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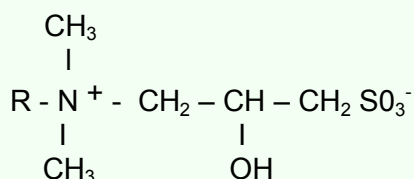
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BETADET[®] S-20

- Amphoteric surfactant
- Thickener and foam booster
- Vegetable origin
- Mild skin irritation
- Stable at wide range of pH

CHEMICAL IDENTIFICATION



R = C12

INCI Name : Lauryl Hydroxysultaine

CAS Number : 13197 - 76 - 7

TECHNICAL SPECIFICATIONS

| | | Kao Method |
|-----------------------------------|------------------------------|------------|
| APPEARANCE (20°C) : | Yellowish transparent liquid | KCSA-258 |
| DRY MATTER (%) : | 43 - 47 | KCSA-283 |
| SODIUM CHLORIDE (%) : | 6.3 - 7.3 | KCSA-058 |
| COLOUR (Apha): | 200 max. | KCSA-207 |
| MICROBIOLOGICAL CONTROL (cfu/g) : | 100 max. | KCSA-234 |
| pH (1% in water) : | 6.0 - 8.0 | KCSA-014 |



BETADET® S-20

TYPICAL PROPERTIES

| | |
|--------------------------------|----------------|
| ODOUR : | Characteristic |
| DENSITY (20°C, g/mL, "spot") : | 1.100 approx. |
| VISCOSITY (20°C, cPs) : | 50 max. |
| SOLUBILITY IN WATER (g/mL) : | Soluble |
| MELTING POINT (°C) : | < -10°C |
| CHARACTER : | Amphoteric |

APPLICATION PROPERTIES

- BETADET® S-20 is recommended as a secondary surfactant in a very low irritation and high foaming products.
- It is compatible with other anionic, amphoteric and non ionic surfactants.
- Main functions:
 - Detoxifying effect: it decreases the irritation level of usual anionic surfactants.
 - Foam booster: it increases the foam level and modifies the quality of the foam.
 - It performs as a viscosity modifier allowing to reduce the sodium chloride content in the final formula.
 - It also acts as a dispersing agent for calcium ions in hard water.
 - Compared to CAPB (Cocamidopropyl Betaine), BETADET® S-20 improves the stability of final preparations at cold temperatures.

Due to the fact that BETADET® S-20 is very stable at a wide pH range, it is also recommended for high foaming and alkaline detergents.

STORAGE – HANDLING – SHELF LIFE

- BETADET® S-20 is chemically stable for a long period of time under appropriate storage conditions (temperature of 25°C and original unopened container).
- In the case of long storage time, it is advisable to homogenise the product before its use, especially if it has been submitted to low temperatures. Small changes in the appearance can be easily recovered by applying a moderate agitation at 25-30°C. A general advise is to use the complete container every time.
- The shelf life of BETADET® S-20 can be considered of 1 year minimum under proper storage conditions. After longer storage time some of its characterising parameters (*odour, appearance, colour, pH,...*), should be checked before using it.



BETADET® S-20

TOXICOLOGICAL & ECO-TOXICOLOGICAL PROPERTIES

BIODEGRADABILITY: Method: OECD 301 D(Closed Bottle Test)
Total Biodegradability: 78% (28 days)
Accomplishes the "Window test - 10 days"

AQUEOUS TOXICITY: Method: OECD 202 (Immobilization Test)
Daphnia (48 hours): 16 mg/L
NOEC: 6 mg/L

ACUTE TOXICITY: Method: Directive 92/69/ECC
Mouse - Method of fixed dose
Higher than 2000 mg/kg

SENSITIZATION: NEGATIVE
Guinea Pigs, CCET Method, 10 animals

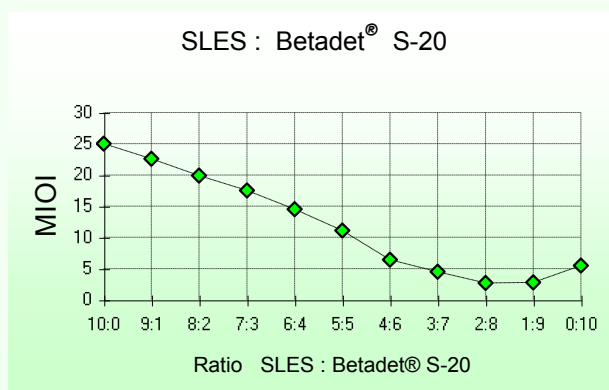
DERMAL IRRITATION: 1. Humans:
Patch Test : 28 humans / 48 hours

| Reaction | + | ± | - | Average |
|--------------|---|---|----|---------|
| 0.5 % active | 1 | 6 | 21 | 0.14 |
| 0.1 % active | 0 | 4 | 24 | 0.07 |
| WATER | 1 | 4 | 23 | 0.11 |

2. Draize Test (Directive 93/21/CEE, OECD 404)
Rabbits, 4 hours, product as it is
NON IRRITATING (It doesn't need any phrase of risk)

OCULAR IRRITATION: 1. Draize Test (Directive 93/21/CEE, OECD 405)
Rabbits, product as it is
IRRITATING (R 36: Irritant for the eyes)

2. Test RBC (Red Blood Cells)



| | MIOI |
|-----------------------|------|
| Non irritating | < 5 |
| Slightly irritating | < 15 |
| Moderately irritating | < 25 |
| Irritating | < 40 |
| Strong irritating | > 40 |

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