Skin STEL: 548 mg/m ³ , 0 times per shift, 15 minute(s). STEL: 100 ppm, 0 times per shift, 15 minute(s). TWA: 274 mg/m ³ , 0 times per shift, 8 hour(s). TWA: 50 ppm, 0 times per shift, 8 hour(s).
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 TWA: 220 mg/m ³ 8 hour(s). Form: All forms TWA: 50 ppm 8 hour(s). Form: All forms
Ethylbenzene	EH40-WEL (United Kingdom (UK), 1/2005). Skin STEL: 552 mg/m ³ 15 minute(s). Form: All forms STEL: 125 ppm 15 minute(s). Form: All forms TWA: 441 mg/m ³ 8 hour(s). Form: All forms TWA: 100 ppm 8 hour(s). Form: All forms
Hexamethylene-di-isocyanate	EH40-WEL (United Kingdom (UK), 1/2005). Notes: As NCO STEL: 0.07 mg/m ³ , 0 times per shift, 15 minute(s). Form: All forms TWA: 0.02 mg/m ³ , 0 times per shift, 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 (Type AX) and particulate filter (EN 140) .
- Hand protection** : >8 hours (breakthrough time): gloves, polyvinyl alcohol (PVA) or neoprene (EN 374-1).
- Eye protection** : Recommended: safety glasses with side-shields (EN 166) .
- Skin protection** : Recommended: Wear overalls or long sleeved shirt. (EN 467)
- Other protection** : When spraying wear suitable respiratory equipment : full-face mask or supplied-air respirator. By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask. In confined spaces, use compressed-air or fresh-air respiratory equipment.
- 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. [Oily liquid.]
- Odor** : Solvent-like.
- Color** : Yellowish.
- Flash point** : Closed cup: 38°C (100.4°F)
- Boiling point** : 145°C (293°F)
- Explosion limits** : Lower: 1%
Upper: 10.8%

9. Physical and chemical properties

Vapor pressure	: 0.8 kPa (6 mm Hg)
Vapor density	: >1 [Air = 1]
Evaporation rate (butyl acetate = 1)	: 0.8 (Butyl acetate. = 1)
Volatility %	: 25% (w/w)
VOC content w/w	: 548 (g/l).
Relative density	: 1.07
Viscosity	: Dynamic: 225 mPa·s (225 cP)

10. Stability and reactivity

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

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

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

Uncontrolled exothermic reactions occur with amines and alcohols.

The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure buildup could result in distortion, expansion and, in extreme cases, bursting of the container.

11. Toxicological information

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

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. 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. Repeated or prolonged contact with irritants may cause dermatitis. If splashed in the eyes, the liquid may cause irritation and reversible damage.

Contains Hexamethylene-di-isocyanate prepolymer. May produce an allergic reaction.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Hexamethylene-di-isocyanate prepolymer	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation	Rat	18500 mg/m ³	1 hours
	Dusts and mists			
2-Methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
	LC50 Inhalation	Rat	4345 mg/L	6 hours
	Vapor			
Xylene (mixture of isomeres)	LD50 Dermal	Rabbit	>1700 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
	LC50 Inhalation	Rat	5000 ppm	4 hours
	Vapor			
Ethylbenzene	LD50 Dermal	Rabbit	17800 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
	LC50 Inhalation	Rat	50000 mg/m ³	2 hours
	Vapor			
	LCLo Inhalation	Rat	4000 ppm	4 hours
Hexamethylene-di-isocyanate	LD50 Dermal	Rabbit	593 mg/kg	-
	LD50 Dermal	Rabbit	570 uL/kg	-
	LD50 Oral	Rat	738 mg/kg	-
	LD50 Oral	Rat	710 uL/kg	-
	LCLo Inhalation	Rat	60 mg/m ³	4 hours
	Vapor			

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 not classified as dangerous for the environment.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Hexamethylene-di-isocyanate prepolymer	OECD 203 203 Fish, Acute Toxicity Test	Acute LC50 >100 mg/l	Fish - Zebra barbel (brachydanio rerio)	96 hours
2-Methoxy-1-methylethyl acetate	-	Acute EC50 408 mg/l	Daphnia	48 hours
	-	Acute LC50 161 mg/l	Fish - Fathead minnow (pimephales promelas)	96 hours
Xylene (mixture of isomeres)	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
	Mortality	Acute LC50 8,2 mg/L	Fish - Rainbow trout (oncorhynchus mykiss)	96 hours
Ethylbenzene	Population	Acute EC50 7,2 mg/L	Algae - Selenastrum capricornutum	48 hours
	Intoxication	Acute EC50 2,97 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	-	-
Hexamethylene-di-isocyanate	OECD 301F 301F Ready Biodegradability - Manometric Respirometry Test	42 % - 10 days	-	-

Conclusion/Summary : According to EC criteria: Not readily biodegradable. This product is estimated to have a slow rate of biodegradation of less than 30% degradation over a test period of 28 days or less.

Product/ingredient name

Hexamethylene-di-isocyanate prepolymer
2-Methoxy-1-methylethyl acetate
Xylene (mixture of isomeres)
Ethylbenzene
Hexamethylene-di-isocyanate

Aquatic half-life

-
-
-
-
-

Photolysis

0%; < 28 day(s).
-
-
-
-

Biodegradability

Not readily
Readily
Readily
Readily
Not readily

Bioaccumulative potential

Product/ingredient name

2-Methoxy-1-methylethyl acetate
Xylene (mixture of isomeres)
Ethylbenzene
Hexamethylene-di-isocyanate

LogP_{ow}

0.43
3.2
3.2
1.08

BCF

-
-
-
-

Potential

low
high
high
low

13. Disposal considerations

Do not allow to enter drains or watercourses. Residues in empty containers should be neutralized with a decontaminant (see section 6).

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	1263	Paint. (2-methoxy-1-methylethyl acetate)	3	III		Hazard identification number 30 Limited quantity LQ7

14. Transport information

						Remarks (≤ 5L:) Limited Quantity - ADR/IMDG 3.4.6
IMDG Class	1263	Paint. (2-methoxy-1-methylethyl acetate)	3	III		Emergency schedules (EmS) F-E , S-E Remarks (≤ 5L:) Limited Quantity - ADR/IMDG 3.4.6
IATA Class	1263	Paint. (2-methoxy-1-methylethyl acetate)	3	III		Passenger and Cargo Aircraft Quantity limitation: 60 L Packaging instructions: 309 Cargo Aircraft Only Quantity limitation: 220 L Packaging instructions: 310 Limited Quantities - Passenger Aircraft Quantity limitation: 10 L Packaging instructions: Y309 Special provisions: A72

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)	:  Irritant
Risk phrases	: R10- Flammable. R36- Irritating to eyes. R43- May cause sensitization by skin contact.
Safety phrases	: S23- Do not breathe vapor. S24/25- Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37- Wear suitable gloves. S51- Use only in well-ventilated areas. S56- Dispose of this material and its container at hazardous or special waste collection point.
Contains	: Hexamethylene-di-isocyanate prepolymer
Europe inventory	: Europe inventory: All components are listed or exempted.
Other EU regulations	
Additional warning phrases	: Contains isocyanates. See information supplied by the manufacturer. This information is provided by the current Safety Data Sheet.
CN code	: 3208 90 10
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 : 5

Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK) :

- R11- Highly flammable.
- R10- Flammable.
- R23- Toxic by inhalation.
- R20- Harmful by inhalation.
- R20/21- Harmful by inhalation and in contact with skin.
- R36- Irritating to eyes.
- R38- Irritating to skin.
- R36/37/38- Irritating to eyes, respiratory system and skin.
- R43- May cause sensitization by skin contact.
- R42/43- May cause sensitization by inhalation and skin contact.

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.



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Rustoleum Aerosols, Carver Building, Littles Lane, Wolverhampton WV1 1JY
 Tel: 01902 712286 Email: sales@rustoleumaerosols.co.uk
 Fax: 01902 426574 Web: www.rustoleumaerosols.co.uk