

In accordance with the Standard for Classification and Labelling of Chemical Substance and Material Safety Data Sheet, Article 10 Paragraph

### SAFETY DATA SHEET

#### Interchar 3120 Black Part A

### Section 1. Chemical product and company identification

A. Product name : Interchar 3120 Black Part A

**Product code** : HFA320

B. Relevant identified uses of the substance or mixture and uses advised against

Identified uses			
Professional application of coatings and inks			
Uses advised against	Reason		
All Other Uses			

C. Manufacturer : International Farg AB

Holmedalen 3

Aspereds Industriomrade SE-424 22 Angered

Sweden

Tel: +46 (0) 31 928500 Fax: +46 (0) 31 928530

**Emergency telephone** number (with hours of

operation)

e-mail address of person responsible for this SDS

: +46 8 33 12 31

: sdsfellinguk@akzonobel.com

### Section 2. Hazards identification

A. Hazard classification : SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

SKIN SENSITIZATION - Category 1

LONG-TERM AQUATIC HAZARD - Category 2

B. GHS label elements, including precautionary statements

**Symbol** 





Signal word : Warning

**Hazard statements** : Causes serious eye irritation.

Causes skin irritation.

May cause an allergic skin reaction.

Toxic to aquatic life with long lasting effects.

**Precautionary statements** 

Prevention : Wear protective gloves. Wear eye or face protection. Avoid release to the

environment. Avoid breathing vapour. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Date of issue/Date of revision Version 1 :

: 22/08/2018



### Section 2. Hazards identification

**Response** : Collect spillage. IF ON SKIN: Wash with plenty of soap and water. Take off

contaminated clothing. Wash contaminated clothing before reuse. 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. If eye irritation persists: Get medical attention.

**Storage** : Not applicable.

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

and international regulations.

Supplemental label

elements

: Wear appropriate respirator when ventilation is inadequate.

C. Other hazards which do

not result in classification

: None known.

### Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Common name	CAS number	%	Classification
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin	reaction product: bisphenol a- (epichlorhydrin)	25068-38-6	≥10 - <20	Skin Irrit. 2, H315  Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
triphenyl phosphate	triphenyl phosphate	115-86-6	≥5 - <10	Aquatic Acute 1, H400 Aquatic Chronic 1,
				H410
3-methyl-1,5-pentanediyl diacrylate	3-methyl-1,5-pentanediyl diacrylate	64194-22-5	<10	Skin Irrit. 2, H315
				Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Man-made vitreous (silicate) fibres	Man-made vitreous (silicate) fibres	287922-11-6	<10	Skin Irrit. 2, H315
2,2-bis(acryloyloxymethyl)butyl acrylate	trimethylolpropane triacrylate	15625-89-5	<10	Skin Irrit. 2, H315
	,			Eye Irrit. 2, H319 Skin Sens. 1, H317

There are no 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.

:

Date of issue/Date of revision : 22/08/2018

**Version** 1 : 2/12



### Section 4. First aid measures

#### A. Eye contact

: 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. Get medical attention.

#### B. Skin contact

: 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. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

#### C. Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Seek medical attention. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. 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.

#### D. Ingestion

: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention if adverse health effects persist or are severe. 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.

#### E. 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. 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 aloves.

#### See toxicological information (Section 11)

# Section 5. Firefighting measures

#### A. Extinguishing media

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable

extinguishing media

: None known.

#### B. Specific hazards arising from the chemical

: In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic 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.

Version 1 :



# Section 5. Firefighting measures

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon dioxide

carbon monoxide nitrogen oxides phosphorus oxides halogenated compounds

C. Special protective equipment for firefighters

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

Special precautions 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.

### Section 6. Accidental release measures

- A. Personal precautions, protective equipment and emergency procedures
- : 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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- **B.** 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. Collect spillage.
- C. Methods and material for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Approach the 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). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

# Section 7. Handling and storage

#### A. 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. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. 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. Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.



# 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.

# B. Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

### Section 8. Exposure controls/personal protection

#### A. Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
, , , ,	Ministry of Labor (Republic of Korea, 8/2013). TWA: 3 mg/m³ 8 hours.

# B. Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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.

#### C. Personal protective equipment

**Respiratory protection** 

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary according to EN529. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Eye 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, gases or dusts. Use eye protection according to EN 166, designed to protect against liquid splashes. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

#### Hand protection

: Use chemical resistant gloves classified under Standard EN 374: Protective gloves against chemicals and micro-organisms. Recommended: Viton® or Nitrile gloves. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. 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. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/ puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Date of issue/Date of revision

Version 1 :



### Section 8. Exposure controls/personal protection

**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.

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.

# Section 9. Physical and chemical properties

A. Appearance

Physical state : Liquid. Colour : Black. B. Odour : Odourless. C. Odour threshold : Not available. : Not applicable. E. Melting/freezing point : Not available. F. Boiling point/boiling : Not available.

range

G. Flash point : Closed cup: 111°C (231.8°F)

Fire point Not available. H. Evaporation rate : Not available. Flammability (solid, gas) : Not available. J. Lower and upper : Not available.

explosive (flammable) limits

: Not available. K. Vapour pressure

L. Solubility : Insoluble in the following materials: cold water.

M. Vapour density : Not available.

: 1.48 N. Relative density

O. Partition coefficient: n-

octanol/water

: Not available.

P. Auto-ignition

temperature

: Not available.

Q. Decomposition

temperature

: Not available.

R. Viscosity : Kinematic (room temperature): 11148 mm<sup>2</sup>/s (11148 cSt)

S. Molecular weight : Not applicable.

### Section 10. Stability and reactivity

: The product is stable. A. Chemical stability

Possibility of hazardous

reactions

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

B. Conditions to avoid : No specific data.

C. Incompatible materials : No specific data.

Date of issue/Date of revision

: 22/08/2018



# Section 10. Stability and reactivity

D. Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### Section 11. Toxicological information

A. Information on likely

: Not available.

routes of exposure

#### Potential acute health effects

**Inhalation**: Exposure to decomposition products may cause a health hazard. Serious effects

may be delayed following exposure.

**Ingestion**: Irritating to mouth, throat and stomach.

**Skin contact**: Causes skin irritation. May cause an allergic skin reaction.

**Eye contact**: Causes serious eye irritation.

#### Over-exposure signs/symptoms

Inhalation: No specific data.Ingestion: No specific data.

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

irritation redness

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

pain or irritation

watering redness

#### B. Health hazards

#### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
triphenyl phosphate	LD50 Dermal LD50 Oral	Rabbit Rat	>7900 mg/kg 3500 mg/kg	-
2,2-bis(acryloyloxymethyl) butyl acrylate	LD50 Dermal	Rabbit	5170 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
2,2-bis(acryloyloxymethyl) butyl acrylate	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-

#### **Sensitisation**

Not available.

#### CMR - ISHA Article 42 Public Notice No 2013-38 Occupational Exposure Limits

Not available.

#### **Mutagenicity**

:

Date of issue/Date of revision : 22/08/2018

**Version** 1 : 7/12



# **Section 11. Toxicological information**

Not available.

#### **Carcinogenicity**

Not available.

#### Reproductive toxicity

Not available.

#### **Teratogenicity**

Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### **Aspiration hazard**

Not available.

#### Potential chronic health effects

#### **Chronic toxicity**

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 : No known significant effects or critical hazards. **Teratogenicity** : No known significant effects or critical hazards. Developmental effects : No known significant effects or critical hazards. **Fertility effects** : No known significant effects or critical hazards.

#### **ATE value**

Route	Result
Oral	17846.3 mg/kg

# **Section 12. Ecological information**

#### A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
triphenyl phosphate	Acute EC50 2000 μg/l	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 225 μg/l Fresh water	Fish - Oncorhynchus mykiss - Fingerling	96 hours
	Acute LC50 1000 μg/l Fresh water Chronic NOEC 55 μg/l Fresh water	Daphnia - Daphnia magna Fish - Oncorhynchus mykiss - Fingerling	48 hours 30 days

#### B. Persistence and degradability

Not available.

#### C. Bioaccumulative potential

Date of issue/Date of revision : 22/08/2018

AkzoNobel 8/12 Version 1 :



# **Section 12. Ecological information**

Product/ingredient name	LogPow	BCF	Potential
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin triphenyl phosphate 2,2-bis(acryloyloxymethyl) butyl acrylate	2.64 to 3.78 4.63 0.67	31 190.546071796 -	low low

D. Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

E. Other adverse effects : No known significant effects or critical hazards.

### Section 13. Disposal considerations

#### A. 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.

#### **B.** Disposal precautions

: 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
A. UN number	UN3082	UN3082	UN3082
B. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, triphenyl phosphate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, triphenyl phosphate). Marine pollutant	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, triphenyl phosphate)
C. Transport hazard class(es)	9	9	9
D. Packing group	III	III	III
E. Environmental hazards	Yes.	Yes.	Yes.

Date of issue/Date of revision

: 22/08/2018



# **Section 14. Transport information**

F. Additional information

This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6. 1.1 and 5.0.2.8.

**IMDG Code Segregation** 

group

: Not applicable.

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.

# **Section 15. Regulatory information**

#### A. Regulation according to ISHA

ISHA article 37

(Harmful substances prohibited from manufacture)

: None of the components are listed.

ISHA article 38

(Harmful substances

: None of the components are listed.

requiring permission)

**Article 2 of Youth Protection Act on** 

**Substances Hazardous** 

to Youth

#### **Exposure Limits of Chemical Substances and Physical Factors**

: Not applicable.

The following components have an OEL:

Triphenylphosphate and mixtures which contain 25% or more

Annex 11-3 (Exposure standards established for harmful factors)

**ISHA Enforcement Regs**: None of the components are listed.

: None of the components are listed.

**ISHA Enforcement Regs** Annex 11-4 (Harmful

factors subject to Work **Environment** 

Measurement)

ISHA Enforcement Regs : None of the components are listed.

Annex 12-2 (Harmful **Factors Subject to** Special Health Check-

up)

Standard of Industrial

Safety and Health **Annex 12 (Hazardous** 

substances subject to

control)

: None of the components are listed.

#### B. Regulation according to Chemicals Control Act

K-Reach Article 20

: Not applicable

(Toxic chemicals)

K-Reach Article 27

(Prohibited)

: None of the components are listed.

Date of issue/Date of revision : 22/08/2018



# **Section 15. Regulatory information**

K-Reach Article 27

(Restricted)

: None of the components are listed.

**CSCA Article 11 (TRI)** 

: The following components are listed: 4,4'-(1-Methylethylidene) bisphenol polymer

with (chloromethyl)oxirane

Korea inventory

: Not determined.

**CSCA Article 39** 

: None of the components are listed.

(Accident Precaution

Chemicals)

C. Dangerous Materials : Not available.

Safety Management Act D. Wastes regulation

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

and international regulations.

E. Regulation according to other foreign laws

: Not determined. **Europe inventory United States inventory** 

(TSCA 8b)

: Not determined.

Japan inventory

: Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.

### **Section 16. Other information**

A. References : Not available. B. Date of issue/Date of : 22/08/2018

revision

C. Version : 1

> : 22/08/2018 Date of printing

D. Other

Indicates information that has changed from previously issued version.

: ATE = Acute Toxicity Estimate Key to abbreviations

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)

UN = United Nations

#### **Notice to reader**

IMPORTANT NOTE: the information contained in this data sheet (as may be amended from time to time) is not intended to be exhaustive and is presented in good faith and believed to be correct as of the date on which it is prepared. It is the user's responsibility to verify that this data sheet is current prior to using the product to which it relates.

Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to use. Where those purposes are other than as specifically recommended in this safety data sheet, then the user uses the product at their own risk.

MANUFACTURER'S DISCLAIMER: the conditions, methods and factors affecting the handling, storage, application, use and disposal of the product are not under the control and knowledge of the manufacturer. Therefore the manufacturer does not assume responsibility for any adverse events which may occur in the handling, storage, application, use, misuse or disposal of the product and, so far as permitted by applicable law, the manufacturer expressly disclaims liability for any and all loss, damages and/or expenses arising out of or in any way connected to the storage, handling, use or disposal of the product. Safe handling, storage, use and disposal are the responsibility of the users. Users must comply with all applicable health and safety

Date of issue/Date of revision : 22/08/2018

11/12



### **Section 16. Other information**

laws.

Unless we have agreed to the contrary, all products are supplied by us subject to our standard terms and conditions of business, which include limitations of liability. Please make sure to refer to these and / or the relevant agreement which you have with AkzoNobel (or its affiliate, as the case may be).

© AkzoNobel

:

Date of issue/Date of revision : 22/08/2018