

Guard Endure E S T

Section 1. Identification

Product identifier : Guard Endure E S T

Product code : 47583

Product type : Powder coating.

Other means of : Not available.

identification

Recommended use of the chemical and restrictions on use

Use in coatings - Industrial use

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Section 2. Hazard identification

Classification of the : ACUTE TOXICITY (oral) - Category 5

substance or mixture SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1

SKIN SENSITISATION - Category 1

GERM CELL MUTAGENICITY - Category 1B

GHS label elements

Hazard pictograms







Signal word : Danger.

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Section 2. Hazard identification

Hazard statements : H303 - May be harmful if swallowed.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage. H340 - May cause genetic defects.

Precautionary statements

General : Not applicable.

Prevention : P201 - Obtain special instructions before use.

P280 - Wear protective gloves, protective clothing, eye protection, face protection,

or hearing protection.

P261 - Avoid breathing dust.

: P308 + P313 - IF exposed or concerned: Get medical advice or attention. Response

P362 + P364 - Take off contaminated clothing and wash it before reuse.

P302 + P352 - IF ON SKIN: Wash with plenty of water.

P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor.

Storage : Not applicable.

: P501 - Dispose of contents and container in accordance with all local, regional, **Disposal**

national and international regulations.

Other hazards which do not : None known.

result in classification

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Other means of identification

Not available.

Ingredient name	%	CAS number
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	<5	2451-62-9

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

Description of necessary first aid measures

Eye contact

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation

: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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Section 4. First aid measures

Skin contact

: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact: May cause an allergic skin reaction.

Ingestion: May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments

: No specific treatment.

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing

media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

: None known.

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Section 5. Firefighting measures

Specific hazards arising from the chemical

: Fine dust clouds may form explosive mixtures with air.

Hazardous thermal decomposition products

: Decomposition products may include the following materials: carbon dioxide

carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides

Special protective actions for fire-fighters

: 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.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

: Avoid dispersal of spilt 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).

Methods and material for containment and cleaning up

Small spill

: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill

Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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Section 7. Handling and storage

Advice on general occupational hygiene

: 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away

from heat and direct sunlight. Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

See Technical Data Sheet / packaging for further information.

Section 8. Exposure controls/personal protection

Control parameters

Dust Limit: 10 mg/m³ (TWA of total inhalable dust) and 4 mg/m³ (TWA of respirable)

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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.

Individual protection measures

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying to ISO 16321-1:2022 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

: There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove

Always ensure that gloves are free from defects and that they are stored and used correctly

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

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Section 8. Exposure controls/personal protection

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Wear suitable gloves tested to ISO 374-1:2016.

May be used, gloves(breakthrough time) 4 - 8 hours: polyvinyl alcohol (PVA) (> 0.3

Recommended, gloves(breakthrough time) > 8 hours: nitrile rubber (> 0.75 mm),

neoprene (> 0.35 mm), PVC (> 0.5 mm)

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of

use, as included in the user's risk assessment.

Body protection : 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.

Other skin protection Appropriate footwear and any additional skin protection measures should be

selected based on the task being performed and the risks involved and should be

approved by a specialist before handling this product.

Respiratory protection : If workers are exposed to concentrations above the exposure limit, they must use a

respirator according to EN 140. If dust is generated and ventilation is inadequate,

use respirator that will protect against dust/mist. (FFP2 / N95).

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Solid. Powder.

Colour Various **Odour** : Odourless. **Odour threshold** : Not applicable. pН : Not applicable.

Melting point (dust) Boiling point : Not applicable. Flash point : Not applicable. **Evaporation rate** : Not applicable.

Flammability : Fine dust clouds may form explosive mixtures with air.

85 - 115 °C

Lower explosion limit (dust) 30 g/m³ (EN 14034-3) Minimum ignition energy : 10 - 30 (EN 13821)

(mJ)

Vapour pressure : Not applicable. Vapour density Not applicable. **Density** 1.2 to 1.9 g/cm³

Solubility(ies)

Media	Result
cold water	Not soluble
hot water	Not soluble

Partition coefficient: n-

octanol/water

: Not applicable.

Auto-ignition temperature : > 400°C

Decomposition temperature : >250°C (>482°F) **Viscosity** : Not applicable.

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Section 9. Physical and chemical properties and safety characteristics

Particle characteristics

Median particle size : Not available.

Section 10. Stability and reactivity

Reactivity

: Fine dust clouds may form explosive mixtures with air.

Chemical stability

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

Possibility of hazardous

reactions

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

Conditions to avoid

: Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame).

Take precautionary measures against electrostatic discharges.

To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material.

Prevent dust accumulation.

Incompatible materials

: Not applicable.

Hazardous decomposition products

: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1,3,5-tris(oxiranylmethyl) -1,3,5-triazine-2,4,6(1h,3h, 5h)-trione	LD50 Oral	Rat	138 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1,3,5-tris(oxiranylmethyl) -1,3,5-triazine-2,4,6(1h,3h, 5h)-trione	Eyes - Irritant	Mammal - species unspecified	-	-	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-

Sensitisation

3	Route of exposure	Species	Result
1,3,5-tris(oxiranylmethyl) -1,3,5-triazine-2,4,6(1h,3h, 5h)-trione	skin	Mammal - species unspecified	Sensitising

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

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Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Product/ingredient name		Route of exposure	Target organs
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	Category 2	-	-

Aspiration hazard

Not available.

Information on likely routes : Not available.

of exposure

Potential acute health effects

Eye contact : Causes serious eye damage.

: No known significant effects or critical hazards. Inhalation

Skin contact : May cause an allergic skin reaction.

: May be harmful if swallowed. Ingestion

Symptoms related to the physical, chemical and toxicological characteristics

: Adverse symptoms may include the following: **Eye contact**

> pain watering redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

: Adverse symptoms may include the following: Ingestion

stomach pains

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed

to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : May cause genetic defects.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

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Section 11. Toxicological information

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Guard Endure E S T 1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h, 5h)-trione	2502.3 100	N/A N/A	N/A N/A	75.1 3	N/A N/A

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
1,3,5-tris(oxiranylmethyl) -1,3,5-triazine-2,4,6(1h,3h, 5h)-trione	-0.8	-	low

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-

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Section 14. Transport information

Transport hazard class(es)

Packing group - - - - -

Special precautions for user : Transport within user's premises: always transport in closed containers that are

No.

upright and secure. Ensure that persons transporting the product know what to do in

No.

the event of an accident or spillage.

Transport in bulk according : Not available.

No.

to IMO instruments

Environmental

hazards

Section 15. Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

History

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Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available SGG = Segregation Group UN = United Nations

Procedure used to derive the classification

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Section 16. Other information

Classification	Justification
	Calculation method
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	Calculation method
SKIN SENSITISATION - Category 1	Calculation method
GERM CELL MUTAGENICITY - Category 1B	Calculation method

References : Not available.

▼ Indicates information that has changed from previously issued version.

Notice to reader

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.

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