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

1.1 Product identifier

Product name : Reveal Lite AW F (D003)

Product code : 33482
Product description : Paint.

Product type : Powder coating.

Other means of : Not available.

identification

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

Identified uses

Use in coatings - Industrial use

1.3 Details of the supplier of the safety data sheet

JOTUN POWDER COATINGS PAKISTAN (Pvt) Ltd. 2 KM DEFENCE ROAD, OFF 9 KM RAIWIND RD. NEAR VALANCIA HOMES GATE, LAHORE PAKISTAN

Phone: + 92 42 53 20 438 Fax: + 92 42 53 20 468 sdspowder@jotun.com

1.4 Emergency telephone number

Phone: +971 4 347 2515

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412

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

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

Classification : R43

R52/53

Human health hazards: May cause sensitisation by skin contact.

Environmental hazards: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

See Section 16 for the full text of the R phrases or H statements declared above. See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

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SECTION 2: Hazards identification

Hazard pictograms





Signal word : Danger.

Hazard statements : Causes serious eye damage.

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Not applicable.

Prevention : Avoid breathing dust. Wear protective gloves. Wear eye or face protection. Avoid

release to the environment.

Response : If skin irritation or rash occurs: Get medical attention. 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 physician.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national

and international regulations.

Hazardous ingredients : tris(oxiranylmethyl) benzene-1,2,4-tricarboxylate

bis(2,3-epoxypropyl) terephthalate

Supplemental label

elements

: Not applicable.

2.3 Other hazards

Other hazards which do not result in classification

: None known.

SECTION 3: Composition/information on ingredients

Substance/mixture

: Mixture

			<u>Classification</u>			
Product/ingredient name	Identifiers	%	67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	Туре	Notes
tris(oxiranylmethyl) benzene-1,2, 4-tricarboxylate	EC: 230-638-7 CAS: 7237-83-4	<5	Xi; R36/38 R43 N; R51/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]	-
bis(2,3-epoxypropyl) terephthalate	EC: 230-565-0 CAS: 7195-44-0	<5	Xi; R41, R38 R43	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]	-
3,9-bis(2,4-di-tert- butylphenoxy)-2,4,8, 10-tetraoxa-3, 9-diphosphaspiro[5.5] undecane	EC: 247-952-5 CAS: 26741-53-7	≤1	Xi; R38	Aquatic Acute 1, H400 (M=1)	[1]	-
			See Section 16 for the full text of the R- phrases declared above.	See Section 16 for the full text of the H statements 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, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

<u>Type</u>

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SECTION 3: Composition/information on ingredients

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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. If unconscious, place in recovery

position and seek medical advice.

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.

Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and

water or use recognised 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. Seek immediate medical

attention.

Ingestion: If swallowed, seek medical advice immediately and show the container or label.

Keep person warm and at rest. Do NOT induce vomiting.

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.

4.2 Most important symptoms and effects, both 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: No known significant effects or critical hazards.

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

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

: Recommended: alcohol-resistant foam, CO₂ blanket, water spray or mist.

Unsuitable extinguishing

media

Do not use water jet.
 Do not use inert gas under high pressure (e.g. CO2).

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture

: This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

: Decomposition products may include the following materials: carbon dioxide

carbon monoxide

Fire/explosion hazards

: Fine dust clouds may form explosive mixtures with air.

5.3 Advice for firefighters

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 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

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".

6.2 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). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill

: Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. 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.

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.

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SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Precautions should be taken to prevent the formation of dusts in concentrations above flammable, explosive or occupational exposure limits.

Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources.

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.

Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep away from heat, sparks and flame.

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

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

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

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

7.2 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.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific : Not available.

solutions

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

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

No exposure limit value known.

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 monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived no effect levels

No DNELs available.

Predicted no effect concentrations

No PNECs available.

8.2 Exposure controls

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.

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SECTION 8: Exposure controls/personal protection

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 EN 166 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 material.

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.

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 EN374.

Recommended, gloves(breakthrough time) > 8 hours: butyl rubber May be used, gloves(breakthrough time) 4 - 8 hours: nitrile rubber

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).

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

Appearance

Physical state : Solid. Powder.

Colour : Various

Odour : Odourless.

Odour threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not applicable.

Initial boiling point and

boiling range

: Not available.

Flash point : Not available.

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SECTION 9: Physical and chemical properties

Evaporation rate : Not available.

Flammability (solid, gas) : Not applicable.

Burning time : Not available.

Burning rate : Not available.

Lower explosion limit : 30 g/m³

Minimum ignition energy (mJ) : 10 - 30

Vapour pressure : Highest known value: 0 kPa (0 mm Hg) (at 20°C) (bis(2,3-epoxypropyl)

terephthalate).

Vapour density : Not available.

Relative density : 1.2 to 1.9 g/cm³

Solubility(ies) : Not available.

Partition coefficient: n-octanol/ : Not available.

water

Auto-ignition temperature : > 450°C **Decomposition temperature** : >230°C

Viscosity: Not applicable.Explosive properties: Not available.Oxidising properties: Not available.

9.2 Other information

10.3 Possibility of

No additional information.

SECTION 10: Stability and reactivity

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

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

10.2 Chemical stability : The product is stable.

hazardous reactions

10.4 Conditions to avoid : No specific data.

10.4 Conditions to avoid : No specific data.10.5 Incompatible materials : Not applicable.

10.6 Hazardous : Under normal conditions of storage and use, hazardous decomposition products

decomposition products should not be produced.

Fine dust clouds may form explosive mixtures with air.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact. Coating powders can cause localised skin irritation in folds of the skin or under tight clothing.

Contains tris(oxiranylmethyl) benzene-1,2,4-tricarboxylate, bis(2,3-epoxypropyl) terephthalate. May produce an allergic reaction.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
3/9-bis(2,4-di-tert-butylphenoxy)-2,4,8, 10-tetraoxa-3, 9-diphosphaspiro[5.5] undecane	Skin - Severe irritant	Rabbit	-	0.5 Grams	-

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SECTION 11: Toxicological information

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary: This material is harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Conclusion/Summary: Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
rís(oxiranylmethyl) benzene- 1,2,4-tricarboxylate	0.9	-	low
bis(2,3-epoxypropyl) terephthalate	1.7	-	low

12.4 Mobility in soil

Soil/water partition : Not available.

coefficient (Koc)

Mobility : Not available.

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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Do not allow to enter drains or watercourses. Material and/or container must be disposed of as hazardous waste.

European waste catalogue (EWC)

08 01 11* Waste paint and varnish containing organic solvents or other dangerous substances

SECTION 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.

This preparation is not classified as dangerous according to international transport regulations (ADR/RID, IMDG or ICAO/IATA).

14.1 UN number : Not regulated.

14.2 UN proper shipping

name

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SECTION 14: Transport information

14.3 Transport hazard

class(es)

14.4 Packing group 14.5 Environmental

: No.

hazards

14.6 Special precautions

for user

: 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.

Additional information

ADR / RID

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

Other EU regulations

Europe inventory : Not determined.

Black List Chemicals : Not listed

Industrial emissions (integrated pollution prevention and control) - : Not listed

Air

Industrial emissions (integrated pollution prevention and control) - : Not listed

Water

Chemical Weapons Convention List Schedule I : Not listed

Chemicals

Chemical Weapons Convention List Schedule II Not listed

Chemicals

Chemical Weapons

: Not listed **Convention List Schedule III**

Chemicals

15.2 Chemical safety

: Not applicable.

assessment

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SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and

acronyms

: ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement PNEC = Predicted No Effect Concentration RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification		
Eye Dam. 1, H318	Calculation method		
Skin Sens. 1, H317	Calculation method		
Aquatic Chronic 3, H412	Calculation method		

Full text of abbreviated H

statements

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage. Causes serious eye irritation. H319 H400 Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects. H411 H412 Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

: Aquatic Acute 1, H400

ACUTE AQUATIC HAZARD - Category 1 Aquatic Chronic 2, H411 LONG-TERM AQUATIC HAZARD - Category 2 Aquatic Chronic 3, H412 LONG-TERM AQUATIC HAZARD - Category 3

Eye Dam. 1, H318 Eye Irrit. 2, H319

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2 Skin Sens. 1, H317 SKIN SENSITISATION - Category 1

Full text of abbreviated R

phrases

: R41- Risk of serious damage to eyes.

R38- Irritating to skin.

R36/38- Irritating to eyes and skin.

R43- May cause sensitisation by skin contact.

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.

Full text of classifications

[DSD/DPD]

: Xi - Irritant

N - Dangerous for the environment

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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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