

SAFETY DATA SHEET

Intersleek 970 Part C

Section 1. Chemical product and company identification

A. Product name : Intersleek 970 Part C

Product code : FXA983

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 Paint Ltd.

Stoneygate Lane

Felling

Gateshead

Tyne and Wear

NE10 0JY UK

Tel: +44 (0)191 469 6111

Fax: +44 (0)191 438 3711

Emergency telephone number (with hours of operation) : +44 (0)191 469 6111 (24H)

e-mail address of person responsible for this SDS : sdsfellinguk@akzonobel.com

Section 2. Hazards identification

A. Hazard classification : FLAMMABLE LIQUIDS - Category 3
 ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (dermal) - Category 4
 ACUTE TOXICITY (inhalation) - Category 4
 TOXIC TO REPRODUCTION (Fertility) - Category 2
 TOXIC TO REPRODUCTION (Unborn child) - Category 2

B. GHS label elements, including precautionary statements

Symbol :



Signal word : Warning

Hazard statements : Flammable liquid and vapour.
 Harmful if swallowed, in contact with skin or if inhaled.
 Suspected of damaging fertility or the unborn child.

Precautionary statements

:

Date of issue/Date of revision : 03/05/2017

Version 3 :

1/12

Section 2. Hazards identification

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapour. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
- Response** : IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- 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
pentane-2,4-dione	pentane-2,4-dione	123-54-6	≥40 - <50	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 3, H331
dioctyltin dilaurate	stannane, dioctylbis[(1-oxododecyl)oxy]-	3648-18-8	≥5 - <10	Repr. 2, H361fd (Fertility and Unborn child) STOT RE 2, H373 Aquatic Chronic 3, H412

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 : 03/05/2017

Version 3 :

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 if irritation occurs.
- 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. If necessary, call a poison center or physician. 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 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. Get medical attention. If necessary, call a poison center or physician. 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.
- 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 necessary, call a poison center or 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.
- E. Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- 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

- A. Extinguishing media**
- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.
- B. Specific hazards arising from the chemical** : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

:

Date of issue/Date of revision : 03/05/2017

Version 3 :

3/12

Section 5. Firefighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides
- C. 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.
- 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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).
- C. Methods and material for containment and cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. 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). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. 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. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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 a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Vapours are heavier than air and may spread along floors. Separate from oxidizing materials. 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
pentane-2,4-dione	ACGIH TLV (United States, 3/2015). Absorbed through skin. TWA: 25 ppm 8 hours.
dioctyltin dilaurate	Ministry of Labor (Republic of Korea, 8/2013). Absorbed through skin. TWA: 0.1 mg/m ³ , (as Sn) 8 hours.

- B. Appropriate engineering 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, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation 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.
- 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. 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. Recommended: Application Method: Airless Spray. full-face mask APF 40 Application Method: Brush half-face mask APF 10.
- 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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- 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

Section 8. Exposure controls/personal protection

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.

- 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- 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.

Section 9. Physical and chemical properties

A. Appearance

Physical state : Liquid.

Colour : Colourless.

B. Odour : Solvent.

C. Odour threshold : Not available.

D. pH : Not applicable.

E. Melting/freezing point : Not available.

F. Boiling point/boiling range : Lowest known value: 139.5°C (283.1°F) (pentane-2,4-dione).

G. Flash point : Closed cup: 35°C (95°F)

Fire point : Not available.

H. Evaporation rate : Not available.

I. Flammability (solid, gas) : Not available.

J. Lower and upper explosive (flammable) limits : Greatest known range: Lower: 2.4% Upper: 11.6% (pentane-2,4-dione)

K. Vapour pressure : Not available.

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

M. Vapour density : Not available.

N. Relative density : 1.26

O. Partition coefficient: n-octanol/water : Not available.

P. Auto-ignition temperature : Not available.

Q. Decomposition temperature : Not available.

R. Viscosity : Kinematic (room temperature): 6 mm²/s (6 cSt)

S. Molecular weight : Not applicable.

:

Date of issue/Date of revision : 03/05/2017

Version 3 :

6/12

Section 10. Stability and reactivity

- A. Chemical stability** : The product is stable.
Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
- B. Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- C. Incompatible materials** : Reactive or incompatible with the following materials:
oxidizing materials
- 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 routes of exposure** : Not available.

Potential acute health effects

- Inhalation** : Harmful if inhaled.
Ingestion : Harmful if swallowed.
Skin contact : Harmful in contact with skin.
Eye contact : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
headache
drowsiness/fatigue
dizziness/vertigo
muscle weakness
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Eye contact** : No specific data.

B. Health hazards

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
pentane-2,4-dione	LC50 Inhalation Vapour	Rat - Male, Female	5.1 mg/l	4 hours
	LD50 Dermal	Rabbit - Male	760 mg/kg	-
	LD50 Oral	Rat - Female	570 mg/kg	-
dioctyltin dilaurate	LD50 Oral	Rat	6450 mg/kg	-

Irritation/Corrosion

:

Date of issue/Date of revision : 03/05/2017

Version 3 :

7/12

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
pentane-2,4-dione	Eyes - Severe irritant	Rabbit	-	20 milligrams 488 milligrams 6 hours 11.2 Milliliters Intermittent 48 hours 11. 2 Milliliters Intermittent 6 hours 33.6 Milliliters Intermittent	-
	Skin - Mild irritant	Rabbit	-		-
	Skin - Mild irritant	Rabbit	-		-
	Skin - Moderate irritant	Rabbit	-		-
	Skin - Moderate irritant	Rabbit	-		-

Sensitisation

Not available.

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

Not available.

Mutagenicity

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)

Name	Category	Route of exposure	Target organs
dioctyltin dilaurate	Category 2	Not determined	Not determined

Aspiration hazard

Not available.

Potential chronic health effects

Chronic toxicity

Not available.

- General** : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : Suspected of damaging the unborn child.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : Suspected of damaging fertility.

ATE value

:

Date of issue/Date of revision : 03/05/2017

Version 3 :

8/12

Section 11. Toxicological information

Route	Result
Oral	1379.5 mg/kg
Dermal	1839.3 mg/kg
Inhalation (vapours)	12.34 mg/l

Section 12. Ecological information

A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
pentane-2,4-dione	Acute LC50 50000 ul/L Fresh water	Crustaceans - Ceriodaphnia reticulata	48 hours
	Acute LC50 35400 ul/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 60100 to 71800 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours

B. Persistence and degradability

Not available.

C. Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
pentane-2,4-dione	0.68	-	low
dioctyltin dilaurate	-	<100	low

D. Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.




:

Date of issue/Date of revision : 03/05/2017

Version 3 :

9/12

Section 14. Transport information

	UN	IMDG	IATA
A. UN number	UN1263	UN1263	UN1263
B. UN proper shipping name	PAINT	PAINT	PAINT
C. Transport hazard class(es)	3 	3 	3 
D. Packing group	III	III	III
E. Environmental hazards	No.	No.	No.
F. Additional information	-	-	-

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 requiring permission) : None of the components are listed.

Article 2 of Youth Protection Act on Substances Hazardous to Youth : Not applicable.

Exposure Limits of Chemical Substances and Physical Factors

The following components have an OEL:
pentane-2,4-dione; acetylacetone
dioctyltin dilaurate

ISHA Enforcement Regs Annex 11-3 (Exposure standards established for harmful factors) : None of the components are listed.

ISHA Enforcement Regs Annex 11-4 (Harmful factors subject to Work Environment Measurement) : The following components are listed: Organic compounds of tin

:

Date of issue/Date of revision : 03/05/2017

Version 3 :

10/12

Section 15. Regulatory information

ISHA Enforcement Regs Annex 12-2 (Harmful Factors Subject to Special Health Check-up) : The following components are listed: Tin and compounds

Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control) : The following components are listed: Tin and its compounds

B. Regulation according to Chemicals Control Act

K-Reach Article 20 (Toxic chemicals) : Not applicable

K-Reach Article 27 (Prohibited) : None of the components are listed.

K-Reach Article 27 (Restricted) : None of the components are listed.

CSCA Article 11 (TRI) : The following components are listed: Tin and its compounds

Korea inventory : All components are listed or exempted.

CSCA Article 39 (Accident Precaution Chemicals) : None of the components are listed.

C. Dangerous Materials Safety Management Act : Class: Class 4 - Flammable Liquid
Item: 4. Class 2 petroleums - Water-insoluble liquid
Threshold: 1000 L
Danger category: III
Signal word: Contact with sources of ignition prohibited

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

Europe inventory : All components are listed or exempted.

United States inventory (TSCA 8b) : All components are listed or exempted.

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 revision : 03/05/2017

C. Version : 3

Date of printing : 03/05/2017

D. Other

 **Indicates information that has changed from previously issued version.**

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)

Section 16. Other information

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 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 : 03/05/2017

Version 3 :

12/12